

Cooperating When “You” and “I” Are Treated Fairly: The Moderating Role of Leader Prototypicality

David De Cremer and Marius van Dijke
Erasmus University Rotterdam

David M. Mayer
University of Michigan

We developed a model predicting that leaders are most effective in stimulating follower cooperation when they consistently treat all group members in a fair manner and are prototypical (i.e., representative of the group’s values and norms). In support of this idea, we consistently found that group members cooperated most when prototypical leaders treated themselves as well as their coworkers fairly across a laboratory experiment and 3 cross-sectional field studies. These findings highlight the important role of others’ fairness experiences and perceptions in influencing one’s own reactions and also the role of leaders as representing the group’s values and norms. We discuss implications for fairness theory and the leader prototypicality literature.

Keywords: procedural fairness, others’ procedural fairness, OCB, cooperation, prototypicality

It is often crucial for the effective functioning of teams, workgroups, and organizations that members are willing to engage in behaviors that are beneficial to the collective, rather than focusing solely on their own benefits (Derlaga & Grzelak, 1982; Smith, Carroll, & Ashford, 1995). Hence, promoting cooperation among group members is considered a core function of leadership (Hogan, Curphy, & Hogan, 1994). In the present research, we operationalize cooperation as being related to helping behavior, promoting the collective interest, and organizational citizenship behavior (OCB; cf. Derlaga & Grzelak, 1982; Podsakoff, Ahearne, & MacKenzie, 1997).

An effective way for leaders to promote cooperation is by enacting procedures in a fair manner (for meta-analyses, see Cohen-Charash & Spector, 2001; Colquitt, 2001). This is because procedural fairness indicates that individuals are valued and respected members of a group that they can be proud of, which contributes positively to their group identity (De Cremer & Tyler, 2005; Tyler, 1999). This positive group identity consequently improves cooperation (Blader & Tyler, 2009). However, a limitation of this research and of the overwhelming majority of procedural fairness studies is that scholars have typically focused on how people’s personal procedural fairness experiences motivate cooperative behavior (for a recent overview, see Blader & Tyler, 2009). Extending prior work, we propose that examining the impact of procedural fairness on cooperation within social settings implies that the fairness experiences of all actors involved need to

be examined. We argue that in a specific context, procedurally fair treatment that group members experience themselves stimulates cooperation, particularly when other group members are also treated procedurally fairly.

Consistent with the identity processes that we theorize underlie the interactive effect of procedurally fair treatment for self and others on cooperation, we also study the role of whether the leader is considered legitimate to communicate group identity-related information, such as fair treatment. Building on the social identity analysis of leadership (Hogg & van Knippenberg, 2003), we advance the hypothesis that leader prototypicality, which refers to the leader being representative of the group’s identity and values, is one such leadership type (D. van Knippenberg & Hogg, 2003). Specifically, we test whether the positive interactive effect of procedural fairness for oneself and for fellow group members on cooperation is pronounced when the enacting leader is prototypical of the group.

We believe that investigating this three-way interaction effect on cooperation is important for three reasons. First, this research extends the traditional “first person” emphasis of procedural fairness research and moves toward a more social dynamic approach by exploring the effects of one’s own and others’ treatment on one’s willingness to cooperate toward the group’s goals. Second, we identify a theoretically relevant moderator variable related to the enacting leader (prototypicality) that is in line with the proposed identity process underlying the Procedural Fairness Self \times Procedural Fairness Others interaction. As such, we highlight when and, thus, why a social dynamic approach of procedural fairness is most likely to explain group member cooperation. Third, these studies allow us to integrate two independent research traditions on procedural fairness and leadership. This approach responds to D. van Knippenberg, De Cremer, and van Knippenberg’s (2007, p. 129) comment that “remarkably little research has been done on the interactive effects of leader fairness and other aspects of leadership . . . and here potentially lies the greatest challenge for research in leadership and fairness.”

This article was published Online First August 30, 2010.

David De Cremer and Marius van Dijke, Rotterdam School of Management, Erasmus University Rotterdam, Rotterdam, the Netherlands; David M. Mayer, Department of Management and Organizations, Stephen M. Ross School of Business, University of Michigan.

Correspondence concerning this article should be addressed to David De Cremer, Rotterdam School of Management, Erasmus Centre of Behavioural Ethics, Erasmus University Rotterdam, P.O. Box 1738, 3000DR Rotterdam, the Netherlands. E-mail: ddecremer@rsm.nl

The Interactive Effect of Own and Others' Procedural Fairness Experiences

The preponderance of research on the effects of procedural fairness on a variety of attitudinal and behavioral variables primarily focuses on the self-oriented consequences of being treated fairly or unfairly (for meta-analyses, see Cohen-Charash & Spector, 2001; Colquitt, 2001). Kray and Lind (2002, p. 906) noted that "with a few notable exceptions, the study of perceived justice has been a 'first-person' undertaking." Motivated by such claims, fairness scholars have recently started to attend to the idea that procedural fairness experiences may be given more meaning when one also examines the fairness experiences of others. Thus, similar to earlier research on outcome fairness (e.g., Adams, 1965; Crosby, 1976), procedural fairness research has begun to highlight the role of social comparisons (DeGoeij, 2000; Jones & Skarlicki, 2005).

To date, however, few published empirical studies have addressed the interactive effect of own and others' procedural fairness experiences. Lind, Kray, and Thompson (2001) showed in an experimental study that fairness judgments were influenced more by own (mild) unfair treatment (i.e., receiving no voice) than by others' (severe) unfair treatment. A subsequent experiment by Kray and Lind (2002) qualified this finding by demonstrating that when people were treated unfairly, their fairness judgments were affected by the unfair treatment of others. These studies suggest that the influence of others' procedural fairness experiences is quite limited.

Van den Bos and Lind (2001), however, found (in two experiments) that the relationship between one's own treatment and fairness judgments was stronger when others received treatment similar to one's own treatment. Van den Bos and Lind thus concluded that "Other-oriented justice effects . . . appear to be every bit as strong as were our self-oriented justice effects" (p. 1333). This conclusion received support from Colquitt's (2004) findings (in a field study and an experimental study) that in teams, role performance increased when fairness experiences were consistently positive within the team (particularly so when interdependence within the team was high). Finally, in a field study, De Cremer, Stinglhamber, and Eisenberger (2005) also demonstrated that own procedural fairness experiences were positively related to own positive emotions, but particularly so if others were treated fairly. Prior work thus suggests that the procedural fairness experiences of others can reveal positive effects, particularly if both self and others receive fair procedural treatment. In the present article, we develop an argument concerning when procedural fairness for self and others will interactively stimulate one important outcome variable: cooperation.

