

# Vicarious experience of justice: when unfair treatment of one's colleague matters

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## Abstract

**Purpose** – The purpose of this paper is to examine the extent to which perceptions of one's colleague's fair treatment by an authority, termed vicarious justice, can affect an individual's satisfaction with and cooperation toward the authority, after controlling one's personal justice experience from the same authority figure.

**Design/methodology/approach** – In Study 1, 172 employees filled out a survey about personal and vicarious justice experience at work. In Study 2, 208 undergraduate students participated in an online scenario experiment that manipulated vicarious justice experience.

**Findings** – Across both studies, results indicated that, controlling for personal justice perceptions, vicarious justice perceptions positively influenced individuals' satisfaction with the authority; the effect on satisfaction was stronger for individuals who saw themselves as more similar to the colleague. Results of the experiment also suggested that vicarious justice led to higher cooperation intentions, and such effect was moderated by similarity as well.

**Research limitations/implications** – The current studies demonstrate that vicarious justice perceptions can influence individuals beyond the effects of their own treatment, and such influence depends on perceived similarity between the focal individual and the colleague.

**Practical implications** – The paper highlights the importance of managers' treatment of other employees, especially when managing employees that are homogeneous in various characteristics.

**Originality/value** – The studies extend the current understanding on vicarious justice effects and underscore the role of similarity in moderating such effects. The combination of field survey and online experiment provides evidence for causal inference for the findings.

**Keywords** Satisfaction, Cooperation, Similarity, Organizational justice, Quantitative, Collectivistic orientation, Vicarious justice

**Paper type** Research paper

## Introduction

The literature on organizational justice has provided an abundance of evidence linking justice experiences to important attitudinal and behavioral outcomes, such as job satisfaction, organizational commitment, and organizational citizenship behaviors (Cohen-Charash and Spector, 2001; Colquitt *et al.*, 2001). The focus of most research has been “first-person” perceptions of justice phenomena (Kray and Lind, 2002), that



is, the degree to which a given individual has experienced fair/unfair treatment and the subsequent impact on that individual. However, interaction with coworkers constitutes an important part of one's experience at work (Donovan *et al.*, 1998), so the extent to which coworkers receive fair treatment may also affect an individual. A vicarious justice experience has been defined as an incident where a focal individual witnesses fair/unfair treatment of another with regard to distributions, procedures, or interactions (cf. Kray and Lind, 2002).

Although research has demonstrated that individuals are affected by vicarious justice experiences (De Cremer and van Hiel, 2006; Turillo *et al.*, 2002), the influence of vicarious justice experiences on the focal individual are not typically studied in juxtaposition with personal justice experience at work from the same source (see De Cremer *et al.*, 2005; De Cremer and van Hiel, 2006; Spencer and Rupp, 2009 for exceptions). Indeed, Colquitt *et al.* (2005) noted that "[...] it remains unclear how impactful vicarious injustice can be relative to individual justice" (p. 59). Thus, the present paper focusses on how witnessing fair/unfair treatment of one's coworker will affect the focal individual above and beyond his/her own treatment by the same source. In particular, we emphasize that factors associated with the importance of group membership may affect the occurrence or strength of these effects.

The present paper advances the understanding of vicarious justice effects by investigating unique effects above and beyond one's own treatment, and what moderates those effects. Using an employee survey and a scenario study, we examined the extent to which perceiving just/unjust treatment of a coworker by one's supervisor may influence an employee's attitude and behavior toward that supervisor, controlling for the focal individual's personal justice experience. To understand the circumstances under which vicarious justice affects the observer, we assessed the degree to which the impact of vicarious justice was moderated by two indicators of group identification: the focal employee's similarity to the coworker and by the focal employee's collectivistic orientation.

In the following section, we describe how the group's importance and influence can serve as a lens to think about vicarious justice experiences. We briefly summarize literature examining vicarious justice effects simultaneously with personal justice experiences and present the rationale for potential moderators of vicarious justice effects: similarity and collectivistic orientation.

#### *Group identification influences*

Social identity theory (Tajfel and Turner, 1985) has clearly established that group membership can play an important role in an individual's attitudes and behavior. Social identity theory (Tajfel and Turner, 1985; Turner, 1975) describes the tendency to categorize others into groups, associate with certain groups, and compare oneself/one's group with other groups. Research on groups in organizations has established that factors such as level of interdependence (Böhm *et al.*, 2013), shared values (Shamir *et al.*, 2000), and other indicators of connection to the group (Brown, 2000) can influence identification with the group. Research has also shown that identification influences how and when treatment of the group (or another member of the group) influences an individual (e.g. Voci, 2006). Hence, social identity theory would suggest that the extent to which individuals associate themselves with a particular group (i.e. coworkers) will influence whether fair or unfair treatment of members of that group has effects on attitudes and behavior.

Research on justice has shown that people use information regarding the treatment of others to infer something about their own relationships and value in the group

(Lind and Tyler, 1988; Tyler and Lind, 1992). Tyler (1994) showed that one reason individuals care about just treatment of others is that it may say something about one's own status. From this perspective, fair treatment of one's colleague may be viewed as indicating how one may be treated as well as how one may be valued. Hence, one can argue that vicarious justice should have effects on an individual's affect and behaviors because of self-interest (how others are treated presages how one might be treated; see Gillespie and Greenberg, 2005) and relational reasons (how others are treated indicates how the workgroup one belongs to is viewed). Thus, social identity theory as well as research on justice supports the notion that vicarious justice effects should occur to a greater extent when an individual sees the mistreated employee as similar and connected to him/herself.

*Relative influence of self vs others' experiences of justice*

Before exploring specific identification influences that may moderate vicarious justice effects, it is important to review what is already established about the relative roles of one's own and others' experiences on fairness perceptions. In van den Bos and Lind's (2001) experiments, an individual's procedural justice experience was manipulated along with information about what another person had experienced, and interactive effects on judgments of justice were found. Kray and Lind (2002) found participants had more empathy for a coworker when they had experienced injustice with the same supervisor than when they did not have a similar experience. De Cremer *et al.* (2005) found that justice for oneself was most influential on an employee's positive emotions when justice for other employees was also high. In Spencer and Rupp (2009), injustice directed at coworkers by customers interacted with how those customers treated the employee him/herself in heightening emotional labor. Thus, these studies provide some evidence that vicarious justice effects may add to the prediction of outcomes beyond one's own experience of justice.

