

RESEARCH ARTICLE

Prosocial thinkers and the social transmission of justice[†]

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Abstract

Feeling the sting of another's injustice is a common human experience. We adopt a motivated information processing approach and explore how individual differences in social motives (e.g., high vs. low collectivism) and epistemic motives (e.g., high vs. low need for closure) drive individuals' evaluative and behavioral reactions to the just and unjust treatment of others. In two studies, one in the laboratory ($N=78$) and one in the field ($N=163$), we find that the justice treatment of others has a more profound influence on the attitudes and behaviors of prosocial thinkers, people who are chronically higher (vs. lower) in collectivism and lower (vs. higher) in the need for closure. In all, our results suggest that chronically higher collectivism and a lower need for closure work in concert to make another's justice relevant to personal judgment and behavior.

'Injustice anywhere is a threat to justice everywhere. We are caught in an inescapable network of mutuality, tied in a single garment of destiny. Whatever affects one directly, affects all indirectly.'—Martin Luther King, Jr. (1963).

Today, when human rights violations continue on a global scale, the manner in which people respond to the justice treatment of others has significant political, economic, and organizational consequences. In this paper, we take an individual difference perspective on the issue by asking who is more likely to respond to the (in)justice of another?

Over 25 years ago, Deutsch (1983) lamented that "the approach to 'justice' has been too psychological and not enough social psychological; that is, it focused on the individual rather than upon the social interaction in which 'justice' emerges" (p. 312). Since then, a number of studies have answered this call by examining the influence of others' justice treatment on justice judgments and behaviors (Colquitt, 2004; De Cremer, Stinglhamber, & Eisenberger, 2005; De Cremer & van Hiel, 2006, 2010; Jones & Skarlicki, 2005; Kray & Lind, 2002; Lamertz, 2002; Lind, Kray, & Thompson, 1998; Skarlicki, Ellard, & Kelln, 1998; Stinglhamber & De Cremer, 2008; Umphress, Labianca, Brass, Kass, & Scholten, 2003; Van den Bos & Lind, 2001; van Prooijen, Stahl, Eek, & van Lange, 2012; van Prooijen,

van den Bos, Lind, & Wilke, 2006; see Gelfand et al., 2012 and Lee, Gelfand, & Shteynberg, 2013, for related discussion on the contagion of conflict). Much of this research focused on comparing the relative impact of one's own justice treatment to the influence of others' justice treatment on fairness judgment. Early findings suggested that one's own justice treatment is more influential for fairness judgments than others' justice treatment (Lind et al., 1998). Subsequent studies, however, suggested that situational factors can make others' justice as relevant as one's own, such as when others' justice treatment is communicated by an authority that dispensed it (van den Bos & Lind, 2001), or when it matches one's own justice experiences (Colquitt, 2001; Kray & Lind, 2002). In sum, researchers have found that immediate situational factors can bolster the influence of others' justice treatment, suggesting that Deutsch's focus on the social context in which justice emerges is important territory for justice research.

In this paper, we expand this growing body of research by examining the role of chronic psychological motives and the role they play in the social transmission of justice. Specifically, drawing on the motivated information-processing model (De Dreu & Carnevale, 2003), we explore whether the social transmission of justice is a result of the interplay between chronic social motives, as exemplified by high collectivism (Triandis, 1989) and chronic epistemic motives, as exemplified by low need for closure (Kruglanski, 1989).

Our contribution is twofold. First, complementing research on justice-oriented individual differences such

[†]The variables reported in this paper have not been included in any paper (published, in press, or current). Nor are any of the variables in this paper planned to be included in future papers.

as justice orientation (Rupp, Byrne, & Wadlington, 2003), belief in a just world (Lerner, 1980), and justice sensitivity (Schmitt, Gollwitzer, Maes, & Arbach, 2005), we show that the social transmission of justice can be understood as a combined result of both basic social and epistemic individual differences. Second, we show that this particular individual difference account shapes behavioral reactions in real world organizations in addition to psychological reactions in laboratory settings.

In what follows, we first describe the motivated information processing (MIP) model, discuss the role of collectivism and need for closure in the model, and then apply the MIP approach to understand the social transmission of justice. Second, we describe a laboratory and a field study where we measure the social transmission of justice via reactions to the supervisor. Notably, in the field study, we examine behavioral consequences of another's (in)justice in the form of employee citizenship behavior directed at the supervisor. Helping behaviors have been explored as consequences of personal justice experiences (e.g., Cohen-Charash & Spector, 2001; Colquitt, 2001; LePine, Erez, & Johnson, 2002), and as such, there is reason to believe that they will be influenced by others' justice treatment when others' justice treatment substantively affects the self. We end by discussing the relevance of our findings to the justice literature.

The Motivated Information Processing Model

De Dreu and Carnevale (2003) proposed that judgments and actions in interpersonal situations result from the interaction of two broad classes of motives: (i) a social motive that is generally defined by the level of concern for the welfare of others and (ii) an epistemic motive that is generally defined by the level of concern for the accuracy of one's judgment. According to MIP, because of heightened concern for others, an individual with a prosocial (vs. selfish) motive is more likely to treat information about the welfare of others as relevant or applicable to (Higgins, 1996) personal judgment. Whereas, in a quest to ensure an accurate judgment, an individual with a high (vs. low) epistemic motivation is more likely to process a greater amount of information before coming to a decision (Kruglanski, 1989), including information about others' welfare.

Thus, the epistemic motive influences the depth of information processing (see also, Chaiken & Trope, 1999), with a high epistemic motive promoting greater attention to processing and integrating available and new information before coming to judgment, relative to a low epistemic motive. On the other hand, the social motive influences the type of information that is deemed relevant to the judgment at hand (De Dreu & Carnevale, 2003), with a prosocial motive resulting in a greater assignment of relevance to information about others' treatment during judgment formation as compared with a proself motive.

The crossing of social and epistemic motives yields four prototypes: prosocial thinkers, selfish thinkers, prosocial misers, and selfish misers (De Dreu & Carnevale, 2003). *Prosocial thinkers* contain a unique combination of epistemic and social motives that renders them more likely to process and consider available information regarding other's welfare as well as deem such information as relevant or important to their judgment. Given that each piece of information must both be processed and deemed relevant in order for it to be integrated into judgment (Kruglanski & Thompson, 1999), prosocial thinkers are more likely to incorporate information about the justice treatment of another into their judgments and consequent behaviors.