Relational models of procedural fairness (Lind & Tyler, 1988) note that fairly enacted procedures signal that the group respects and values its members. This relational information helps shape their group identity. Moreover, the group engagement model (Tyler & Blader, 2003) and the self-based model of cooperation (De Cremer & Tyler, 2005) suggest that this positive influence of procedural fairness on members' group identity consequently promotes cooperation (for empirical evidence, see De Cremer & Tyler, 2005; Blader & Tyler, 2009; Tyler & Lind, 1992). We argue that this relational effect of procedural fairness will be pronounced if all members (i.e., self and others) receive procedurally fair treatment. We expect this because if fair procedures are consistently used across both self and others, then the message is communicated that the group (by means of its enacting leader) treats its

members as equal and worthwhile members. This should be particularly effective in increasing group members' pride in the group (cf. Tyler & Blader, 2002). Further, receiving the same positive treatment as others promotes feelings of being a respected and valued group member (Simon, Lücken, & Stürmer, 2006). This enhances group identity (Deutsch, 1985), which is positively related to cooperation (Blader & Tyler, 2009; Tyler, 1999).

If our argument regarding identity-relevant implications of procedural fairness for self and for others is valid, this implies that the two-way interaction will be more likely to emerge when the procedures are enacted by a leader who is representative of the group's identity (i.e., its norms and values) because fair procedures should then be particularly influential in communicating group identity-relevant information. The social identity analysis of leadership refers to such leaders as prototypical leaders (Hogg, 2001). In the following section, we argue how leader prototypicality moderates the effect of a procedurally fair treatment for both oneself and for others on cooperation.

Leader Prototypicality as a Moderator

Social identity and self-categorization theories (Tajfel & Turner, 1986; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) describe how group members cognitively represent the groups of which they are members by prototypes. A prototype is a fuzzy set of attributes, values, and goals that define one's group in reference to other groups that are in mind for comparison (i.e., making a group prototype contingent on the specific intergroup context). For instance, when members of a business school compare themselves with psychologists (i.e., other scientists they often interact with), they may view themselves as doing applied, practically relevant research. When comparing themselves with managers (i.e., other professionals they often interact with), they may view themselves as scientists who want to understand the basic workings of social reality. In the former case, the most "applied" researcher may be the most prototypical group member; in the latter case, the most "basic" researcher may be the most prototypical group member.

A prototypical group representation is thus an abstract, dynamic image of what "we" are and how "we" should think, feel, and behave (Hogg, 2001), and a group member is prototypical if he or she represents this image (i.e., the group's values and goals; Hains, Hogg, & Duck, 1997; Hogg, 2001). When group leaders are prototypical (as determined by the intergroup context), they are perceived as more effective, and they are supported more by the members of the group they lead (Hogg & van Knippenberg, 2003; D. van Knippenberg & Hogg, 2003). Moreover, they also positively influence their followers' self-perceived status (van Dijke & De Cremer, 2008). These effects of prototypical leadership directly result from social identity processes as evidenced by laboratory and field studies showing that the effects are restricted to group members who strongly identify with the group (Giessner & van Knippenberg, 2008; Platow & van Knippenberg, 2001; Ullrich, Christ, & van Dick, 2009; van Dijke & De Cremer, 2008, 2010).

Being prototypical of the group may thus be a key determinant of whether a leader can communicate identity-relevant information (van Dijke & De Cremer, 2008; D. van Knippenberg & Hogg, 2003), such as fair treatment (Blader & Tyler, 2009; De Cremer & Tyler, 2005). Indeed, as a prototypical leader is the group member that best represents the group's identity, his or her actions and

decisions signal the group opinion. This observation is relevant for our rationale underlying the interaction effect of procedural fairness for oneself and other group members on cooperation because this effect arguably results from a consistent fair treatment across group members communicating identity information (i.e., respect and pride). Hence, the two-way interaction between own and others' fair treatment should emerge, particularly when procedures are enacted by a prototypical leader. The fairness of procedures toward self and others enacted by a nonprototypical leader should be considered less meaningful in terms of identity information. As a result, no two-way interaction between own and others' fair treatment is expected.

Although there is theoretical support for the relationship between procedural fairness for oneself and for fellow group members as a function of prototypical leadership on cooperation, no empirical research to date has addressed this specific issue. In fact, we know of only three studies that have addressed leader prototypicality as a moderator of fairness effects. Ullrich et al. (2009) focused on *leader endorsement* as an outcome variable and showed that prototypical leaders are endorsed even when they are procedurally unfair, whereas for nonprototypical leaders, their endorsement depends on their procedural fairness. Platow and van Knippenberg (2001) found a similar pattern of findings regarding outcome fairness. These findings primarily demonstrate that prototypical leaders are particularly effective in influencing followers to endorse them (see also Giessner & van Knippenberg, 2008; van Dijke & De Cremer, 2010). Finally, Lipponen, Koivisto, and Olkkonen (2005) demonstrated in a field study that interactional fairness (a form of fairness that is related to procedural fairness but focuses on interpersonal treatment; Colquitt, 2001) is more strongly related to employees' self-assessed respect and pride when the supervisor is highly (rather than lowly) prototypical of the company. These findings suggest that particularly prototypical leaders are effective in influencing identity variables, such as group members' pride and respect. Because of this influence, their actions (such as fair treatment) should be able to affect followers' behavioral responses, such as cooperation.

The Present Research

In sum, we predict that cooperation will be promoted the most when leaders treat both self and others in a procedurally fair manner. This pattern, however, is expected to emerge particularly when procedures are enacted by a prototypical, rather than a nonprototypical, leader. Thus, we hypothesize a three-way interaction such that group members display cooperation particularly when they as well as their fellow group members are treated in a procedurally fair manner by a highly prototypical leader (Hypothesis 1). We tested our hypothesis in four studies using various methods: a laboratory experiment (Study 1); a cross-sectional, single-source field survey (Study 2); and two cross-sectional, multisource field surveys (Studies 3 and 4).

Study 1

Method

Participants and design. One hundred and sixty-one undergraduate students (108 women, 53 men; $M_{\text{age}} = 20.60$ years, $SD =$

1.67) participated voluntarily in exchange for course credits or a monetary reward (€7; approximately \$9 at the time of the study). They were randomly assigned to a 2 (procedural fairness self: voice vs. no voice) \times 2 (procedural fairness other: voice vs. no voice) \times 2 (leader prototypicality: high vs. low) between-subjects design.

Experimental procedure. Participants arrived at the laboratory and were seated in separate experimental cubicles, each containing a table, a chair, and a computer. All information was communicated via the computer.

After being seated, we informed participants that they would engage, together with two other people, in a study about brain-hemispheric dominance and brainstorming in groups ($N = 3$). We reasoned that this would be a believable cover story because the relationship between brain hemispheres and creativity is often presented in the popular press. In the course of this task, they would be able to obtain a financial bonus. We explained that groups are often hierarchically structured and that this would be the case in this study as well. Specifically, the group task would be monitored by a leader who would be chosen from the group of three.

Then, we introduced the prototypicality manipulation (taken from B. van Knippenberg & van Knippenberg, 2005). Participants individually completed a brain-hemisphere dominance test and received bogus feedback concerning their own and other group members' scores on this test. Half of the participants learned that their group was predominantly left-hemisphere dominant; the other half learned that their group was right-hemisphere dominant. Feedback about group members' test scores was given by representing each group member with a letter from A to E and by presenting the position of the five group members on a scale ranging from left- to right-hemisphere dominance (actually, all participants received the letter B and a fairly group-typical score). We briefly explained the results of the test and provided some positive characteristics of left- and right-hemisphere dominance. Then, we announced that a group leader would be assigned who would supervise the upcoming group task.