However, this research is limited in terms of examining what might influence the relative effects of personal vs third-party justice. That is, we know individuals react to the treatment of unknown others (e.g. Skarlicki *et al.*, 1998) as well as to the treatment of coworkers (e.g. De Cremer and van Hiel, 2006), but do not have a good understanding of how that information is weighted and interpreted relative to information on one's own treatment from the same sources, or what affects the weighting of that information.

There exists only one set of studies that indirectly addressed this question. De Cremer and van Hiel (2006) hypothesized that a colleague's justice experience would affect the participant only when the colleague showed willingness to support and help the participant. Across a scenario experiment, a cross-sectional field survey, and a laboratory experiment, the unfair treatment of a supportive colleague by the supervisor resulted in the participant's significantly lower positive emotions and cooperative behavior. The unfair treatment of an unsupportive colleague, however, negatively predicted the participant's positive emotions and cooperative behavior in the field survey. While the findings suggest that vicarious justice effects may depend on the nature of the relationship between the observer and the coworker, these studies did not include any information on the focal individual's treatment by the same supervisor. One might surmise that if the supervisor's treatment of the focal individual is known, such information will likely outweigh vicarious justice experiences in affecting the individual (see Ambrose *et al.*, 1991), regardless of relationships with coworkers.

In sum, while we know that vicarious justice effects occur, and that they appear to interact with one's personal justice experiences, there has been limited discussion or

investigation of what might affect the influence of vicarious experiences on one's attitudes and behavior, in light of the individual's overall evaluation of fairness. The research described here addresses this gap by assessing the role of two identification concepts – similarity and collectivistic orientation – in determining this influence.

### *Vicarious justice effects*

Following the rationale proposed above, the first purpose of our research is to determine the extent to which an employee would be influenced by the fair/unfair treatment of a colleague by his/her supervisor above and beyond his/her personal treatment by that same individual. We determine this influence on the outcomes of satisfaction with supervisor and cooperative behavior. A number of studies have demonstrated that breach of personal justice expectations can influence satisfaction with supervisor (e.g. Cohen-Charash and Spector, 2001; Colquitt *et al.*, 2001) and cooperative behavior (e.g. Bottom *et al.*, 2002; Tyler and Blader, 2000). In particular, satisfaction with supervisor has been suggested as a mediating mechanism by which justice dimensions affect distal outcomes such as organizational commitment and job performance (Cohen-Charash and Spector, 2001). Likewise, cooperative behavior with the supervisor provides a fine lens to understand vicarious justice's potential influence on job performance. Based on these studies as well as the findings of van den Bos and Lind (2001) highlighted earlier, we expect that vicarious justice experiences would exert effects on these variables.

Thus, while an individual's own experiences with a supervisor will influence whether he/she is satisfied with that supervisor and will be cooperative with that supervisor, vicarious justice effects suggest that treatment of colleagues will provide additional information about how an individual is likely to be treated in the future, and will also influence how an individual feels and acts toward that supervisor;

- H1.* An individual's (a) satisfaction with his/her supervisor and (b) cooperative behaviors toward his/her supervisor will be positively associated with the supervisor's fair treatment of a colleague, controlling for the individual's personal justice experience.

### *Similarity*

Social identity theory and research has indicated that people tend to allocate more resources to other members of their own group (Turner, 1978) and are more likely to offer assistance and support to in-group members than out-group ones (Ensher and Murphy, 1997; Saucier *et al.*, 2005). Furthermore, individuals tend to perceive the same emergency situation as more severe when an in-group rather than out-group member is the victim (Kuntsman and Plant, 2008). Thus, the observer may be more concerned about the colleague's treatment if the observer sees the colleague as similar to him/herself as opposed to otherwise.

Witnessing a similar colleague experiencing justice incidences may convey information on how the supervisor values the focal employee's group (Tyler, 1994), facilitate the focal employee's engagement in his/her own status judgment and identity evaluations (Tyler, 1999), and further provide a backdrop for the focal employee to foresee his/her own treatment by the authority in the future (see Tyler and Blader, 2003). As an example showed that layoff survivors who identified with victims and perceived the layoff compensation as inadequate had the largest reduction in organizational commitment relative to the pre-layoff period (Brockner *et al.*, 1987). That is, identification with coworkers influenced the extent to which coworker treatment influenced one's justice perceptions.

While extant literature has shown that vicarious justice effects depend on the focal individual's social relationship with the other employee(s) (Brockner *et al.*, 1987; de Cremer and Van Hiel, 2006), research on third-party justice effects seldom measures perceived similarity to the third party, and thus may be overlooking an important moderator of effects (e.g. an employee might react more strongly to customer mistreatment of similar coworkers). Considering the theoretical reasoning and empirical evidence above, we propose that similarity will also moderate the effect of vicarious justice on individual affect and behavior;

- H2.* An individual's similarity to a coworker will moderate vicarious justice effects, such that effects on (a) satisfaction and (b) cooperative behaviors (above and beyond personal justice effects) are stronger when the individual is more similar to the coworker.

#### *Collectivistic orientation*

Hofstede (1980) found that cultures differ on levels of collectivism, and noted that people in collectivistic cultures tend to see themselves as part of a larger whole and assign priority to in-group members. Collectivistic individuals are more likely to perceive a common fate for the members of their groups and to view their group members as an extension of themselves (Fadil *et al.*, 2005). Thus, collectivistic individuals tend to consider the implications of their actions for their groups (Hui and Triandis, 1986), and tend to be willing to sacrifice personal interests for the sake of collective interests (Leung and Bond, 1984).