Selfish thinkers, like prosocial thinkers, engage in extensive information processing before forming a judgment, but do not deem information concerning the welfare of others as particularly relevant to their personal judgment. *Prosocial misers*, like prosocial thinkers, treat information concerning the welfare of others as quite relevant to their personal judgment, but they form judgments without extensive processing or consideration of available information. Finally, *selfish misers* neither treat information concerning the welfare of others as relevant to their judgment nor form judgments with extensive processing or consideration of available information. Consequently, prosocial misers, selfish thinkers, and selfish misers are less likely to integrate available information concerning others' welfare in the course of judgment formation as compared with prosocial thinkers (De Dreu & Carnevale, 2003). Indeed, it is possible that the unique combination of social and epistemic motives that is characteristic of prosocial thinkers dovetails with the well-researched personality trait of observer justice sensitivity, which amplifies the importance of others' justice in one's own judgment and behavior (Gollwitzer, Rothmund, Pfeiffer, & Ensenbach, 2009; Schmitt, Baumert, Gollwitzer & Maes, 2010; Schmitt *et al.*, 2005).

There is now a growing body of evidence that suggests the proposed interaction of social and epistemic motives in a number of domains, including negotiator behavior (e.g., De Dreu, Beersma, Stroebe, & Euwema, 2006), team learning (De Dreu, 2007), team conflict (Halevy, 2008), and group creativity (Bechtoldt, De Dreu, Nijstad, & Choi, 2010). Here, we apply the logic of the motivated information-processing model to the social transmission of justice. Specifically, we propose that another's justice treatment is more influential for prosocial thinkers, individuals who have (i) a high social motive that renders information about others' welfare relevant during judgment formation and (ii) a high epistemic motive that makes it more likely that information about others' welfare is processed en route to judgment formation. Next, we discuss how the individual differences of collectivism and need for closure map onto the two motives (also see De Dreu & Carnevale, 2003), the interaction of which drives the social transmission of justice.

Collectivism as a Prosocial Motive

In line with seminal work in cultural and cross-cultural psychology, we posit that individuals with collectivistic values and beliefs are more likely to have concern for another's justice treatment and see it as relevant to fairness judgments, intentions, and behavior. Notably, the collectivism perspective does not posit that collectivistic individuals treat the justice experiences of all others as important. Rather, collectivism should increase concern for the justice treatment of one's group members, but not for those outside of the referent group (Triandis & Gelfand, 1998). Maintaining a shorter psychological distance between the self and close others (Markus & Kitayama, 1991), collectivistic individuals have been characterized as possessing values and beliefs that heighten the subjective relevance of close others' treatment (Gelfand *et al.*, 2012; Lee *et al.*, 2013; Triandis, 1989; Triandis & Gelfand, 1998). Put differently, in striving to maintain psychological interconnectedness with others (Shweder & Bourne, 1984), collectivistic individuals develop values and beliefs that place greater emphasis on close others' experiences.

Accordingly, De Dreu and Carnevale (2003) regard individuals with higher collectivism as having a higher prosocial motive. However, although research has shown that collectivistic individuals have more knowledge about others (Kitayama, Markus, Tummala, Kurokawa, & Kato, 1990), are more concerned about their interests during negotiation (Gelfand & Christakopoulou, 1999), and are more influenced by the opinions of others (Bond & Smith, 1996), there has been little research to suggest that justice is more socially transmitted for collectivistic individuals. A notable exception is research by Colquitt (2004) who found that teammates' justice had a stronger effect on personal performance when collectivism is high. However, as discussed next, it is possible that a social motive of high collectivism is more likely to increase the social transmission of justice when joined by an epistemic motive of a low need for closure.

Need for Closure as an Epistemic Motive

Need for closure is a well-researched epistemic motivation that influences the extent of informational processing en route to judgment as well as the likelihood of subsequent judgment revision given relevant information (Kruglanski, 2004; Kruglanski & Webster, 1996; Webster & Kruglanski, 1998). A low need for closure refers to the individual's need to continue extensive informational processing before making a judgment (Kruglanski, 1989). Moreover, low-need-for-closure individuals are more likely to revise their justice judgments on the basis of new information. Conversely, when the need for closure is high, the individual is reluctant to consider new information as it delays judgment formation (Kruglanski & Webster, 1996) and so "... may process less information before committing to

a judgment ..." (p. 265). Also, high-need-for-closure individuals are more likely to "freeze" on their judgment and are less likely to engage in the mental effort that is involved in judgment revision. Accordingly, De Dreu and Carnevale (2003) refer to individuals with a lower need for closure as having a higher epistemic motive.

Importantly, lower (vs. higher) need for closure individuals are more likely to engage in perspective taking before making a judgment, given that perspective taking requires extensive information processing (Kruglanski, 2004; Kruglanski, Dechesne, Orehek, & Pierro, 2009). The propensity for perspective taking becomes particularly relevant in the justice transmission context, where information about another's welfare can be obtained by putting one's self into the other's position. Indeed, research suggests that perspective taking is decreased under a higher need for closure, especially for individuals who are dissimilar from the self (Nelson, Klein, & Irvin, 2003). In all, a low need for closure allows for more thorough information processing, including information about another's welfare—information that can be effectively gleaned by taking the vantage point of the other.

The Interplay of Collectivism and the Need for Closure: A Social Transmission Hypothesis

In light of the theoretical and empirical scholarship reviewed, we propose that psychological and behavioral reactions to others' justice treatment are a joint product of higher (vs. lower) collectivism and lower (vs. higher) need for closure. As reviewed, people with more collectivistic attitudes are more likely to consider the treatment of a teammate or a coworker as relevant to their cognitive and behavioral reactions (Gelfand *et al.*, 2012; Lee *et al.*, 2013; Triandis, 1989; Triandis & Gelfand, 1998). Moreover, people with a lower need for closure are more likely to engage in greater information processing and perspective-taking (Kruglanski, 2004; Kruglanski *et al.*, 2009). This implies that in the absence of collectivistic values and beliefs, the social transmission of justice is made less likely, because information regarding others' welfare is deemed less relevant to personal judgment. Moreover, in the absence of a low need for closure, the social transmission of justice is made less likely by the lack of processed or integrated information concerning another's welfare before judgment.

We hypothesize that the just versus unjust treatment of another will have more influence on the psychological and behavioral reactions in individuals who are simultaneously higher on collectivism and lower in their need for closure. This implies that prosocial thinkers will be particularly prone to adjust their psychological and behavioral reactions to be in line with the level of justice afforded to another. Conversely, we expect that prosocial misers, selfish thinkers, and selfish misers will not exhibit such correspondence between another's justice and personal reactions.

Hypothesis: The three-way interaction among another's (in)justice treatment (fair vs. unfair), collectivism, and the need for closure will predict perceptions of supervisor fairness (Study 1) and supervisor-directed citizenship behaviors (Study 2). That is, unfair (vs. fair) treatment of another will result in lower perceptions of supervisor fairness and lower supervisor-directed citizenship behaviors for individuals who are simultaneously higher (vs. lower) on collectivism and lower (vs. higher) in the need for closure.