In the prototypical leader condition, participants learned that the experimenter had decided to assign a leader who was representative of the group as a whole. We stressed that the leader would be the person considered most representative of the characteristics of the group and its members. Then, we assigned Group Member E as the group's leader, allegedly because this group member was most prototypical. In the nonprototypical leader condition, we told participants that the experimenter had decided to assign the person who was least representative of the group to the leadership position. Here, we stressed that the leader would be the person who was most different from and had the least in common with the other group members. Then, we assigned Group Member D to the leader position, allegedly because this person was the least prototypical group member and the only one with deviating hemispheric dominance. Actually, Group Members D and E did not exist, and the alleged leaders' communications were preprogrammed.

After the leader was appointed, we explained the task to the participants. The brainstorming task involved discussing one specific topic in a dyad including the participant and another member (the leader would supervise this pair). The topics addressed issues relevant for student life. We told participants that the quality of the discussion would be evaluated by an independent party and that high-quality discussions would be awarded with a financial bonus (because the experiment finished before the brainstorming task could start, no bonus was allocated). Thus, the higher the quality

of the ideas and conclusions put forward concerning this topic, the higher the financial bonus would be. To increase task commitment, we told the participants that after this negotiation, they would also participate in a subsequent decision-making task in which financial resources could make a real difference, meaning that the financial bonus could be helpful. The topics that could be discussed, and that had to be chosen before the negotiation task began, were as follows: (a) "living and food on campus," (b) "the recently introduced bachelor–master educational system," (c) "student housing facilities in the city," and (d) "free time and studying." The participants also learned that the leader would make decisions on how to proceed and select the topic to discuss.

Then, we introduced the other's procedural fairness manipulation.

In the *voice other* condition, the leader wrote in an e-mail that he wanted to know the opinion of the participant's discussion partner. The participant's discussion partner was thus invited to type in his or her opinion concerning the topic choice.

In the *no voice other* condition, the leader wrote in an e-mail that he did not want to know the opinion of the participant's discussion partner. The participant's discussion partner was thus not invited to type in his or her opinion about the topic choice.

Subsequently, we introduced the participant's procedural fairness manipulation.

In the *voice self* condition, the leader wrote in an e-mail that he wanted to know the opinion of the participant. The participants were thus invited to type in their opinions concerning topic choice.

In the *no voice self* condition, the leader wrote in an e-mail that he did not want to know the opinion of the participant. The participants were thus not invited to type in their opinions about topic choice.

After this, we solicited the manipulation checks and the measures of cooperation. Finally, we debriefed the participants, gave them their course credit, and thanked them.

Dependent measures. Participants answered all questions on a 7-point scale ranging from 1 (*not at all*) to 7 (*very much so*). To check the validity of our prototypicality manipulation, we asked "To what extent do you consider the leader to be representative of the group?" and "To what extent does the leader resemble the other group members?" ($r = .84$).

To check the validity of the procedural fairness other manipulation, we asked "Did your discussion partner receive voice in the decisions of the leader?"

To check the validity of the procedural fairness self manipulation, we asked "Did you receive voice in the decisions of the leader?"

We assessed intended cooperation with three items: We asked whether the participants "wanted to help the other" (their discussion partner), "wanted to cooperate with the other," and "would display a cooperative attitude during the discussion" (Cronbach's $\alpha = .90$).

Results

Manipulation checks. A $2 \times 2 \times 2$ analysis of variance (ANOVA) on the prototypicality score revealed only a significant main effect of leader prototypicality, $F(1, 123) = 4.92, p < .05, \eta^2 = .05$, showing that participants in the low prototypicality condition perceived the leader to be less prototypical than those in the high prototypicality condition ($M_s = 4.13$ vs. $3.68, SD_s = 1.02$ vs. 1.22 , respectively).¹

A $2 \times 2 \times 2$ ANOVA on the question of whether oneself received voice revealed only a significant main effect of procedural fairness self, $F(1, 123) = 686.55, p < .001, \eta^2 = .85$, showing that participants in the voice self condition reported to be listened to more than those in the no voice self condition ($M_s = 6.23$ vs. $1.36, SD_s = 0.95$ vs. 1.15 , respectively).

A $2 \times 2 \times 2$ ANOVA on the question of whether the other received voice revealed only a significant main effect of procedural fairness other, $F(1, 123) = 871.12, p < .001, \eta^2 = .88$. Participants in the voice other condition reported that the other was listened to more than those in the no voice other condition ($M_s = 6.22$ vs. $1.25, SD_s = 1.10$ vs. 0.76 , respectively).

Cooperation. A $2 \times 2 \times 2$ ANOVA on the average cooperation score revealed a main effect of procedural fairness self, $F(1, 123) = 122.79, p < .001, \eta^2 = .58$, and procedural fairness other, $F(1, 123) = 20.02, p < .001, \eta^2 = .14$. Further, a significant interaction between procedural fairness self and procedural fairness other emerged, $F(1, 123) = 9.98, p < .01, \eta^2 = .09$. Most importantly, however, these lower order effects were qualified by a significant three-way interaction, $F(1, 123) = 4.70, p < .05, \eta^2 = .04$ (see Table 1).

To analyze this three-way interaction further, we conducted simple effects tests. These analyses revealed, first of all, that the interaction between procedural fairness self and other was significant when leader prototypicality was high, $F(1, 123) = 14.02, p < .001, \eta^2 = .10$, but not when leader prototypicality was low, $F(1, 123) = 0.50, p < .48, \eta^2 = .02$.

The pattern of means in Table 1 suggests that voice self positively influenced cooperation, particularly when the other group member also received voice. Moreover, this effect was most pronounced when the leader was prototypical of the group. We conducted further simple effects tests (Dawson & Richter, 2006) to test this observation. The combination of procedural fairness for the coworker (voice vs. no voice) and leader prototypicality (high vs. low) results in four simple effects of the fairness of one's own treatment on cooperation. These tests showed that the effect of procedural fairness self on cooperation, when the coworker was treated in a fair manner by a prototypical leader, was significantly larger than all three other simple effects: smallest effect difference, $t(159) = 2.01, p < .05$.

Discussion

The findings of Study 1 provide initial support for our line of reasoning: Willingness to cooperate was greatest when participants as well as their coworker received voice but only when the leader enacting the voice procedure was prototypical of the group. When the leader was not

¹ We presented both types of hemispheric dominance as equally fit for brainstorming (e.g., left-hemispheric dominance was presented as "comes up with ideas intuitively"; right-hemispheric dominance was presented as "persists in coming up with new ideas"). Nevertheless, we wanted to be sure that the type of group (i.e., predominantly right- vs. left-hemispheric) did not influence the effectiveness of leader prototypicality as a moderator (e.g., nonprototypical leaders, whose hemispheric dominance differed from the rest of the group, may seem less competent at the task when they are described in terms that seem less relevant to brainstorming). We thus initially entered group hemispheric dominance as an additional factor in all analyses. This had no main or interaction effects on the manipulation checks and cooperation.