A number of characteristics of collectivistic individuals may predispose them to greater influence of vicarious justice, including preference to operate within the in-group boundary (Oyserman *et al.*, 2002; Triandis, 1995), sense of shared responsibility with in-group members, identification with the groups they are in (Cooper and Thatcher, 2010), and concern for the well-being of in-group members (Triandis, 1996; Triandis and Bhawuk, 1997). Therefore, experiencing vicarious justice can result in more active evaluation of group membership and status in highly collectivistic individuals, leading to stronger influence on outcomes. Further, collectivistic orientation has been shown to increase the association in team members' affective states (Ilies *et al.*, 2007). Thus, a highly collectivistic individual may be more likely to be influenced emotionally by a coworker's unfair treatment as well. In sum, one might expect identification with the group as an important mechanism for the reactions of collectivist individuals to vicarious justice;

- H3.* An individual's collectivistic orientation will moderate vicarious justice effects, such that effects on (a) satisfaction and (b) cooperative behaviors (above and beyond personal justice effects) are stronger when the individual has a higher collectivistic orientation.

In sum, we propose that perceiving fair treatment of a coworker by one's supervisor will be positively associated with the individual's satisfaction with the supervisor and cooperative behaviors toward the supervisor above and beyond one's own justice experiences, and such effects will be moderated by the individual's similarity to the coworker and the individual's collectivistic orientation. We tested these hypotheses in a field survey (Study 1) and an online scenario study (Study 2).

### **Study 1 – method**

#### *Participants*

An invitation e-mail containing a link to an online survey was sent to working students and alumni from the master of business administration programs and master of

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human resource management program at a Southeastern University in the USA. In total, 172 individuals followed the link and completed the anonymous survey. Of the respondents, 65 percent were female; 36 percent were whites, followed by 32 percent blacks and 27 percent Hispanics; the average age was 37. Respondents held a wide range of positions, such as accountants, administrative assistants, various specialist and analyst positions, and managerial positions. On average, the respondents had worked in their organizations for 68 months, with their supervisors for 32 months, and with the specific coworkers they considered for 31 months.

### *Procedure*

The survey consisted of four distinct sections: satisfaction with and cooperative behavior toward the supervisor; vicarious justice; collectivistic orientation; and personal justice perceptions. The survey was sequenced in the order above such that responses to outcome measures would not be cued by the recall and report of personal and vicarious justice.

Because the survey involved the extent to which the supervisor fairly treated the participant and a coworker, we provided specific definitions of “supervisor” and “coworker” to enable accurate assessment of the perceptions. Specifically, supervisor was defined to the participants in the survey as “the person (a) whom you report to; and (b) who oversees your work activities and makes work related decisions for you, such as approving requests for time off, distributing resources, and determining work schedule,” whereas coworker was defined as a person “who (a) reports to the same supervisor as you do; and (b) regularly interacts with you.”

An instruction set was also embedded in the beginning of section (b) of the survey to increase variance in similarity to the coworker. Specifically, respondents were randomly assigned into low vs high similarity conditions where they were suggested to think of a coworker who “has little/a lot in common with you. Specifically, this coworker is different/similar to you in terms of background, experience, and other characteristics.” Respondents were then instructed to think of the coworker and to respond to measures about the coworker (i.e. vicarious justice measures) to the best of their knowledge.

### *Measures*

*Personal procedural and interpersonal justice.* Procedural justice refers to the degree to which the procedures that result in the outcome distribution or decision are applied fairly (Leventhal, 1980; Thibaut and Walker, 1975). Interpersonal justice refers to the extent to which individuals are treated with dignity and respect and politeness by authorities (Bies and Moag, 1986). We focus on these two specific facets of justice as they are likely observable at work *vis-à-vis* how others are treated regardless of the job or organizational context. In contrast, there likely is large variability in knowledge of distributive justice (i.e. pay and performance information of coworkers is often confidential).

We assessed personal perceptions of procedural and interpersonal justice using scales from Colquitt (2001) on a five-point Likert scale (1 = “to a small extent”; 5 = “to a large extent”). Seven items ( $\alpha=0.91$ ) assessed the extent to which the supervisor adhered to procedural justice standards when making decisions concerning the participant, whereas four items ( $\alpha=0.93$ ) measured the perceived extent of interpersonal justice in daily interactions between the supervisor and the participant. Sample items are: procedural: “Have you had influence over the decisions arrived at by the supervisor?” and interpersonal: “Has the supervisor treated you with respect?”

*Vicarious procedural and interpersonal justice.* We measured vicarious procedural and interpersonal justice using items similar to personal procedural and interpersonal justice. Items were modified to reflect the focus on the coworker: the participant responded to the degree of fairness he/she perceived in the supervisor's decision-making procedures concerning the coworker and interactions with the coworker. The same five-point Likert scale was used. Sample items are: procedural ( $\alpha = 0.80$ ): "Has the coworker had influence over the decisions arrived at by the supervisor?" and interpersonal ( $\alpha = 0.91$ ): "Has the supervisor treated the coworker with respect?"

*Similarity.* Although participants were instructed to recall a coworker who was either similar or different from themselves, the dichotomy could not fully represent the degree of similarity between the focal participant and the coworker, especially in light of practical constraints (i.e. respondents had no control over whom they worked with and thus the similarity between them and their coworkers). To accurately capture the similarity, we measured on the same Likert scale the actual level of similarity using two items ( $\alpha = 0.72$ ) from Fox *et al.* (1989): "Do you think the coworker and you are similar in terms of background and experience?" and "Do you think the coworker has a lot of similar characteristics to you?"

*Collectivistic orientation.* Collectivistic orientation was operationalized using the 15-item multidimensional psychological collectivism scale ( $\alpha = 0.87$ ) by Jackson *et al.* (2006), which capture psychological collectivism specific to the work context. The scale asked respondents to reflect upon the work groups they had belonged to and respond to the items. A sample item is "I cared about the well-being of those groups." Responses were made on a five-point Likert scale from "strongly disagree" to "strongly agree."

*Satisfaction with supervisor.* Satisfaction with supervisor was operationalized with a six-item scale ( $\alpha = 0.91$ ). Four items were obtained from Spector (1985); a sample item is "My supervisor is quite competent in doing his/her job." Two items were added to capture overall satisfaction and increase scale reliability: "I am satisfied with the way my supervisor treats me" and "I enjoy working with my supervisor."

*Cooperative behaviors toward the supervisor.* We measured cooperative behaviors toward the supervisor ( $\alpha = 0.86$ ) with seven items adapted from Williams and Anderson (1991) and two items adapted from Bentein *et al.* (2002). Items were modified to reflect the degree to which employees cooperated with the supervisors in their daily activities. Sample items include: "Pass along work-related information to the supervisor" and "Give advance notice to the supervisor when you are unable to come to work."