Overview of Research

We conducted a laboratory and a field study to test our hypothesis. In the laboratory study, we manipulated the justice treatment of a fellow teammate at the hands of a graduate student supervisor and then subsequently measured personal evaluations of the supervisor's fairness. Specifically, we examined whether prosocial thinkers perceived their supervisor as more unfair when their teammate was treated unjustly as compared with when their teammate was treated justly. Notably, the injustice (vs. justice) manipulation was composed of their teammate's communication about lacking (vs. having) voice, calling it unfair (vs. fair). We also conducted a field study, where we tested our hypothesis in organizational settings with employees (and their supervisors) from a variety of companies. Specifically, we examined whether prosocial thinkers are more likely to react to their supervisor's unjust (vs. just) procedural treatment of fellow employees by lowering their citizenship behavior (i.e., helpful behavior that goes beyond employees' job descriptions) towards their supervisors. Given our hypothesis, we expected that prosocial thinkers would be less helpful to their supervisors when their supervisors were procedurally unjust to fellow employees as compared with just.

The Institutional Review Boards of the University of Maryland and the University of Michigan reviewed and cleared this research. All study participants completed informed consent, had the right to withdraw, and were debriefed. All data are confidential.

Study 1

Sample and Design

We recruited 78 (37 men and 41 women) undergraduate psychology students at a large, mid-Atlantic university to participate in a laboratory study in exchange for course credit. We invited students to participate in the study if they had participated in a mass-testing session conducted in their introductory psychology course, which occurred at least 1 month before the beginning of the study. We measured collectivism and need for closure and manipulated other justice treatment (just vs. unjust) as a between-subjects variable. We measured overall evaluations of supervisor's fairness as a dependent variable.

Procedure

During a mass-testing procedure in their introductory psychology course, all participants filled out a battery of surveys on personal characteristics, including collectivism, and need for closure. More than 1 month later, participants were randomly assigned to experimental conditions, where the manipulations were embedded in a series of simulated organizational tasks during the course of the study (as described in detail in the succeeding discussion). Participants were told that they would be completing a series of organizational simulation tasks and that a graduate student who will be their supervisor would evaluate their performance.

The study proceeded in two parts. First, in order to simulate teammate relationships in actual environments, we had participants across both conditions engage in a joint creativity task that was meant to increase feelings of cohesion and teamwork. In the second part, participants were placed in separate rooms to complete a series of organizational tasks. Embedded in the organizational tasks was the experimental manipulation of other's procedural justice (i.e., voice) in the form of electronic messages that appeared to be from their supervisor and from the other participant (in actuality, the messages were preprogrammed). A similar computer-mediated feedback paradigm was utilized in Lind *et al.* (1998). In order to establish the psychological fidelity of both tasks and manipulations, we finalized the study materials only after extensive feedback from pilot studies.

Creative task. After the introduction, each participant was paired with a partner (i.e., another participant) and the two were asked to get acquainted with each other while working face-to-face on a joint creativity task. The task involved coming up with and writing down as many creative uses for a number of household items (e.g., hanger, sock, and paper cup) within the allotted time period. After 10 minutes had passed, a research assistant reviewed the dyad's answers and gave them positive feedback (e.g., "That's a good one," "These are really good," and "It looks like you guys really work well together as a team!"). These positive comments were meant to induce a sense of camaraderie with their teammate. The establishment of even a minimal relationship was necessary to simulate teamwork conditions, under which collectivism is expected to play a role. At the end of the joint creativity task, the research assistant told both participants that they would next be physically separated to work on a series of organizational simulation tasks at individual computer stations.

Organizational task. Before beginning the organizational simulation task, participants were given written instructions on how to operate the computer program that would run the organizational tasks. The instruction manual included a screenshot of the computer interface along with explanations of the interface. As can be seen in Appendix A, the interface had several components.

On the upper-left corner were the task instructions that participants read before beginning the simulation. The lower-left corner consisted of the task workspace where participants input their answers. During the organizational tasks, participants were led to believe that they could communicate with the supervisor and their partner online. In reality, all of the information “communicated” by the supervisor and the partner was preprogrammed.

Participants first received general instructions regarding the upcoming tasks, where they were told that they would assume the role of a consultant and make various organizational decisions as well as provide rationales for why those decisions were made. They were also reminded that the supervisor would evaluate their performance on the tasks and that this evaluation would determine the number of lottery tickets participants could enter into a drawing of various prizes.

All organizational tasks that were part of the computer program were adapted from Leslie and Gelfand (2008) and are illustrated in detail in Appendix B. As evident in Appendix B, the first three organizational tasks involved the participant reading an email from various people in the consulting firm asking participants to make a decision between two options regarding the company and submitting a rationale as to why they made that particular decision. The fourth organizational task differed in that participants were told that they would be working together with their original partner in brainstorming ideas on how to improve their client’s recruitment strategies. Participants were told to submit their ideas while being led to believe that their partner in a different room was also submitting his or her ideas online.

Experimental manipulation. At this point, participants received a preprogrammed incoming message from the partner that served as the other’s justice manipulation. Participants in the other just (opportunity for voice) condition received a message which said, “hey just sent you my ideas on the summer camp task. Did you fin that these tasks were really rushed. I’m glad that supervisor asked me for feedback bc now he’ll know this bf he evaluates me. I think that’s fair since the lottery tickets depends on his evaluation” [sic]. Participants in the other unjust (no opportunity for voice) condition received a message which said, “hey just sent you my ideas on the summer camp task. Did you find that these tasks were really rushed. This really sucks that supervisor doesn’t want my feedback bc he should know this bf he evaluates me. I think that’s unfair since the lottery tickets depend on his evaluation” [sic]. The wording of experimental manipulations was piloted extensively until pilot participants did not exhibit any suspicions about the authenticity of the messages. We found that less formal communication with mistakes were more likely to be regarded as genuine.

Notably, to maintain realism, the participant also received a personal justice message. The personal justice message was counterbalanced across another’s justice

condition with half of the participants receiving a message that asked them for their input on the tasks performed (i.e., fair personal experience), whereas the other half received a message telling them that their input will not be needed (i.e., unfair personal experience).

After participants finished the simulation, they evaluated the fairness of the supervisor. When participants were done, the research assistant handed participants a note from the supervisor indicating that the participant had won five lottery tickets. At the very end, participants were fully debriefed on the true purpose of the study.