Table 1
Cooperation as a Function of Leader Prototypicality, Voice Self, and Voice Other (Study 1)

Leader prototypicality	Procedural fairness self	Procedural fairness other		
		Voice	No voice	Total
High	Voice	5.98 (0.74) ^a	3.96 (1.42) ^b	4.97 (1.58) _x
	No voice	2.48 (1.13) ^c	2.43 (1.11) ^c	2.46 (1.10) _y
	Total	4.56 (1.97) _x	2.97 (1.39) _y	3.70 (1.85)
Low	Voice	5.36 (0.79) ^a	4.45 (1.29) ^b	4.98 (1.08) _x
	No voice	2.87 (1.62) ^c	2.37 (1.34) ^c	2.66 (1.50) _y
	Total	4.12 (1.76) _x	3.38 (1.67) _y	3.80 (1.75)

Note. Means are on a 7-point scale with high values representing higher cooperation; standard deviations are provided in parentheses. Conditions with different superscripts (^{a,b,c}) are significantly different from each other. Adjacent totals with different subscripts (_{x,y}) are significantly different from each other.

prototypical, the positive interaction between procedural fairness for self and for the coworker did not emerge on cooperation.

Having found causal evidence for our proposed processes in a laboratory experiment, we proceeded to examine whether these effects generalize to organizational field settings in which employees function together with others in meaningful team structures. We designed Study 2 to address that question. In Study 2, we measured employees' perceptions of their supervisor's prototypicality, the extent to which they themselves were treated fairly, and the extent to which their coworkers were treated fairly. In this study, we focused on OCB as an operationalization of cooperative behavior in work contexts.

Study 2

Method

Sample and procedure. We randomly selected 973 Dutch people who worked for at least 8 hr a week and who had a supervisor from the national postal guide. We employed the services of a company that has all these addresses on file and that can access a random subset of these addresses on the basis of a number of relevant selection characteristics. We sent the desired respondents a letter in which they were asked to participate in "a study on work experience" by filling out the enclosed questionnaire and by returning it in the prepaid envelope. We told them that they would be anonymous. Of these 973 questionnaires, 16 were returned because the addressee no longer lived there. We sent a reminder to all intended respondents 2 weeks after the first mailing.

Three hundred forty-four questionnaires were returned that included responses to the questions relevant to the present study. Sixty-five percent were men; 35% were women. Two percent had lower education (primary school); 39% had secondary education only; 25% had vocational education; 23% had a bachelor degree; 9% had a master's degree; and 1% indicated having "another" education. Thirty-eight percent had a net month salary below €1,500 (\$1,900); 35% earned between €1,500 (\$1,900) and €2,000 (\$2,600); 14% earned between €2,000 (\$2,600) and €2,500 (\$3,200); and 14% earned more than €2,500 (\$3,200). The mean age was 42.71 years ($SD = 10.26$). The respondents worked, on

average, for 11.94 years ($SD = 10.66$) with their current organization and for 8.49 years ($SD = 9.93$) in their current job.

Measures. All items were in Dutch and were answered on 5-point scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

We assessed *procedural fairness self* with Colquitt's (2001) validated seven-item scale. Examples of items include the following: "To what extent do you experience that you are able to express your views and feelings?" and "To what extent do you experience that the procedures are applied consistently?" (Cronbach's $\alpha = .85$).

We assessed *procedural fairness others* using the same measure, but we modified this scale so that it refers to the perceived justice of procedures for coworkers. Examples of items include the following: "To what extent do you think your colleagues experience that they are able to express their views and feelings?" and "To what extent do you think your colleagues experience that the procedures are applied consistently?" (Cronbach's $\alpha = .89$).

We assessed *leader prototypicality* with the following five items (B. van Knippenberg & van Knippenberg, 2005): "My supervisor is a good example of the kind of people in my team," "My supervisor has a lot in common with the members of my team," "My supervisor represents what is characteristic about my team," "My supervisor is very similar to what the members of my team value," and "My supervisor represents what this team stands for" (Cronbach's $\alpha = .91$).²

We assessed *OCB* with three items taken from Moorman and Blakely (1995), including "I often modify my working schedule to help colleagues taking a day off," "I always help new colleagues feel welcome in the group," and "I always treat colleagues in a

² To obtain evidence about the construct validity of the Prototypicality scale, we performed two validation studies using data collected for projects unrelated to the project reported in the current article. First, we collected data in which we, in addition to the Leader Prototypicality scale, measured transformational leadership with the Dutch version of the Multifactor Leadership Questionnaire (MLQ), Version 5X (Den Hartog, Van Muijen, & Koopman, 1997). This data set contains responses from 256 civil servants working in nine different municipalities. Of the respondents, 58% were men; the mean age was 41.2 years ($SD = 9.4$). Confirmatory factor analysis (CFA) revealed acceptable fit for the two-factor model, $\chi^2(225) = 591.77$; Tucker-Lewis index (TLI) = .90; comparative fit index (CFI) = .90; root mean square error of approximation ($RMSEA$) = .08, but inadequate fit for the one-factor model (with the prototypicality and transformational leadership items loading on a single factor), $\chi^2(224) = 837.27$; $TLI = .81$; $CFI = .82$; $RMSEA = .11$. Note that the MLQ originally aimed to measure four distinct factors but that a one-factor solution shows a superior fit for this scale (Den Hartog et al., 1997). The two-factor model also fit the data significantly better than the one-factor model, $\chi^2(1) = 245.50$, $p < .001$. Second, we collected data containing the Prototypicality scale, the seven-item Leader-Member Exchange scale (Scandura & Graen, 1984), and six items measuring leader-team similarity (adapted from Ensher & Murphy, 1997). This data set contains 192 respondents working in a variety of occupations in the United States (90 men; $M_{age} = 24.27$ years, $SD = 6.50$). CFA results show that the three-factor model fits the data quite well, $\chi^2(116) = 308.05$; $TLI = .95$; $CFI = .96$; $RMSEA = .08$. A two-factor solution (with the prototypicality items and the similarity items loading on the same factor) fits inadequately, $\chi^2(118) = 672.41$; $TLI = .87$; $CFI = .88$; $RMSEA = .16$. The one-factor solution has poor fit, $\chi^2(119) = 1,063.34$; $TLI = .77$; $CFI = .80$; $RMSEA = .20$. All models fit the data significantly better than all simpler models ($p < .001$). The Leader Prototypicality scale thus appears distinct from relevant scales measuring constructs that are conceptually related.

friendly and caring manner, even if I have problems at work or at home" (Cronbach's $\alpha = .70$).

We also measured *positive affect* by asking the respondents how happy and positive they felt (Cronbach's $\alpha = .87$). We included this measure to control for an alternative explanation of our results. Specifically, positive affect is known to predict OCB (Lee & Allen, 2002). Hence, an alternative explanation for our findings is that the interactive effect of procedural fairness for self, procedural fairness for others, and leader prototypicality on OCB is not driven by the theorized identity processes but simply by the three conditions combining to result in increased positive affect.