### Study 1 – results

We conducted confirmatory factor analysis to ensure the vicarious justice measures captured unique aspects of the supervisors' justice practices. Using measured items as indicators, a four-factor model consisting of vicarious procedural justice, vicarious interpersonal justice, personal procedural justice, and personal interpersonal justice provided reasonable fit to the data,  $\chi^2 = 469.14$ ,  $df = 203$ ; RMSEA = 0.089; SRMR = 0.067; CFI = 0.91; TLI = 0.90. A nested two-factor model tested whether responses to the items reflect participants' general perceptions of procedural justice and interpersonal justice, with vicarious and personal justice items from the same justice dimension loading on the same factor. This model provided noticeably worse fit to the data,  $\Delta\chi^2(5) = 51.86$ ,  $p < 0.001$ ; RMSEA = 0.096; SRMR = 0.124; CFI = 0.89; TLI = 0.88. An alternative nested two-factor model evaluated whether responses reflected participants' perceptions of personal and vicarious justice, with

justice items pertaining to the participant and the coworker loading on two separate factors. Compared to the four-factor model, this model provided significantly worse fit to the data:  $\Delta\chi(5)^2 = 360.89$ ,  $p < 0.001$ ; RMSEA = 0.135; SRMR = 0.105; CFI = 0.79; TLI = 0.76. Therefore, the analysis confirmed that vicarious justice perceptions were indeed distinct from personal justice perceptions. We created scale scores for the four justice scales and presented descriptive statistics in Table I.

*H1a* stated that vicarious justice perceptions would be associated with satisfaction with supervisor after controlling for personal justice perceptions. We conducted separate multiple regression analyses for procedural and interpersonal justice dimensions. First, we regressed satisfaction simultaneously on both personal and vicarious procedural justice. Satisfaction was significantly predicted by both personal and vicarious procedural justice perceptions. Together, procedural justice perceptions accounted for 63 percent of variance in satisfaction with supervisor. Similarly, we regressed satisfaction on both personal and vicarious interpersonal justice and found similar results. Thus, *H1a* was supported by the data: controlling for personal justice perception, vicarious justice perception on the same justice dimension significantly predicted respondents' satisfaction with supervisors.

*H1b* predicted that vicarious justice perceptions would correlate with cooperative behaviors toward the supervisor after controlling for personal justice perceptions. Similar multiple regression analyses were conducted with cooperative behaviors as the outcome variable. Controlling for personal procedural justice perceptions, vicarious procedural justice perceptions did not predict cooperative behaviors. Similarly, while personal interpersonal justice perceptions were a significant predictor of cooperation, vicarious interpersonal justice perceptions were not. Therefore, *H1b* was not borne out by the data: vicarious justice perceptions failed to account for variance in cooperative behaviors toward supervisors beyond respondents' personal justice perceptions.

*H2* and *H3* stated that the effects of vicarious justice perceptions on the outcome variables would depend on the respondent's similarity to the coworker and collectivistic belief. Moderated regression analyses were used to examine these hypotheses. All predictor variables were mean centered prior to the analyses. Personal procedural or interpersonal justice perceptions were entered in the first step of hierarchical regression as a control. The corresponding vicarious justice perception and the moderating variable were entered in the second step. The interaction term was entered in the final step. Table II present model  $R^2$  change in each step and regression coefficients from the final steps.

	1	2	3	4	5	6	7	8
1. Vicarious procedural	0.80							
2. Vicarious interpersonal	0.64	0.91						
3. Similarity	0.06	0.08	0.72					
4. Collectivistic belief	0.16	0.06	0.17	0.87				
5. Satisfaction	0.62	0.68	0.08	0.05	0.92			
6. Cooperation	0.30	0.26	0.22	0.18	0.36	0.86		
7. Personal procedural	0.67	0.61	0.13	0.10	0.78	0.43	0.92	
8. Personal interpersonal	0.59	0.72	0.10	0.13	0.81	0.33	0.74	0.93
<i>M</i>	3.29	3.94	2.48	3.44	3.63	3.73	3.34	3.99
SD	0.84	0.99	1.05	0.52	0.96	0.76	1.00	0.95

**Notes:**  $n = 165\text{--}172$ . Cronbach's  $\alpha$  are presented on the diagonal. When  $|r| > 0.15$ ,  $p < 0.05$ ; when  $|r| > 0.20$ ,  $p < 0.01$

**Table I.**  
Descriptive statistics  
and intercorrelations  
for Study 1 variables

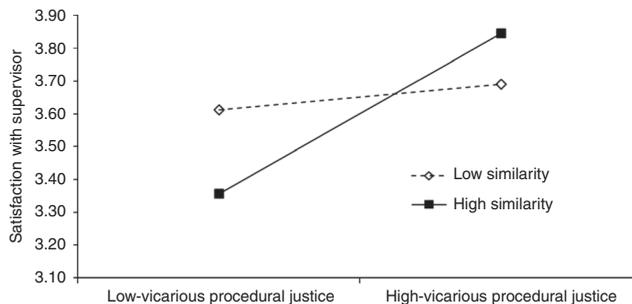
	Outcome: satisfaction			Outcome: cooperation		
	<i>b</i>	$\beta$	$\Delta R^2$	<i>b</i>	$\beta$	$\Delta R^2$
<i>Procedural justice dimension</i>						
Intercept	3.63			3.71		
Personal procedural justice	0.65	0.67***	0.61***	0.33	0.43***	0.19***
Vicarious procedural justice (VPJ)	0.18	0.15*	0.02**	-0.05	-0.05	0.00
Similarity	-0.02	-0.02	0.00	0.09	0.13	0.03*
Similarity $\times$ VPJ	0.12	0.11*	0.01*	0.11	0.13	0.01
Collectivistic belief	-0.07	-0.03	0.00	0.18	0.12	0.02
Collectivistic belief $\times$ VPJ	-0.02	-0.01	0.00	-0.10	-0.06	0.00
<i>Interpersonal justice dimension</i>						
Intercept	3.62			3.72		
Personal interpersonal justice	0.70	0.69***	0.66***	0.20	0.24*	0.11***
Vicarious interpersonal justice (VIJ)	0.17	0.18**	0.02**	0.06	0.07	0.00
Similarity	0.01	0.01	0.00	0.13	0.17*	0.03*
Similarity $\times$ VIJ	0.09	0.11*	0.01*	0.03	0.04	0.00
Collectivistic belief	-0.10	-0.06	0.01	0.17	0.11	0.01
Collectivistic belief $\times$ VIJ	-0.01	-0.01	0.00	-0.11	-0.08	0.01