Measures

Perceptions of other’s and self’s opportunity for voice. In order to ensure that the other’s voice manipulation affected individuals’ perceptions of whether one’s partner had an opportunity to give voice, we asked participants to rate the item, “My teammate had an opportunity to voice his/her opinions to the graduate student regarding his/her work tasks (1 = *Disagree strongly*; 7 = *Agree strongly*).” We also measured whether the personal (in)justice message affected individuals’ perceptions of their own voice by asking the following question: “You had an opportunity to voice your opinions to the graduate student regarding your work tasks (1 = *Disagree strongly*; 7 = *Agree strongly*).”

Collectivism. Collectivism was measured with a 12-item scale (Triandis & Gelfand, 1998). Participants were asked to rate how important they think certain behaviors are, such as “to maintain harmony within any group that one belongs to” and “to respect decisions made by one’s group/collective.” Items were rated on a 5-point scale (1 = *Not at all important*; 5 = *Very important*), $M = 3.51$, $SD = 0.45$. The reliability of the scale was $\alpha = .75$.

Need to for closure. Need for closure was measured using a 20-item, short version of the need for closure scale (NFCS; Houghton & Grewal, 2000). Participants were asked to rate their opinions on items such as, “When thinking about a problem, I consider as many different opinions on the issue as possible (R)” and “Even after I have made up my mind about something, I am always eager to consider a different opinion (R).” The items were rated on a 5-point scale (1 = *Strongly disagree*; 5 = *Strongly agree*), $M = 2.98$, $SD = 0.39$. The reliability of the scale was $\alpha = .65$. Although the reliability of the NFCS was relatively low, it is consistent with previous research (De Dreu, Koole, & Oldersma, 1999; Orehek et al., 2010).

Evaluation of supervisor’s fairness as a dependent variable. Supervisor’s fairness was measured with the following three items: “How fair was the graduate student overall (1 = *Very unfair*; 7 = *Very fair*)?”; “How polite was the graduate student overall (1 = *Not at all*; 7 = *Very much so*)?”; and “How respectful was the

Table 1. Hierarchical regression analysis for three-way interaction of supervisor justice towards other, collectivism (COLL), and need for closure (NFC) predicting evaluations of supervisor's fairness

	1	2	3	4
Intercept	6.20 (.11)**	6.18 (.11)**	6.20 (.11)**	6.23 (.11)**
Personal justice (SELF, -1 = <i>just</i> ; 1 = <i>unjust</i>)	-.28 (.11)*	-.27 (.11)*	-.29 (.11)*	-.29 (.11)**
Other's justice (OTHER, -1 = <i>just</i> ; 1 = <i>unjust</i>)		-.16 (.11)	-.14 (.11)	-.17 (.11)
COLL		.06 (.11)	.10 (.11)	.19 (.11) [†]
NFC		.07 (.11)	.11 (.11)	.09 (.11)
OTHER by COLL			-.17 (.12)	-.16 (.11)
OTHER by NFC			.22 (.11) [†]	.24 (.11)*
COLL by NFC			.08 (.12)	.03 (.12)
OTHER by COLL by NFC				.30 (.12)*
ΔR^2	.08*	.04	.09 [†]	.07*
Model R^2	.08*	.12	.20 [†]	.28*

Note: $N = 78$. Parameter estimates are unstandardized. Standard errors are shown in parentheses.

[†] $p < .10$;

* $p < .05$;

** $p < .01$.

graduate student overall (1 = *Not at all*; 7 = *Very much so*)?" The items were adopted from Lind et al. (1998). Importantly, when each item was treated as a single-item dependent variable, the results were highly similar across the three items. We therefore combined the three items into one scale ($M = 6.20$, $SD = 0.99$). The scale had a Cronbach's α of .85.

Results

Manipulation checks. As expected, we found that the other's injustice manipulation influenced perceptions of other's opportunities for voice, $b = -0.39$, $t(76) = -3.65$, $p < .001$, Cohen's $d = 0.84$, such that individuals perceived that others had less opportunity for voice in the low justice condition ($M = 4.03$, $SD = 2.08$) than in the high justice condition ($M = 5.61$, $SD = 1.75$). Perceptions of other's opportunity for voice were not predicted by collectivism, $b = -0.02$, $t(76) = -0.21$, $p = .84$; need for closure, $b = -0.05$, $t(76) = -0.45$, $p = .65$; nor their interaction $b = -0.05$, $t(74) = -0.40$, $p = .69$.

The personal injustice manipulation influenced perceptions of the self's opportunities for voice, $b = -0.53$, $t(76) = -2.35$, $p = .02$, Cohen's $d = 0.54$, such that individuals perceived that the self had less opportunity for voice in the low justice condition ($M = 3.80$, $SD = 2.03$) than in the high justice condition ($M = 4.87$, $SD = 1.98$). Perceptions of self's opportunity for voice were not predicted by collectivism, $b = 0.11$, $t(76) = 0.45$, $p = .66$; need for closure, $b = -0.33$, $t(76) = -1.41$, $p = .16$; nor their interaction, $b = -0.07$, $t(74) = -0.27$, $p = .79$.

Test of hypothesis. We tested the hypothesized interaction between other's (in)justice manipulation (where the just condition was coded -1 and the unjust condition was coded 1), collectivism, and need for closure on the dependent variable of interest: evaluation of supervisor's fairness.

We ran one hierarchical regression, in which we controlled for personal (in)justice in Step 1 and entered the main effects of other's (in)justice, collectivism, and need for closure in Step 2, three two-way interactions in Step 3, and the hypothesized three-way interaction in Step 4 (see Table 1 for complete results). Notably, we control for personal (in)justice to ascertain to what extent the hypothesized three-way interaction can account for variance in perceptions of supervisor fairness over and above personal justice treatment. We also report results without controlling for personal (in)justice. In the figures referenced later, we graphed the three-way interactions at the 25th and 75th percentiles of collectivism and need for closure scores (Aiken & West, 1991).¹ Collectivism and need for closure scores were converted into z-scores to ease graphing and simple slope analyses.

In Step 1, the effect of personal injustice was significant, $b = -0.28$, $t(76) = -2.57$, $p = .01$, with individuals treated unjustly rating supervisory fairness lower. In Step 2, no significant effects were found. In Step 3, the other's (in)justice manipulation by need for closure interaction was marginally significant, $b = 0.22$, $t(70) = 1.91$, $p = .06$, such that lower (vs. higher) need for closure lead to a higher perception of unfairness when the other was treated unjustly versus justly. This two-way interaction was qualified by the hypothesized three-way interaction, $b = 0.30$, $t(69) = 2.59$, $R^2 = 7.1\%$, $p = .01$, Cohen's $d = 0.62$, observed power = 0.72 (Table 1; Figure 1).² The three-way interaction remained significant when personal injustice was not

¹Collectivism and need for closure were graphed at 25th and 75th percentiles because predicted scores based on conventional values of +/-1 SD exceeded the maximum of the dependent variable scale.