Results

Means, standard deviations, and intercorrelations for the study variables are displayed in Table 2. To test our hypothesis, we conducted a hierarchical regression analysis in which OCB was predicted by the main effects of procedural fairness self, procedural fairness other, leader prototypicality, and positive affect at Step 1. We entered the two-way interactions between procedural fairness self, procedural fairness other, and leader prototypicality as well as the squared main effects of these variables at Step 2 (cf. Edwards, 2008). The three-way interaction was entered at Step 3. Following Aiken and West (1991), the interaction terms were based on mean-centered scores of the independent variables. Table 3 shows the regression results.

Of greatest importance, the predicted three-way interaction was significant ($\beta = .26, p < .001$). We conducted simple slope analyses to further analyze this interaction (Aiken & West, 1991). As expected, when prototypicality was high (1 *SD* above the mean), the interaction between procedural fairness self and procedural fairness others was significant ($\beta = .28, p < .01$). When prototypicality was low (1 *SD* below the mean), the interaction between procedural fairness self and procedural fairness others was not significant ($\beta = -.09, p < .22$).³

We also conducted further simple slopes tests (Dawson & Richter, 2006). Specifically, low and high leader prototypicality and low and high procedural fairness other combined resulted in four simple slopes for the effect of procedural fairness self on OCB. The analyses showed that the fairness with which one was treated, when the coworkers were treated fairly and the leader was prototypical, had a significantly stronger positive relationship with OCB than all other slopes: smallest slope difference, $t(332) = 2.87, p < .01$ (see Figure 1).

Discussion

The results of Study 2 again support our hypothesis but this time in an organizational field setting with a sample that is representative of the Dutch population of employed workers. Employee OCB was positively related to the interaction between the respondent's procedural fairness and coworker procedural fairness. Again, this positive interactive effect was found only when the leader who enacted the procedures was prototypical of the group.

Nevertheless, Study 2 was hampered by a limitation that derives from our use of self-report indices of OCB. Such indices may be prone to self-presentation effects. Further, empirically established relationships may actually result from common method variance (although this is unlikely when studying interaction effects, which

were of primary interest in the present research; Evans, 1985). In Study 3, we therefore obtained data from different sources to reduce these concerns: Our focal employees assessed the extent to which they and their coworkers were fairly treated by their supervisor and also their supervisor's prototypicality. A coworker assessed the focal employees' OCB.

Study 3

Method

Sample and procedure. We invited 288 junior- and senior-level undergraduate students from a large southeastern U.S. university to participate, and 132 participated (a response rate of 45.8%). We used a snowballing method whereby students working at least 20 hr per week could serve as the focal employee or could choose another working adult (i.e., friend, family member, colleague) to serve as the focal employee (for a similar approach, see, e.g., Grant & Mayer, 2009; Lee & Allen, 2002; Skarlicki & Folger, 1997). We administered the focal employee and the coworker surveys online. We asked participating students to provide information to the focal employee regarding the research project, including a link to the survey website. The focal employee was responsible for providing one coworker a link to their respective surveys. Each respondent had a unique identification number to ensure anonymity and to make sure we could match the focal employee and coworker data.

A total of 253 individuals—132 focal employees and 121 coworkers—participated. Respondents worked in American organizations in various industries, such as technology, government, insurance, financial, food service, retail, and manufacturing. The average age of the focal employees was 23.8 years, and 49% were women. These respondents were 4.6% African American, 6.1% Asian American, 69.5% Caucasian, 13.7% Hispanic, 3.1% biracial, and 3.1% "other." Employees worked for an average of 1.93 years in the organization ($SD = 2.05$), and 30.5% worked full-time. The average size of the respondents primary workgroup was 13.68 ($SD = 12.60, Mdn = 10.00$).

The coworkers averaged 29.3 years of age with 4.2 years of experience working in their organizations. They were 60% men. Sixty-eight percent were Caucasian (8% Hispanic, 6% African American, 9% Latino/a, 2% biracial, 7% Asian American, and 1% "another racial background"). Nine percent of the coworkers had only lower education (high school), 41% had some college experience, 34% had a college degree, 8% were in graduate school, and 7% had a master's degree. Seventy-two percent of the coworkers had a nonmanagement job, 11% had a line management job, 12% had a middle management job, and 6% had "another position." Sixty-eight percent of the coworkers worked part-time (at least 20 hr a week), and 32% worked full-time.

³ To further increase our confidence that positive affect was not driving our results, we regressed positive affect on the main, interactive, and squared effects of procedural fairness for self, procedural fairness for others, and leader prototypicality. This analysis showed that positive affect was significantly related to all three main effects but not to any interaction effect.

Table 2
Descriptive Statistics and Intercorrelations of Study 2 Measures

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Procedural fairness self	2.99	1.04	(.81)				
2. Procedural fairness other	3.50	0.85	.51***	(.84)			
3. Leader prototypicality	2.75	0.76	.38***	.45***	(.82)		
4. Positive affect	3.66	0.78	.34***	.28***	.17**	(.86)	
5. OCB	3.61	0.59	.35***	.52***	.41***	.35***	(.70)

Note. *N* = 344. Internal reliabilities (coefficient alphas) are provided in parentheses on the diagonal. OCB = organizational citizenship behavior.

** *p* < .01. *** *p* < .001.

Measures. All responses were made on a Likert-type scale with ratings ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

We assessed *own procedural fairness* (Cronbach's $\alpha = .90$), *others' procedural fairness* (Cronbach's $\alpha = .91$), *supervisor prototypicality* (Cronbach's $\alpha = .94$), and *positive affect* (Cronbach's $\alpha = .94$) using the same measures as in Study 2.

We measured *OCB* with six items from Bolino and Turnley (2005): This employee "attends work related functions in his/her personal time," "goes into the office before normal business hours," "carries a cell phone or a pager so that he/she can be reached after normal business hours," works during his/her vacation," "volunteers for special projects in addition to his/her normal job duties," and "checks back with the office even when he/she is on vacation" (Cronbach's $\alpha = .88$).

Results

Means, standard deviations, and intercorrelations for the study variables are displayed in Table 4. We tested our hypothesis using the same analytic procedures as in Study 2. Table 5 shows the regression results.

Of greatest importance, the predicted three-way interaction was significant ($\beta = .35$, $p < .05$). We conducted simple slope anal-

yses to further analyze this interaction (Aiken & West, 1991). When prototypicality was high (1 *SD* above the mean), the interaction between procedural fairness self and procedural fairness others was significant ($\beta = .26$, $p < .05$). When prototypicality was low (1 *SD* below the mean), however, the interaction between procedural fairness self and procedural fairness others was not significant ($\beta = -.03$, $p < .80$).⁴

As can be seen in Figure 2, the form of the interaction is that the positive relationship between procedural fairness self and OCB was more likely to emerge when one's coworkers were also treated fairly by a prototypical leader. Simple slopes tests following Dawson and Richter (2006) showed that the fairness with which one was treated, when the coworkers were treated fairly and the leader was prototypical, had a significantly stronger positive relationship with OCB than all other simple slopes: smallest slope difference, $t(106) = 1.99$, $p < .05$.