**Table II.** Coefficients from moderated regression analysis

**Notes:** All predictor variables were centered around their means. Regression coefficients in the table were all from the final regression that included the interactions.  $\Delta R^2$  represent change in  $R^2$  in each step of hierarchical regression. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

*H2* proposed that the vicarious justice effects would be moderated by the respondent's similarity to the coworker. The results supported *H2a*: the effects of vicarious justice perceptions (both procedural and interpersonal) on satisfaction with supervisor were moderated by subjective similarity to the coworker, such that when the employee perceived the coworker as similar rather than dissimilar to himself/herself, the association between vicarious justice perceptions and satisfaction with the supervisor was stronger, controlling for his/her personal justice perceptions of the corresponding dimension. Figure 1 depicts the interaction effect between vicarious procedural justice and similarity. Simple slope analysis (Aiken *et al.*, 1991) was used to follow up the significant interactions, after controlling for corresponding personal justice perceptions. When similarity to the coworker was high (1 standard deviation above the mean), vicarious procedural justice perceptions had a significant effect on satisfaction with supervisor ( $\beta = 0.25$ ,  $p < 0.001$ ); when similarity to the coworker was low (1 standard deviation below the mean), however, the effect of vicarious

**Figure 1.** Similarity as a moderator on the effect of vicarious procedural justice on satisfaction with supervisor in Study 1



procedural justice perceptions was not significant ( $\beta = 0.04$ , ns). The simple slope analysis with vicarious interpersonal justice as predictor yielded similar results (when similarity was high,  $\beta = 0.27$ ,  $p < 0.001$ ; when similarity was low,  $\beta = 0.08$ , ns). Taken together, controlling for personal experience of justice, vicarious procedural/interpersonal justice only had significant effects on satisfaction with supervisor when the employee was highly similar to the coworker.

*H2b* did not receive support from the data. Neither the similarity  $\times$  vicarious procedural justice interaction nor the similarity  $\times$  vicarious interpersonal justice interaction contributed significantly to the prediction of cooperative behaviors.

*H3* stated that the vicarious justice effects would be stronger for respondents with higher collectivistic belief. The results failed to support either *H3a* or *H3b*. Respondents' collectivistic orientation did not moderate the extent to which vicarious justice perceptions related to their satisfaction or cooperative behaviors toward their supervisors. As suggested by an anonymous reviewer, we explored the role of ethnicity as a potential moderating variable. Ethnicity (dummy-coded white, Hispanic, and black) did not moderate the effects of various justice.

## Study 1 – discussion

The field study supported the hypothesis that vicarious justice perceptions would be associated with the employees' satisfaction with the supervisor, after controlling for personal perceptions of justice. Furthermore, similarity moderated vicarious justice's relationship with satisfaction with supervisor, whereas collectivistic belief did not moderate such relationship. That is, vicarious justice perceptions more strongly influence the employee's satisfaction with the supervisor when the employee is similar to the coworker.

Although Study 1 shed light on when effects of vicarious justice perceptions might be observed, the correlational nature of the data limits causal inferences. An employee's subjective similarity to the coworker may have been influenced by the way the supervisor treated the coworker. To rule out potential competing explanations and establish causal relationships, we conducted a scenario study with experimental manipulations. Specifically, the scenario study investigated whether, with the presence of personal justice, vicarious justice/injustice experiences would affect the focal individual and whether such effects would depend on similarity and collectivistic orientation.

## Study 2 – method

### *Participants*

In total, 216 undergraduate students enrolled in psychology courses at a large Midwestern University in the USA participated in the study in exchange of course credit. The sample was mostly female (71 percent) and white (81 percent).

### *Procedure*

Participants were invited to complete the scenario experiment online. They were randomly assigned by the computerized system to a 2 (vicarious justice vs vicarious injustice)  $\times$  2 (high similarity vs low similarity) between subject factorial design. The number of participants in each cell ranged from 53 to 56.

Participants first responded to pre measures and then were presented with the vicarious justice scenario, which was adapted based on De Cremer and van Hiel (2006)

(Study 1). The participants were asked to imagine being an actual employee in the scenario described below:

You are an employee at a major company producing food products. Together with some other colleagues you are part of a team that is responsible for the marketing and sales of certain food products. In the next few days you will start up a new project together with a colleague whom you have seen around in the office. The two of you do not know each other well [similarity manipulation]. You will have to discuss with this colleague on several issues with respect to this project, such as the amount of food products to be produced, promotion strategies, the distribution of potential profits, etc.

The similarity manipulation followed previous operational definitions (Tajfel, 1982; Triandis *et al.*, 1988). For the low similarity condition, the participants read:

In addition, the two of you are quite different in age, have different educational backgrounds, and do not have hobbies or interests in common”, whereas for high similarity condition, the participants read “In addition, the two of you are quite similar in age, graduated from the same university, and have a lot of hobbies and interests in common.

In the second paragraph, the participants read about the vicarious justice manipulations:

During this project, the supervisor has been fair and respectful to you. Meanwhile, you find out that the supervisor has decided [vicarious justice manipulation].

We manipulated vicarious justice on both procedural and interpersonal dimensions. Similar to De Cremer and van Hiel (2006), vicarious justice on the procedural dimension was manipulated as voice vs no voice; whereas vicarious justice on the interpersonal dimension was operationalized in terms of nonverbal indicators of interpersonal concern (sneer vs smile):

[...] to give your colleague no voice. In other words, your supervisor does not want to listen to what your colleague has to say about the work that both of you will engage in during this project. You also hear the supervisor mentioning to your colleague with a sneer that your colleague seems a little stupid to do this job (Low vicarious justice).