²We conducted a multivariate outlier analysis by computing Mahalanobis D^2 to make sure that this result was not the product of very few, unusual cases. The analysis indicated that there were no multivariate outliers (collectivism by need for closure) in the dataset (all cases $p > .001$).

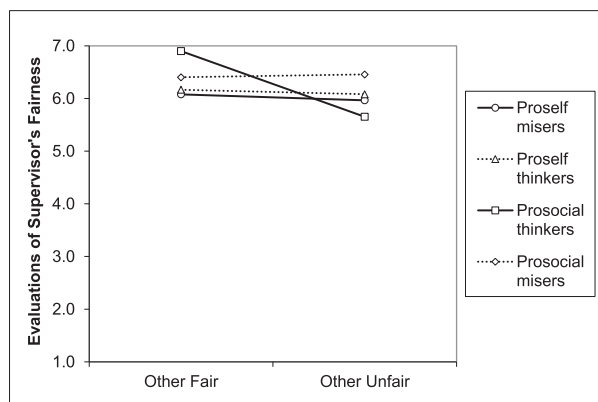


Fig. 1: Study 1: Three-way interaction of other's justice, collectivism, and need for closure predicting evaluations of supervisor's fairness. Collectivism and need for closure are graphed at 25th and 75th percentiles because predicted scores based on conventional values of ± 1 SD exceeded the maximum of the dependent variable scale

entered into the regression, $b = 0.30$, $t(70) = 2.49$, $p = .02$.³

Simple slope analyses⁴ indicated that other's unfair (vs. fair) treatment led to lower perceptions of supervisor fairness for individuals who were both higher (vs. lower) on collectivism and lower (vs. higher) on the need for closure, $t(69) = -3.66$, $p = .0002$ (one-tailed). However, the other's unfair (vs. fair) treatment did not lead to lower perceptions of supervisor fairness for individuals who were (i) lower (vs. higher) on collectivism and lower (vs. higher) on the need for closure, $t(69) = -0.37$, $p = .36$ (one-tailed), (ii) lower (vs. higher) on collectivism and higher (vs. lower) on the need for closure, $t(69) = -0.25$, $p = .40$ (one-tailed), and (iii) higher (vs. lower) on collectivism and higher (vs. lower) on the need for closure, $t(69) = 0.17$, $p = .43$ (one-tailed).⁵

Discussion

Study 1 results are supportive of the stated hypothesis. Specifically, we found that participants with high collectivism and a low need for closure were more influenced by other's justice in their judgments of supervisor fairness. The study directly addresses Deutsch's (1983) call for greater attention to the interpersonal determinants of justice judgments by examining specific individual differences that result in the social transmission of justice. Our findings also

have high practical utility. By pinpointing which individual differences make the social transmission of justice more likely, we establish measurable indicators of when people will be impacted by another's justice treatment. We believe the consideration of these individual differences can be potentially helpful in predicting justice reactions in response to organizational as well as public policy decisions.

One limitation of Study 1 was that our simulated teamwork environment did not encompass all of the social dynamics of actual relationships, and as such, it is possible that the individual differences we focus on have less predictive validity outside of the laboratory where other variables are of more import (e.g., length and quality of relationships and individual and organizational performance). To address this possibility, Study 2 examined whether another's treatment predicted behavioral reactions of actual employees. Moreover, Study 1 is limited by our exclusive focus on justice perceptions, which may or may not translate into actual behaviors. To address this limitation, our focus in Study 2 was on whether individual differences that predict fairness evaluations of the supervisor could also predict behavior towards the supervisor.

Study 2

In Study 2, we conducted a conceptual replication in the field to examine whether our findings generalize to fairness reactions of actual employees in the form of organizationally relevant actions such as supervisor-directed citizenship behaviors. Despite the existence of a well-documented relationship between personal justice experiences and citizenship behaviors (Cohen-Charash & Spector, 2001; LePine et al., 2002), to our knowledge, the social transmission of justice processes have not been linked to supervisor-directed citizenship behavior. Given that citizenship behaviors are at the discretion of the employee, these behaviors can be particularly sensitive to justice treatment (Cohen-Charash & Spector, 2001; LePine et al., 2002). As such, to the extent that others' (un)just treatment at the hand of the supervisor influences the self, citizenship behaviors towards the supervisor is likely to be affected.

Sample and Design

Participants were 163 (87 men and 76 women) employees from a variety of industries (e.g., accounting, advertising, banking, defense, education, real estate, software, and transportation). The employee sample was demographically diverse, including 50.6% Caucasians, 21.4% Hispanics/Latinos, 11% Asians, 10.4% African Americans, 3.7% other, 0.6% Native Americans, 0.6% biracial, and 1.8% non-response. The average age in the employee sample was 25.1 years ($SD = 7.37$), and their average organizational tenure was 3.14 years ($SD = 3.89$). Over 50% of respondents were full-time employees of the organization. In order to avoid common source bias, we also recruited 129

³Because the dependent variable was negatively skewed (skewness = -1.20 , $SE = 0.27$), we replicated the reported analysis using robust estimation of standard errors, which yielded a significant three-way interaction (Wald $\chi^2 = 13.62$, $b = 0.30$, $SE = 0.08$, $p < .0001$).

⁴Collectivism and need for closure were tested at 25th and 75th percentiles.

⁵We replicated the reported analysis with robust standard errors, which yielded a significant simple slope for higher collectivism and lower need for closure participants ($t = -4.34$, $p = .00002$), but not others (all $ps > .40$).

supervisors of these focal participants in order to obtain supervisory ratings of employee citizenship behavior towards supervisors. The supervisor sample consisted of 64.1% men and 35.9% women with an average age of 39 years ($SD=10.30$) and an average organizational tenure of 9.38 years ($SD=7.62$).

All other variables, including perceptions of supervisor's justice towards other employees, individual differences in collectivism, and need for closure, were assessed by asking the focal participants.

Procedure. In order to recruit participants, we used a snowball sampling technique. We first sent an electronic message to 312 students in upper-level undergraduate management courses at a large southeastern United States university and provided them with the opportunity to participate in a study for extra credit. Students were invited to participate if they met the criterion of presently working for at least 20 hours per week and, if they did not, were asked to invite a working adult that they knew to complete the survey. This data collection technique has been used successfully in a number of other studies (Grant & Mayer, 2009; Mayer, Kuenzi, Greenbaum, Bardes, & Salvador, 2009). A total of 163 employees participated, with a response rate of 54%. We instructed employees to visit a website to complete a survey and send an electronic survey link to their immediate supervisor. A total of 129 supervisors responded. We assured all participants that their responses would remain confidential. Employees filled out all of the measures with the exception of citizenship behavior towards supervisor, which was filled out by the supervisor regarding the focal employee.