Discussion

The results of Study 3 again support our expectation, but this time with a multisource design in which coworkers rated the focal employee's OCB. Employee OCB was positively related to the interaction between the respondent's procedural fairness and coworker procedural fairness. Again, this positive interactive effect was found only when the leader who enacted the procedures was prototypical, rather than nonprototypical, of the group.

However, one limitation of Study 3 is that the items used to assess employee OCB do not map very well on employee cooperation because the items all refer to personal industry. It has been argued that personal industry is not necessarily extra effort to achieve the goals of the group or organization because it can be extrinsically motivated by the organization's formal reward system (Van Dyne, Cummings, & McLean Parks, 1995). Moreover, prior research has suggested that people sometimes engage in citizenship for instrumental reasons, such as receiving favorable performance evaluations or job promotions, and this may particularly be the case for individual extra effort (e.g., Bolino, 1999). Study 4 was therefore a constructive replication of Study 3, but we focused on an OCB measure that directly reflects helping coworkers.

⁴ Similar to Study 2, we regressed positive affect on the main, interactive, and squared effects of procedural fairness for self, procedural fairness for others, and leader prototypicality. Positive affect was not significantly related to any main or interaction effect.

Table 3
Hierarchical Regression Analysis for OCB (Study 2)

Step	<i>B</i>	<i>SE B</i>	β	ΔR^2
Step 1				.13***
Procedural fairness self (PFs)	0.04	0.04	.06	
Procedural fairness other (PFo)	-0.01	0.05	-.01	
Prototypicality (Prot)	0.01	0.04	.01	
Positive affect	0.28	0.04	.37*	
Step 2				.02
PFs \times Prot	0.04	0.04	.03	
PFo \times Prot	-0.05	0.04	-.07	
PFs \times PFo	0.05	0.04	.03	
PFs ²	-0.03	0.03	-.06	
PFo ²	0.06	0.03	.09	
Prot ²	0.05	0.03	.10	
Step 3				.04***
PFs \times PFo \times Prot	0.10	0.03	.26***	

Note. Final model: $F(11, 322) = 7.20$, $p < .001$. OCB = organizational citizenship behavior; *B* = unstandardized regression coefficient; β = standardized regression coefficient.

* $p < .05$. *** $p < .001$.

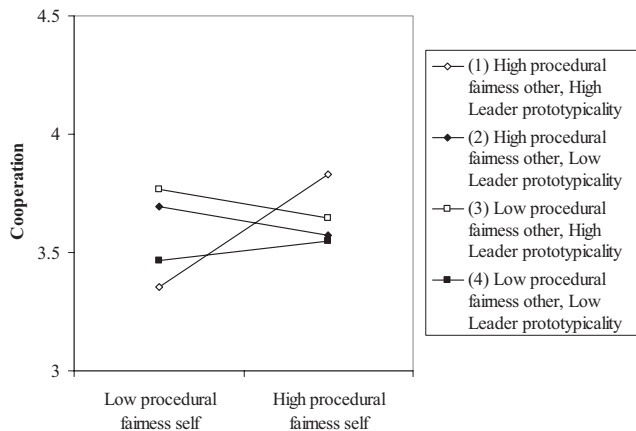


Figure 1. The relationship between the Procedural Fairness Self × Procedural Fairness Other interaction and organizational citizenship behavior as a function of leader prototypicality (Study 2).

Study 4

Method

Sample and procedure. The procedure we used was the same as in Study 3. We invited as participants 385 junior- and senior-level undergraduate students attending a large university in the southeastern United States who worked for at least 20 hr a week. A total of 236 students volunteered to take part, for a response rate of 55%. Of these respondents, 213 served as focal employees who responded to all items relevant to the present study. They brought on 193 coworkers that filled out all items relevant to the present study. The focal employees and coworkers were all part- or full-time employees working in a variety of industries, including banking, defense, entertainment, government, health care, hospitality, manufacturing, and retail. Focal employees ranged in age from 18 to 65 years, with a mean age of 24.49 years. Of the focal respondents, 51% were women, and 68% were employed full-time. Average tenure with their current organization was 2.71 years. In terms of race, 61% were White, 15% were Hispanic, 6% were Asian, 3% were Black, 2% were Latino/a, 1% were biracial, and 3% were “other.”

Coworkers ranged in age from 18 to 65 years, with a mean age of 27.58 years. The majority were women (61%) and worked full-time (57%). Their average organizational tenure was 3.59 years. In terms of race, 54% were White, 12% were Hispanic, 7%

Table 5
Hierarchical Regression Analysis for OCB (Study 3)

Step	B	SE B	β	ΔR ²
Step 1				
Procedural fairness self (PFs)	0.15	0.18	.14	.07
Procedural fairness other (PFo)	-0.10	0.23	-.14	
Prototypicality (Prot)	0.38	0.21	.24	
Positive affect	0.08	0.20	.05	
Step 2				
PFs × Prot	0.23	0.21	.10	.03
PFo × Prot	-0.17	0.23	-.14	
PFs × PFo	-0.16	0.21	-.15	
PFs ²	-0.18	0.14	-.11	
PFo ²	0.35	0.23	.17	
Prot ²	0.08	0.08	.12	
Step 3				
PFs × PFo × Prot	0.14	0.07	.33*	.03*

Note. Final model: $F(7, 100) = 2.26, p < .05$. OCB = organizational citizenship behavior; B = unstandardized regression coefficient; β = standardized regression coefficient.
* $p < .05$.

were Black, 4% were Latino/a, 3% were Asian, and 2% were Native American or “other.”

Measures. All responses were made on a Likert-type scale with ratings ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

We assessed *own procedural fairness* (Cronbach’s α = .92), *others’ procedural fairness* (Cronbach’s α = .93), and *supervisor prototypicality* (Cronbach’s α = .97) using the same measures as in Studies 2 and 3.

We assessed employee *OCB* (indexed by a coworker) using the eight-item OCB Interpersonal subscale (taken from Lee & Allen, 2002). Sample items include the following: “This employee goes out of his/her way to make newer employees feel welcome in the group” and “This employee shows genuine concern toward coworkers, even under the most trying business or personal circumstances” (Cronbach’s α = .92).

Results

Means, standard deviations, and intercorrelations for the study variables are displayed in Table 6. We tested our hypothesis using the same analytic procedures as in Studies 2 and 3. Table 7 shows the regression results.

Table 4
Descriptive Statistics and Intercorrelations of Study 3 Measures

Variable	M	SD	1	2	3	4
1. Procedural fairness self	5.05	1.08	(.91)			
2. Procedural fairness other	4.99	0.99	.70***	(.90)		
3. Leader prototypicality	5.02	1.33	.41***	.42***	(.93)	
4. OCB	3.95	1.57	.10	.09	.29**	(.87)

Note. N = 121. Internal reliabilities (coefficient alphas) are provided in parentheses on the diagonal. OCB = organizational citizenship behavior.
** $p < .01$. *** $p < .001$.