[...] to give your colleague voice. In other words, your supervisor wants to listen to what your colleague has to say about the work that both of you will engage in during this project. You also hear the supervisor mentioning to your colleague with a smile that your colleague shows competence for this job (High vicarious justice).

After reading the scenario, participants answered questions pertaining to their reactions to the scenario. Manipulation checks were also administered. All questions were rated on a five-point Likert scale, ranging from 1 = “strongly disagree” to 5 = “strongly agree” or from 1 = “not at all” to 5 = “very much so.”

Three important distinctions between the current study and Study 1 in De Cremer and van Hiel (2006) are noteworthy. First, the current study experimentally controlled for personal justice perceptions by presenting the supervisor as being fair and respectful to the respondent. Second, the current study presented the colleague as someone acquainted with the respondent rather than being totally unknown to or a close friend with the respondent, thus controlling for potential ambiguity and possible confound from perceived friendship. Finally, we manipulated vicarious interpersonal justice in addition to vicarious procedural justice. Because Study 1 did not reveal differential effects between vicarious procedural and interpersonal justice, we collapsed the two justice dimensions into a single factor (vicarious justice vs injustice) to create a more potent and salient manipulation while also reducing the sample size required for the study.

### Measures

We operationalized collectivistic orientation with the eight-item horizontal collectivism scale (Singelis *et al.*, 1995) as student participants might not have the necessary experience in work groups to complete Jackson *et al.*'s (2006) scale. The horizontal collectivism scale focusses on collectivistic belief based on equal social relationships within groups (Singelis *et al.*, 1995). A sample item is "It is important to maintain harmony within my group." Cronbach's  $\alpha$  for the scale was 0.69.

The outcome measures of satisfaction with supervisor and cooperation intention were adapted from De Cremer and van Hiel (2006). Satisfaction with supervisor was measured with four items ( $\alpha = 0.87$ ). A sample item is "To what extent would you be satisfied with this supervisor?" Cooperation intention was measured with five items ( $\alpha = 0.81$ ). A sample item is "To what extent would you be willing to cooperate with this supervisor?"

### Manipulation check

Three items were used to ensure the effects of intended manipulations. The vicarious justice manipulations were tested on two items: "The colleague has been able to express his/her views during the procedures at work" and "The colleague has been treated by the supervisor in a polite and respectful manner." In addition, the similarity manipulation was checked against the following item: "The colleague and I share a lot of similarities."

### Study 2 – results

We first examined the effects of the manipulations. Significant differences in responses were found for all manipulation check items:  $t(214) = 15.32$ ,  $d = 1.44$ ,  $p < 0.001$  for vicarious procedural justice perceptions;  $t(214) = 17.54$ ,  $d = 1.53$ ,  $p < 0.001$  for vicarious interpersonal justice perceptions;  $t(213) = 16.54$ ,  $d = 1.50$ ,  $p < 0.001$  for the similarity check item. Therefore, the manipulations appeared to have reached the desired effects. We proceeded with the analysis after removing eight participants who failed the manipulation check (i.e. responding "strongly agree" when a manipulation was absent or "strongly disagree" when a manipulation was present) as such responses indicated insufficient effort responding (see Huang *et al.*, 2012). Table III presents descriptive statistics and intercorrelations for study variables.

We examined the main effect of vicarious justice experience on satisfaction with supervisor in *H1a* and the moderating effect of similarity in *H2a* simultaneously using a 2 (vicarious justice vs vicarious injustice)  $\times$  2 (low similarity vs high similarity) ANOVA. Table IV presents means and standard deviations for each condition. Participants in the vicarious justice condition reported significantly higher satisfaction with the supervisor than those in the vicarious injustice condition (partial  $\eta^2 = 0.16$ ).

	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Vicarious justice <sup>a</sup>	0.50	0.50	–				
2. Similarity <sup>b</sup>	0.48	0.50	0.02	–			
3. Collectivistic belief	3.74	0.37	–0.03	0.09	0.69		
4. Satisfaction	2.49	0.87	0.38	0.19	–0.02	0.87	
5. Cooperation intention	3.03	0.73	0.40	0.19	–0.02	0.68	0.81

**Notes:**  $n = 208$ . Cronbach's  $\alpha$ 's for measures are presented on the diagonal. When  $|r| > 0.14$ ,  $p < 0.05$ ; when  $|r| > 0.16$ ,  $p < 0.01$ . <sup>a</sup>0 = vicarious injustice, 1 = vicarious justice; <sup>b</sup>0 = low similarity, 1 = high similarity

**Table III.**  
Descriptive statistics  
and intercorrelations  
for Study 2 variables

Similarity to the colleague also had an effect on satisfaction with the supervisor (partial  $\eta^2 = 0.04$ ). Both main effects were moderated by a significant justice by similarity interaction (partial  $\eta^2 = 0.03$ ). Taken together, these results supported *H1a* and *H2a*: vicarious justice resulted in significantly higher satisfaction with the supervisor, and the effect was stronger for individuals who were more similar to the colleague (see Figure 2). Additional tests of simple main effects suggested that vicarious justice significantly influenced supervisor satisfaction for both the high similarity,  $F(1, 204) = 36.64, p < 0.01$ , and low-similarity conditions,  $F(1, 204) = 6.91, p < 0.01$ .

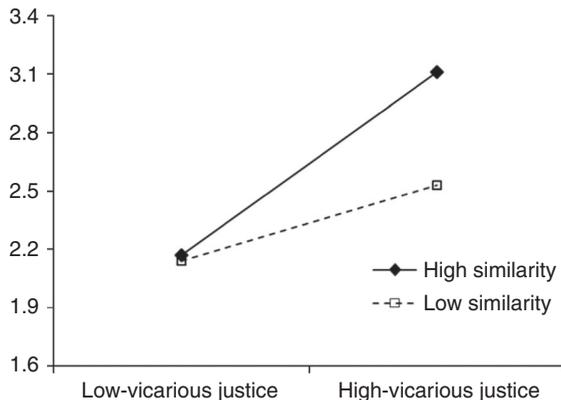
The effect of vicarious justice on cooperation intention and the moderating effect of similarity were also examined using a  $2 \times 2$  ANOVA. Means and standard deviations are also presented in Table IV. The main effect of vicarious justice was significant (partial  $\eta^2 = 0.17$ ). The main effect of similarity was also significant (partial  $\eta^2 = 0.04$ ). A significant justice  $\times$  similarity interaction qualified both main effects (partial  $\eta^2 = 0.04$ ). Participants in the vicarious justice condition reported higher intention to cooperate with the supervisor relative to those in the vicarious injustice condition; this effect was even stronger for participants who were similar to the coworker (see Figure 3). *H1b* and *H2b* were both supported by the results. Tests of simple main effects showed that vicarious justice significantly affected cooperative intention for both the high similarity,  $F(1, 204) = 41.28, p < 0.01$ , and low-similarity conditions,  $F(1, 204) = 6.84, p < 0.01$ .