Predictor Measures

Collectivism. Collectivism was measured with a 12-item scale (Triandis & Gelfand, 1998). Participants were asked to rate how important they think certain behaviors are, such as "to maintain harmony within any group that one belongs to" and "to respect decisions made by one's group/collective." Items were rated on a 7-point scale (1 = *Not at all important*; 7 = *Very important*), $M=5.12$; $SD=0.85$. The scale had a Cronbach's α of .82.

Need for closure. Need for closure was measured using a 20-item, short version of the NFCS (Houghton & Grewal, 2000). Participants were asked to rate their opinions on items such as, "When thinking about a problem, I consider as many different opinions on the issue as possible (R)" and "Even after I have made up my mind about something, I am always eager to consider a different opinion (R)." The items were rated on a 7-point scale (1 = *Strongly disagree*; 7 = *Strongly agree*), $M=4.59$; $SD=0.65$. The scale had a Cronbach's α of .82.

Perceptions of supervisor's justice towards other employees. Participants were asked to reflect

on the fairness of procedures that were used to determine the outcomes and events that affect their coworkers on the job (e.g., pay raises and promotions). This scale was adopted from Colquitt's (2001) 7-item measure of personal procedural justice by changing the referent from "self" to "my coworkers." An example item was "My coworkers have been able to express their views and feelings during those procedures" (1 = *Strongly disagree*; 7 = *Strongly agree*), $M=3.18$; $SD=1.18$. All items were reverse coded such that higher values indicated greater procedural injustice. The scale had a Cronbach's α of .92.

Perceptions of supervisor's justice towards self. Perceptions of personal injustice were measured with Colquitt's (2001) 7-item measure. Participants were asked to refer to the procedures that are used to determine outcomes or events that affect them on the job (e.g., pay raises and promotions), in answering the questions. An example item is, "I have been able to express my views and feelings during those procedures (1 = *Strongly disagree*; 7 = *Strongly agree*)" ($M=3.16$; $SD=1.15$). In order to present the results in a manner consistent with Study 1, all items were reverse coded such that higher values indicated greater procedural injustice. The scale had a Cronbach's α of .91.

Criterion Measure

Supervisor-directed citizenship behavior represents helping behavior that exceeds job expectations and was measured with the following four items: "Gives advance notice to you when s/he is unable to come to work," "Informs you when an unforeseen problem occurs on the job," "Completes work assigned by you as soon as possible," and "Assists you with your work when not asked." Items were measured on a 7-point scale (1 = *Strongly disagree*; 7 = *Strongly agree*), $M=5.50$; $SD=1.55$. The items were drawn from Bentein, Stinglhamber, and Vandenberghe (2002); McNeely and Meglino (1994), and Williams and Anderson (1991). The scale had a Cronbach's α of .92.

Results

Test of hypothesis. We tested the hypothesized interaction between perceptions of coworkers' injustice, collectivism, and need for closure on the criteria of interest: supervisor-directed citizenship behavior. We ran one hierarchical regression. In Step 1, we controlled for perceptions of personal procedural injustice. The main effects of perceptions of coworker procedural injustice, collectivism, and need for closure were entered in Step 2. Three two-way interactions were entered in Step 3, and the hypothesized three-way interaction in Step 4. Notably, we control for personal procedural justice to ascertain to what extent the hypothesized three-way interaction can account for variance in supervisor-directed citizenship

Table 2. Hierarchical regression analysis for three-way interaction of supervisor injustice towards other employees, collectivism (COLL), and need for closure (NFC) predicting supervisor-directed citizenship behavior

	1	2	3	4
Intercept	5.50 (.14)**	5.51 (.14)**	5.47 (.15)**	5.49 (.15)
Personal justice (SELF)	-.14 (.13)	.08 (.28)	.10 (.28)	.07 (.28)
Others' justice (OTHER)		-.16 (.28)	-.16 (.28)	-.20 (.27)
COLL		.21 (.15)	.17 (.16)	.23 (.16)
NFC		.13 (.15)	.13 (.15)	.26 (.16)
OTHER by COLL			-.15 (.15)	-.09 (.15)
OTHER by NFC			.08 (.15)	.16 (.15)
COLL by NFC			-.02 (.12)	.09 (.13)
OTHER by COLL by NFC				.20 (.09)*
ΔR^2	.01	.03	.01	.04*
Model R^2	.01	.04	.05	.09*

Note: $N = 129$. Parameter estimates are unstandardized. Standard errors are shown in parentheses.

† $p < .10$;

* $p < .05$;

** $p < .01$.

behavior over and above personal procedural justice perceptions. We also report results without controlling for personal procedural justice perceptions. In the figures referenced later, we graphed the three-way interactions at one standard deviation above and below the mean of perceived others' (in)justice, collectivism, and need for closure (Aiken & West, 1991). Collectivism and need for closure means were converted into z -scores prior to analysis.

No main effects or two-way interactions were significant in Steps 1–3. In Step 4, the hypothesized three-way interaction emerged, $b = 0.20$, $t(120) = 2.14$, $R^2 = 3.5\%$, $p = .03$, Cohen's $d = 0.39$, observed power = 0.57 (Table 2; Figure 2).⁶ Notably, the three-way interaction remains significant when personal procedure justice is not entered into the regression, $b = 0.20$, $t(121) = 2.16$, $p = .03$.⁷

Simple slope analyses⁸ indicated that others' more (vs. less) unfair treatment led to lower helping behavior for individuals with higher (vs. lower) collectivism and lower (vs. higher) need for closure, $t(120) = -1.71$, $p = .05$ (one-tailed). However, others' more (vs. less) unfair treatment did not lead to lower helping behaviors for individuals with (i) lower (vs. higher) collectivism and lower (vs. higher) need for closure, $t(120) = -0.14$, $p = .44$ (one-tailed); (ii) lower (vs. higher) collectivism and higher (vs. lower) on the need for closure, $t(120) = -0.41$, $p = .34$ (one-tailed); and (iii) higher (vs. lower) collectivism and