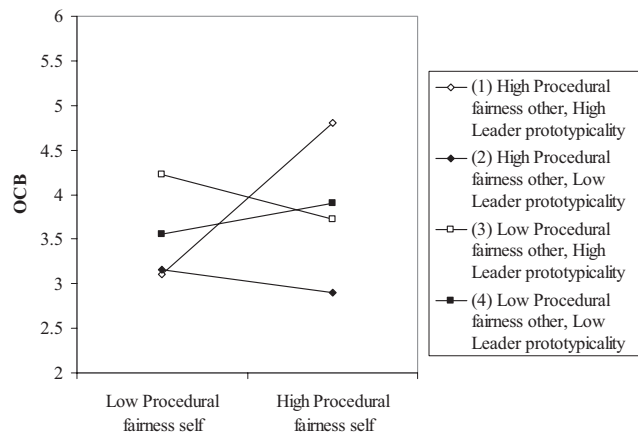


Figure 2. The relationship between the Procedural Fairness Self \times Procedural Fairness Other interaction and organizational citizenship behavior (OCB) as a function of leader prototypicality (Study 3).

Similar to the previous studies, the predicted three-way interaction was significant ($\beta = .30, p < .01$). We conducted simple slope analyses to further analyze this interaction (Aiken & West, 1991). When prototypicality was high (1 *SD* above the mean), the interaction between procedural fairness self and procedural fairness others was significant ($\beta = .34, p < .05$). When prototypicality was low (1 *SD* below the mean), however, the interaction between procedural fairness self and procedural fairness others was not significant ($\beta = -.17, p < .44$).

As can be seen in Figure 3, the form of the interaction is that the positive relationship between procedural fairness self and OCB was more likely to emerge when one's coworkers were also treated fairly by a prototypical leader. Simple slopes tests showed that the fairness with which one was treated, when the coworkers were treated fairly and the leader was prototypical, had a significantly stronger positive relationship with OCB than all other simple slopes: smallest slope difference, $t(166) = 2.88, p < .01$.

General Discussion

In the present article, we adopted a theoretical framework in which we examined the impact of both own and others' fair treatment on cooperation as a function of leader prototypicality. Taken together, the four studies described here consistently support our hypothesis that members of social collectives cooperate to reach the group's goals, particularly when they as well as their

Table 7
Hierarchical Regression Analysis for OCB (Study 4)

Step	B	SE B	β	ΔR^2
Step 1				.15**
Procedural fairness self (PFs)	0.25	0.22	.18	
Procedural fairness other (PFo)	-0.12	0.21	-.09	
Prototypicality (Prot)	0.46	0.13	.37*	
Step 2				.02
PFs \times Prot	-0.15	0.40	-.14	
PFo \times Prot	-0.01	0.37	-.01	
PFs \times PFo	0.19	0.24	.20	
PFs ²	0.17	0.38	.19	
PFo ²	-0.22	0.39	-.25	
Prot ²	0.09	0.14	.08	
Step 3				.04**
PFs \times PFo \times Prot	0.14	0.06	.30**	

Note. Final model: $F(10, 183) = 4.47, p < .001$. OCB = organizational citizenship behavior; B = unstandardized regression coefficient; β = standardized regression coefficient.

* $p < .05$. ** $p < .01$.

coworkers are treated procedurally fairly by a highly prototypical leader. This interactive effect was established in a laboratory experiment and three cross-sectional field studies across two different nations (the Netherlands and the United States). It included measured and manipulated operationalizations of own and others' procedural fairness and leader prototypicality as well as a number of different measures of cooperation.

Theoretical Implications

Our results are interesting in light of the first-person approach that is usually adopted in procedural fairness research (see Kray & Lind, 2002)—that is, examining the effect of personal procedural fairness experiences on one's own reactions. Prior procedural fairness work has almost exclusively focused on people's reactions to their own (un)fairness. The present research shows that people do care about how fair other members of their group are treated. In fact, our results consistently show that group members react more cooperatively to the fairness with which they are treated when other group members are fairly treated as well (when the procedures were enacted by a prototypical leader). This finding is consistent with previous work that has stressed the role of pride in the group as a function of fair treatment (e.g., Tyler & Blader, 2002). Pride is arguably the strongest when all group members are treated in a fair manner.

Table 6
Descriptive Statistics and Intercorrelations of Study 4 Measures

Variable	M	SD	1	2	3	4
1. Procedural fairness self	4.77	1.21	(.92)			
2. Procedural fairness other	4.69	1.17	.72***	(.93)		
3. Leader prototypicality	4.87	1.63	.58***	.54***	(.97)	
4. OCB	5.49	1.33	.28***	.30***	.35***	(.97)

Note. Reliabilities (Cronbach's alphas) are provided in parentheses on the diagonal. OCB = organizational citizenship behavior.

*** $p < .001$.

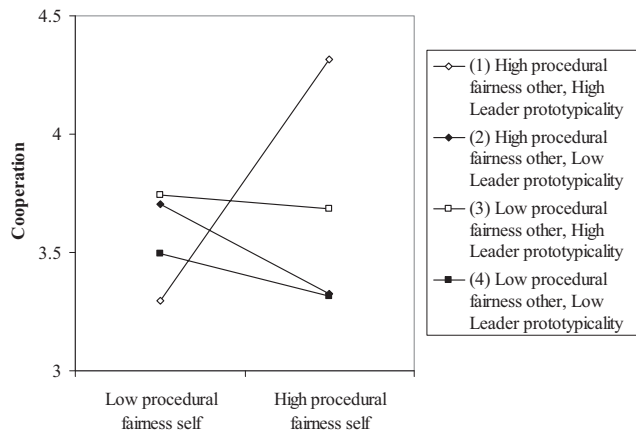


Figure 3. The relationship between the Procedural Fairness Self \times Procedural Fairness Other interaction and organizational citizenship behavior as a function of leader prototypicality (Study 4).

Our line of reasoning extends arguments put forward by the group-value model (Lind & Tyler, 1988) and the self-based model of cooperation (De Cremer & Tyler, 2005). Consistent with the identity processes that should underlie procedural fairness effects according to these models, we argued that the impact of this interaction on cooperation should be pronounced when procedures are enacted by a leader representative of the group identity—that is, a highly prototypical leader (D. van Knippenberg & Hogg, 2003). This type of leader is in a legitimate position to communicate how the group evaluates its members. Finding support for the three-way interaction is consistent with our idea that the Procedural Fairness for Self \times Procedural Fairness for Others interaction is driven by identity processes.

In sum, our research extends prior work in at least two important ways. First, the findings from these studies suggest that the different results that have appeared in prior research on procedural fairness for self and others may be explained by a moderator—leader prototypicality.⁵ Second, extending prior work that integrated procedural fairness and leader prototypicality (i.e., Ullrich et al., 2009; see also Lipponen et al., 2005), we showed that such integration is also important when considering procedural fairness for self and others simultaneously.