**Table IV.**  
Means and standard deviations for satisfaction with supervisor and cooperation intention across conditions

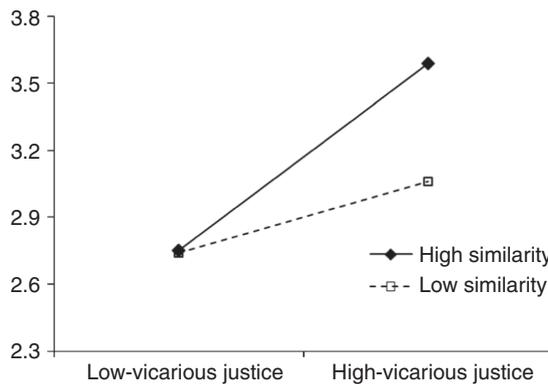
	Low-vicarious justice		High-vicarious justice		ANOVA <i>F</i>		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	Vicarious justice	Similarity	Vicarious $\times$ Similarity
Outcome: satisfaction with supervisor					38.37***	7.88**	6.60**
Low similarity	2.14	0.78	2.53	0.85			
High similarity	2.17	0.69	3.11	0.77			
Outcome: cooperation intention					41.66***	8.73**	8.11**
Low similarity	2.74	0.79	3.06	0.72			
High similarity	2.75	0.58	3.59	0.42			

**Notes:**  $n = 55$  for low-vicarious justice and low similarity;  $n = 54$  for high-vicarious justice and low similarity;  $n = 48$  for low-vicarious justice and high similarity;  $n = 51$  for high-vicarious justice and high similarity. Means on the same row are significantly different from each other. \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

**Figure 2.**  
Similarity as a moderator on the effect of vicarious justice on satisfaction with supervisor in Study 2



*H3* stated that the vicarious justice effects would be moderated by respondents' collectivistic orientation. We examined the hypothesis using moderated regression. Each outcome variable was regressed on both vicarious justice condition and the mean-centered individual difference variable in the first step of hierarchical regression analysis. The second step of hierarchical regression analysis consisted of the interaction term between vicarious justice condition and the individual difference variable. Table V presents model  $R^2$  change in each step and regression coefficients from the final step. Collectivistic orientation significantly moderated the effect of vicarious justice on satisfaction with supervisor,  $\beta = 0.27$ ,  $p = 0.01$ ,  $\Delta R^2 = 0.03$ , with a stronger impact for individuals with higher collectivistic belief. Follow-up simple slopes analysis tested the effect of vicarious justice on satisfaction for individuals high vs low on collectivistic orientation (1 standard deviation above and below the mean). For individuals who had high-collectivistic belief, vicarious justice was a much stronger predictor of satisfaction with supervisor,  $\beta = 0.56$ ,  $p < 0.001$  than for individuals who had low-collectivistic belief,  $\beta = 0.21$ ,  $p = 0.03$ . Thus, the results provided support to *H3a*. In contrast, the moderating effect of collectivistic belief failed to reach significance when cooperation intention was the outcome,  $\beta = 0.19$ ,  $p = 0.06$ ,  $\Delta R^2 = 0.02$ . Although in the expected direction, there was insufficient evidence to support *H3b* that the effect of vicarious justice on cooperation



**Figure 3.**  
Similarity as a  
moderator on  
the effect of  
vicarious justice  
on cooperation  
intention in  
Study 2

	Outcome: satisfaction			Outcome: cooperation		
	<i>b</i>	$\beta$	$\Delta R^2$	<i>b</i>	$\beta$	$\Delta R^2$
<i>Collectivistic belief as moderator</i>						
Intercept	2.16			2.75		
Collectivistic belief	-0.52	-0.22*	0.15***	-0.31	-0.16	0.16***
Vicarious justice	0.66	0.38***		0.57	0.39***	
Collectivistic belief $\times$ Vicarious justice	0.82	0.27**	0.03**	0.49	0.19	0.02

**Notes:** Collectivistic belief was mean centered. Regression coefficients in the table were all from the final regression that included the interaction.  $\Delta R^2$  represent change in  $R^2$  in the first (vicarious justice and collectivistic belief) and second (interaction term) steps of hierarchical regression, respectively. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

**Table V.**  
Coefficients  
from moderated  
regression analysis

intention differed across individuals with high vs low-collectivistic belief. Finally, similar to the results in Study 1, dummy-coded ethnicity did not moderate the influence of vicarious justice.

### Study 2 – discussion

Results from Study 2 again demonstrated that individuals are attuned to not only their own treatment by their supervisors, but their coworkers' treatment as well. Also, the degree to which individuals are affected by vicarious justice is moderated by similarity to the coworker, such that individuals who were similar to the coworker were more strongly affected by the coworker's treatment by the supervisor, compared to individuals who were not. Whereas Study 1 failed to show vicarious justice effects on cooperative behaviors toward supervisor, Study 2 indicated that cooperation intention was affected by the experimental manipulation of vicarious justice, and the effect was moderated by similarity as well. Further, whereas Study 1 showed a lack of moderating effect for collectivistic orientation, Study 2 findings indicated that individuals with high-collectivistic orientation may experience stronger vicarious justice effects on satisfaction with their supervisors, relative to individuals with low-collectivistic orientation.