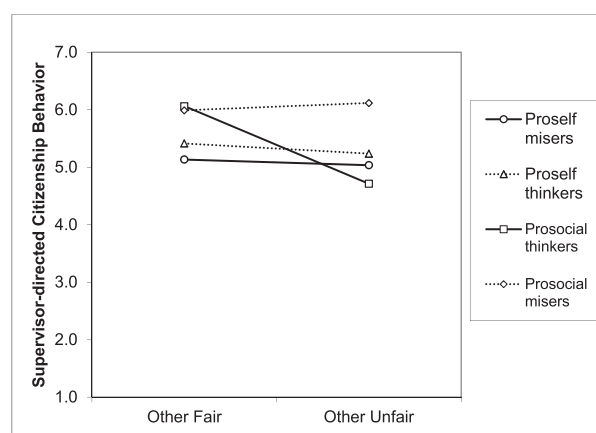


Fig. 2: Study 2: Three-way interaction of others' justice, collectivism, and need for closure predicting supervisor-directed citizenship behavior (supervisor reported). All variables are graphed at ± 1 SD

higher (vs. lower) need for closure, $t(120) = 0.18$, $p = .43$ (one-tailed).⁹

Discussion

Study 2 results provide further evidence for our hypothesis. We found that the perceived justice of a supervisor had a greater influence on supervisor-directed citizenship behavior for employees who were higher on collectivism and lower on the need for closure. The fact that co-occurrence of high collectivism and low need for closure explained reactions to others' justice in a field setting underscores the robustness of the laboratory results. Moreover, the magnitude of the three-way interaction, which explained 3.5% in supervisor-directed citizenship behavior, was

⁶We conducted a multivariate outlier analysis by computing Mahalanobis D^2 to make sure that this result was not the product of very few, unusual cases. The analysis indicated that there were no multivariate outliers (collectivism by need for closure) in the dataset (all cases $p > .001$).

⁷Because the dependent variable was negatively skewed (skewness = -1.52 , $SE = 0.21$), we replicated the reported analysis using robust estimation of standard errors, which yielded a significant three-way interaction (Wald $\chi^2 = 6.81$, $b = 0.20$, $SE = 0.08$, $p = .009$).

⁸All variables were tested at ± 1 SD.

⁹We replicated the reported analysis with robust standard errors, which yielded a significant simple slope for higher collectivism and lower need for closure participants ($t = -2.60$, $p = .005$), but not others (all $ps > .29$).

larger than the magnitude of interactions typically found in organizational research (Aguinis, Beaty, Boik, & Pierce, 2005).

General Discussion

Scholars have long recognized that justice judgments are a product of personal experiences as well as social construal processes (Deutsch, 1983). However, although much is known about the effects of personal justice experiences (e.g., Folger & Cropanzano, 2001), there has been a relative lack of research on how another's justice can become self-relevant. Moreover, research that does explore the social construction of justice has focused on immediate situational drivers of justice transmission such as personal justice experiences (e.g., Lind *et al.*, 1998) and the source of the justice information (van den Bos & Lind, 2001). Complementing research on justice-oriented individual differences such as justice orientation (Rupp *et al.*, 2003), belief in a just world (Lerner, 1980), and justice sensitivity (Schmitt *et al.*, 2005), our research explores the role of individual differences in understanding for whom justice is socially contagious.

Across both a laboratory and a field study, our results suggest that the social transmission of justice is highest for individuals with both higher (vs. lower) collectivism and lower (vs. higher) need for closure. In Study 1, we found that such individuals were more influenced by their teammate's (in)justice treatment when evaluating supervisor's fairness. In Study 2, we found that such individuals exhibited lower supervisor-directed citizenship behavior when the supervisor unjustly (vs. justly) treated fellow employees. By pinpointing novel individual differences that make the social transmission of justice treatment more likely, we establish additional measurable indicators of when people will be impacted by another's justice treatment.

Implications, Limitations, and Future Directions

The present set of studies has important implications for the motivated processing literature, research on collectivism, and justice. First and foremost, the MIP perspective (De Dreu & Carnevale, 2003) provides a useful conceptual lens for examining how others' treatment influences one's justice judgments, intentions, and behavior. Notably, although we focused on the social transmission of procedural justice in particular, this theoretical perspective implies that the interaction of social and epistemic motives should also result in the social transmission of other forms of justice, such as distributive and interpersonal. Moreover, although the research presented conceptualizes social and epistemic motives as individual differences in collectivism and need for closure, the application of the dual-motive perspective to justice transmission allows for numerous other research directions. For example, as emphasized by De Dreu, Nijstad, and van Knippenberg (2008), a wide

array of individual differences can be described as social motives (e.g., agreeableness and need for affiliation) and epistemic motives (e.g., need for cognition and uncertainty orientation).

Notably, it is conceivable that justice-oriented beliefs such as justice orientation (Rupp *et al.*, 2003), belief in a just world (Lerner, 1980), and justice sensitivity (Schmitt *et al.*, 2005) mediate the influence of social and epistemic motives on justice transmission. For instance, it is possible that high collectivism paired with low need for closure yield greater observer justice sensitivity, which then increases justice transmission. This hypothesis waits future empirical testing.

Overall, the strength of the information processing model lies in its simultaneous consideration of both social and epistemic motives. Whereas the former is the cornerstone of social and cultural psychology scholarship, the latter is more prominent in the social cognitive literature. Given that both motives, as reviewed, have garnered significant research attention in their respective literatures, their interaction promises to build important bridges across communities of scholars.

For instance, although abundant theoretical work supports a connection between collectivism and contagion of others' attitudes (Markus & Kitayama, 1991; Shweder & Bourne, 1984; Triandis & Gelfand, 1998), our studies are the first to show that controlling for personal treatment, collectivism is a reliable predictor of justice transmission for individuals with a lower need for closure. Notably, our findings do not speak to how collectivism levels across cultures would impact the transmission of justice, as we both conceptualized and measured collectivism at the level of the individual.

Importantly, both studies investigate the social transmission of justice within interpersonal situations where the others are either fellow teammates or coworkers. In fact, it is conceivable that trait collectivism impedes justice transmission when others are outgroup members or strangers who are outside of one's circle of care (Gelfand *et al.*, 2012). On the other hand, other social motives, such as the concern with universalism (Schwartz, 2007), or identification with all humanity (McFarland & Hornsby, 2015; Reese, Proch, & Finn, 2015), may expand that circle of care to encompass unfamiliar others.

Moreover, our research sheds light on the conditions under which a low need for closure leads to the social transmission of (in)justice. Although it is well known that greater information processing is a hallmark of individuals with a lower need for closure, our research clearly shows that a lower need for closure in combination with higher collectivism results in greater social attunement. Still, it is important to consider that the influence of a lower need for closure on information processing depends on the overall salience of information about others' justice treatment (Higgins, 1996). It is possible that a lower need for closure has little import in very strong situations, where the information about others' treatment is exceedingly salient and is easy to process prior to judgment.

Importantly, our studies do not address the question of whether it is justice and/or injustice that is chiefly susceptible to social transmission. At this point, we can only say that social transmission of justice in general is more likely for individuals high on collectivism and low on the need for closure. Future researchers may want to pinpoint whether others' justice versus injustice has a greater impact on fairness perceptions for such individuals. Moreover, our research does not support the idea that a specific justice dimension (e.g., provision of voice) is particularly suited for the social transmission of justice. For instance, (in)justice manipulation in Study 1 combines the other's voice/no voice communication with an overall fairness assessment. As such, we can only say that the other's justice in general, as communicated by that other, will be more integrated into the fairness assessments of individuals high on collectivism and low on the need for closure.