### General discussion

The purpose of the current studies was to investigate whether and when employees will attend to the treatment of their peers by an authority after partialing out their own treatment by the same authority. Results from both studies indicate that vicarious justice perceptions can influence employees' satisfaction with their supervisors, after controlling for personal justice perceptions. Understanding vicarious justice effects necessitates considering their role beyond personal experiences, as the well-established role of personal justice perceptions and self-interest effects needs to be accounted for before suggesting that attention to vicarious justice is warranted. In particular, findings from Study 1 indicate that, in actual work settings, employees are indeed affected by their colleagues' treatment by their supervisors, beyond their personal justice experience, extending the field study findings by de Cremer and Van Hiel (2006).

For employees who were more similar to the coworker, the effect of vicarious justice on satisfaction with supervisor was stronger. Furthermore, to the extent that vicarious justice with high similarity others affects the focal individuals more strongly, interpretation of third-party justice studies conducted with undergraduate students in the laboratory settings may need to be tempered with this boundary condition (e.g. van den Bos and Lind, 2001; Spencer and Rupp, 2009): whether undergraduate students perceive others who participate in the same experiment as highly similar to themselves should be examined.

Although Study 1 and 2 converged to a large extent on the moderating effect of similarity, a closer look at the effect of vicarious justice on a dissimilar colleague revealed an interesting difference: vicarious justice with a dissimilar colleague did not show significant influence on the focal employee in Study 1, whereas it significantly impacted the focal individual in Study 2. Study 2's finding aligns with Spencer and Rupp's (2009) simulation finding that a customer's interpersonally unfair treatment of one's coworker can negatively impact the focal individual, despite fair treatment from the same customer. That is, the complexity of the social context (e.g. well-established work relations vs interaction with less familiar others; ongoing, longer-term roles

vs short term interactions) may be an important consideration in interpreting whether and when vicarious justice effects are bounded by similarity.

The findings across the two studies on the effect of vicarious justice on cooperation differed, with Study 2 showing effects but not Study 1. Two explanations could be offered. First, the discrepancy in results could be due to a lack of control of extraneous variables in the field setting, as behaviors at work are subject to influence by various organizational and individual factors (e.g. Chen and Chiu, 2008; Korman, 1976). Second, the difference in results may have reflected the difference in behavioral intention and actual behavior (Ajzen, 1991): whereas actual behaviors were the focus in the field study, behavioral intentions were measured in the scenario study. Thus, one may form the intention to be uncooperative when a similar coworker is treated unfairly, but in reality be unwilling to take a chance on negative outcomes from being uncooperative at work.

#### *Limitations and directions for future research*

Several limitations of the present studies should be noted. First, we did not cover the entire spectrum of possible vicarious justice. In Study 1, we only examined vicarious justice effects with regard to procedural and interpersonal domains. In Study 2, we collapsed vicarious procedural and interpersonal justice dimensions to produce a stronger manipulation and to minimize the sample size needed for the study. To fully understand how different dimensions of vicarious justice may influence the focal individual and potentially interact with each other, researchers might devise a way to accurately capture vicarious distributive and informational justice in field settings.

Second, the field survey in Study 1 was based on employees' self-reports, which can be subject to confounding influences from respondents' personality traits. Although the experiment in Study 2 corroborated the vicarious justice effects found in Study 1, more studies are needed to understand how perceiver characteristics such as negative affectivity and neuroticism may affect the vicarious justice phenomenon. Also, while single source surveys often are criticized for potential common method variance problems, our focus on the effects of vicarious justice after partialing out personal justice was less susceptible to common method bias, and the interaction effects could not be attributed to common method variance (Siemsen *et al.*, 2010). Finally, the use of student samples – Study 1 included some working students while Study 2 relied on a student sample – may have influenced the current results. For example, as students may have limited working experience, they may not have the opportunity to witness different degrees of vicarious injustice, and thus the estimated effects of vicarious justice may have been restricted.

Results from the current studies also suggest several directions for future research. First, collectivistic orientations had a somewhat restricted range in both studies, which may have attenuated its observed moderating effect. Future research may investigate the moderating roles of these values in more diverse samples, such as by studying the vicarious justice phenomenon across cultures that have different standings on collectivism. Second, future research may also explore the moderating effects of other individual difference variables, such as perspective taking (Maner *et al.*, 2002) and empathy (Batson *et al.*, 1995), which likely relate to how one is affected by treatment of a third party. In particular, moderators that may affect vicarious justice effects for one form of justice (e.g. interpersonal) and not for another should be explored. Third, research directed at specifying contextual moderators of vicarious justice effects, such as workplace justice climate, group size, and worker interdependence may be useful to explore.

*Practical implications*

In terms of practical implications, the findings of the present studies highlight the importance of managers' treatment of other employees. Managers may need to attend to the extent to which their treatment of one employee is perceived as fair by other employees, especially when other employees may not be aware of the reason behind the treatment and may see it as unfair. Managers often have a balancing act between ensuring confidentiality and being open regarding treatment at work.

The findings also suggest that managers may need to be particularly cognizant of their treatment of employees as a whole when managing employees that are homogeneous in various characteristics. As vicarious justice effects are stronger when employees are similar to each other, managers in low-diversity organizations (e.g. employees similar in age, male or female dominated workplaces) may have to be even more aware of how employees are affected by the treatment of others than managers in organizations with diverse employees. While there are many reasons why managers would seek to promote group identification among coworkers (e.g. increasing cohesion, increasing cooperation), there is a need to recognize how heightened group identification may create greater sensitivities to the treatment of others.

While the interaction effects observed here were small in magnitude, their practical significance may still be substantial. There are many aspects of workplace decision-making procedures that managers have little latitude to influence; hence, small effects in areas managers can influence (e.g. interpersonal treatment) are important as these are areas of malleability. Further, small effects on outcomes like cooperative behaviors may have large financial implications for organizations, as such behaviors appear to affect unit level outcomes (Koys, 2001; Podsakoff *et al.*, 2009). At a societal level, increasing perceptions of fairness at work and cooperative behavior can have cumulative effects on productivity and economic outcomes.

**Conclusion**

In sum, the current studies demonstrated that vicarious justice perceptions can influence individuals beyond the effects of their own treatment. The findings suggest the likelihood of boundaries on vicarious justice effects require further exploration. The present findings underscore the importance of considering vicarious justice in the organizational justice literature and serve as a call for further investigation of the vicarious justice phenomenon at work.

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