In all, our results suggest that chronically higher collectivism and a lower need for closure work in concert to make another's justice relevant to personal judgment and behavior. As such, our findings challenge solipsistic accounts of justice by drawing greater attention to the individual differences that result in the social transmission of justice in organizations and society.

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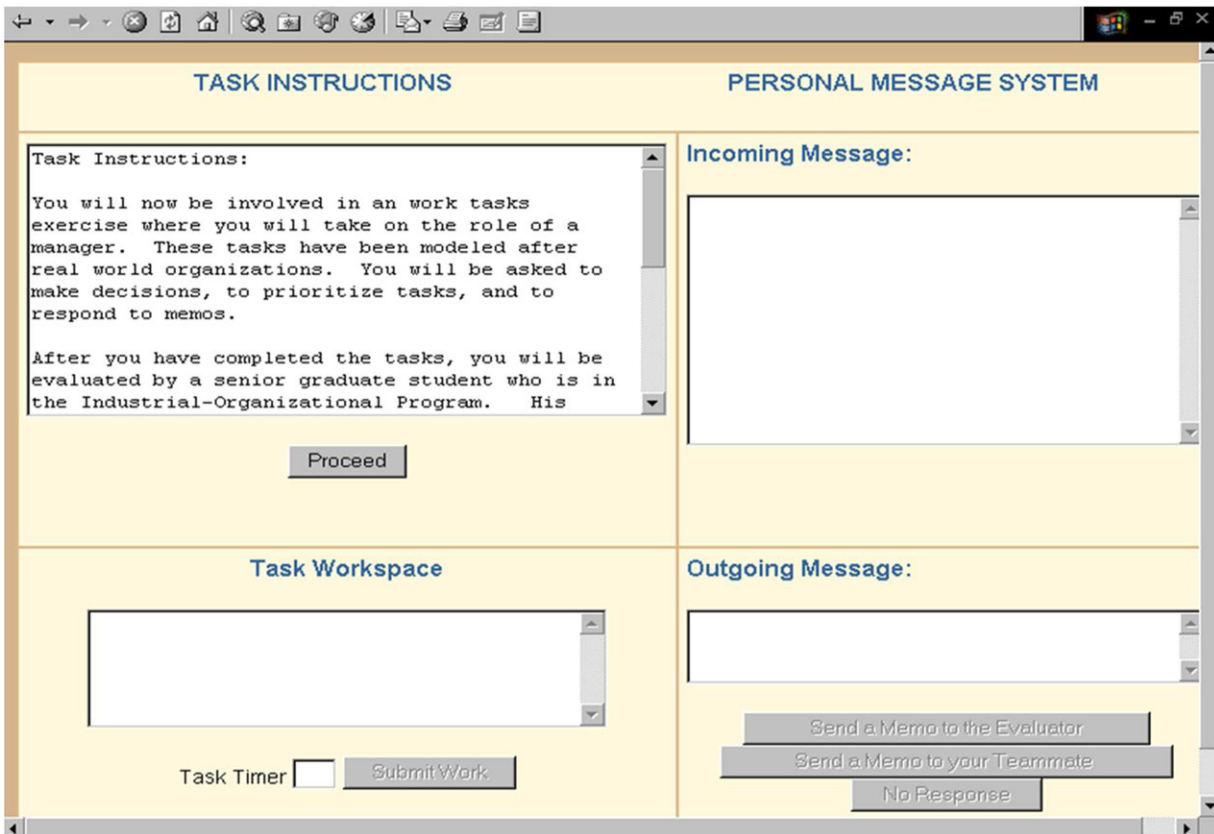
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Appendix A: Computer Screenshot of Workspace for Organizational Simulation Tasks



Appendix B: Organizational Simulation Tasks

Task 1:

FROM: collins@RLKConsult.com
 RE: Location of new office
 I am writing to get your opinion. As you know, we are going to build a new office in order to expand our company. We can open the office in New York or Chicago. The office space costs less in Chicago, but the taxes will be higher for the first five years of business. After five years taxes will be the same in either city. In New York the office space costs more, but we get a five year tax break. The money really equals out overall if we figure an average level of business over the next five years. I would like your opinion on what we should do.
 R. Collins, CEO

Task 2:

FROM: foley@RLKConsult.com
 RE: Hiring Decision
 As you may know, one of the associates in our group had to resign last month because of medical problems. Due to the high volume of business our group has been handling recently, we need to fill the position immediately. Human resources has sent me the resumes of 72 applicants for the position. Due to the tight economy, it seems that we have an abundance of highly qualified applicants. We do not have time to interview all of these candidates. Realistically, we can only interview 20 people if we want to fill the position within the month. In determining which of these candidates will receive interviews we need to decide whether we want to emphasize either performance in business school or past experience in the consulting industry. Please let me know which strategy you recommend.
 J. Foley, Senior Associate

Task 3:

FROM: green@RLKConsult.com

RE: Plan for Attracting New Business

The company is currently debating what the best plan is for attracting new clients to our company. I have been placed in charge of developing different strategies and surveying employees' opinions of these strategies. I would like your opinion on which of two general strategies you believe to be more effective. The first strategy involves seeking contracts to do large-scale projects. Developing presentations to use to solicit business will be fairly time intensive as large projects must be tailored to the needs of each specific company. If we do get clients to sign with us on big projects, each project will be hugely profitable. The second strategy involves focusing our efforts on contracts to do small-scale projects that address common problems in companies. We would not have to spend much time developing presentations for each company we want to solicit business from because many organizations can often benefit from the same or similar small-scale projects. The payoffs from smaller contracts, however, are not as profitable. Please let me know which of these strategies you think will be more profitable for RLK Consulting.

T. Green, Senior Associate

Task 4:

FROM: Collins@RLKConsult.com

RE: Summer Camp Project

As you know, we've decided recently to consult with Camp Muskoka, a summer camp organization for kids, ages 8-12. Camp Muskoka has been experiencing declining revenues over the years and want our help to increase profit. Based on my interview with them, it seems like they have two major issues. First, the quality of counselors they have is very poor. Second, they seem to suffer from poor marketing strategies. I would like you two to work on different aspects of this project. While you brainstorm a couple ways to help make the counselors more talented, your partner will brainstorm a couple ways to improve the marketing of Camp Muskoka. I will look at both your ideas together and come up with a final plan. I appreciate your help!

R. Collins, CEO.