The conceptualization of prototypicality as a representation of the group's identity suggests that leader prototypicality can covary with leader–follower similarity. Whereas this may be true to some extent, the concept of prototypicality actually captures a different construct—it refers to an ideal-type more than an “average” group member (Giessner & van Knippenberg, 2008). The more prototypical, the more the leader represents the group's standards, values, and norms, making the prototypical leader closer to a representation of the ideal group member than to the typical or average group member. Research on leader–follower similarity has mostly focused on surface-level characteristics (such as age, gender, and organizational tenure) and has often (but not consistently) found that outcomes (such as follower satisfaction, work performance, and OCB) are higher when leaders and followers are more similar on these characteristics (e.g., Epitropaki & Martin, 1999; Tsui, Porter, & Egan, 2002; for the distinction between surface-

and deep-level characteristics, see Harrison, Price, & Bell, 1998). Interestingly, these positive leader–follower similarity effects have also been explained with reference to self-categorization and social identity perspectives, although these ideas have, to our knowledge, never been empirically tested. Specifically, it has been argued that when leaders and followers are more demographically similar, they are more likely to be considered to belong to the same category, which should explain positive attitudes of followers toward the leader and also increased in- and extra-role performance (e.g., Tsui et al., 2002). However, to the extent that the concept of leader prototypicality connects with leader–follower similarity, it will likely often resemble deep-level similarity. This also suggests that the effects of leader prototypicality can be far more enduring than the effects of, for instance, gender and age similarity (cf. Harrison et al., 1998).

Practical Implications

From a practical point of view, the present research reveals several useful suggestions. First, it extends previous work showing that enacting procedures in a fair manner reveals a variety of positive effects, including cooperation. The conclusion from most of the fairness literature relates to the importance of one's own fair treatment. In the present research, we highlight that employees not only respond to their own treatment but also to how coworkers are treated. More specifically, when a leader represents the characteristics of the work group, employees' level of cooperation is influenced not only by their own fair treatment but by how coworkers are treated. This issue regarding whether managers treat all of their employees fairly is relevant to the idea of differentiation in leader–member exchange theory (e.g., Liden, Erdogan, Wayne, & Sparrowe, 2006). Our results suggest that differentiating (i.e., treating some employees more favorably than others) can have a detrimental effect on how much employees cooperate to complete work tasks. Thus, particularly when a leader is prototypical, the results suggest that it is important for leaders to not differentiate but rather to treat all employees in the work group in a procedurally fair manner.

This suggestion is especially relevant in light of research showing that group members often want their leaders to not only treat ingroup members fairly but to favor ingroup over outgroup members (Platow, Reid, & Andrews, 1998). Interestingly, prototypical leaders receive more leeway from ingroup members and are therefore allowed to treat in- and outgroup members equally fairly (Platow & van Knippenberg, 2001). In sum, prototypical leaders should treat all members of the work group in a fair manner, and their followers will even allow them to treat members of other workgroups fairly.

The present research also suggests a limitation to the effectiveness of treating all followers fairly to stimulate cooperation. This results from the nature of leader prototypicality as a boundary condition to this interaction effect. Supervisors will not always be able to effectively represent the identity of the group they lead.

⁵ Without prototypicality included as an independent variable in the analyses, the Procedural Fairness Self \times Procedural Fairness Others interaction was significantly related to cooperation in Studies 1 and 3 but not in Studies 2 and 4 of the present research project.

Research shows that prototypical group leaders are more effective (B. van Knippenberg & van Knippenberg, 2005) and are also perceived as such (e.g., Hains et al., 1997), and the present research shows that prototypical leaders are also more effective in using fair procedures to increase cooperation toward the group's goals. However, the reality of organizational life is that supervisors often do not emerge on the basis of their prototypicality but are appointed by higher management. Appointed supervisors may or may not represent the group's identity. This point should be taken into account by management when deciding to appoint a group or team leader, in that it may be useful to select leaders on the basis of the extent to which they represent core values of the team. This suggests that it may be worthwhile to select for a formal supervisor position those individuals who are already part of the team and that are most prototypical (Fielding & Hogg, 1997; D. van Knippenberg, van Knippenberg, & van Dijk, 2000). We recognize the dilemma this poses for top management, as selecting and appointing leaders on the basis of group prototypicality suggests that top management hands over some of its influence over the workgroup. However, the finding that leader prototypicality makes procedural fairness for all group members an effective tool to stimulate cooperation makes this way of appointing group leaders worth considering. In sum, organizational leadership often builds upon the assumption that leaders shape the values of the group who they represent (e.g., Shamir, House, & Arthur, 1993) and can also positively influence their employees' behavior, such as by enacting decision-making procedures in a fair manner. We want to stress, however, that it is also necessary (maybe even more so) for leaders to recognize how the group itself defines its characteristics.

It would thus also help to train organizational leaders in how to identify and recognize important attributes and characteristics of specific workgroups. Scholars have argued that leaders may actively strive to embody the group prototype (D. van Knippenberg & Hogg, 2003), and research in political contexts shows that the use of relevant rhetoric can increase the perception that a leader represents a salient aspect of the group's identity. Reicher and Hopkins (1996) showed in the context of anti-abortionist groups in the United States that candidate leaders can increase their prototypicality in such groups by engaging in strong anti-abortionist rhetoric. Future research should directly address such issues in an organizational context and should aim to identify whether and how leaders can be trained to recognize what groups consider their core values.

Strengths, Limitations, and Future Directions

A strength of the present research is that we made use of a triangulation approach in which we used different research methods. First, we used a laboratory experiment (Study 1) to test our ideas in a setting that gives us confidence in the internal validity of our results. Study 1 is relevant because a large number of studies show that identity processes shape intra- and intergroup behavior even in laboratory groups that have no real value to their members (for an overview, see Stroebe, Lodewijkx, & Spears, 2005; for evidence in the context of leader prototypicality, see Hains et al., 1997). Nevertheless, it is important to test whether the process that we identified in the laboratory also predicts the motivations of employees working in meaningful team structures. We thus conducted a large-scale, cross-sectional survey (Study 2) that included

a sample that is representative of the employed Dutch population. Although we did not explicitly include measures of team work in this study, research shows that at least 63% of the Dutch working population works in team settings (Valeyre et al., 2009), suggesting that our results can be generalized to this population. To further increase our confidence in our ideas, we also conducted two organizational field surveys (Studies 3 and 4) in which we obtained data from different sources (focal respondents and their coworkers). This approach helps us to reduce same-source bias concerns (Evans, 1985) and enables a test of our argument using others' perceptions of cooperation (i.e., OCB). The results of these studies most likely generalize somewhat less directly to the population of working adults. Although we used business students who worked for at least 20 hr each week, this subpopulation is unlikely to unambiguously represent the U.S. workforce. Nevertheless, the consistent support for our ideas across four studies makes us confident in the validity of our findings.

A limitation of the present research is that although identity processes were theorized as driving our three-way interaction, we did not explicitly test for the role of group identification as a variable in our studies. Identification has been shown to make procedural fairness effects more pronounced among people who strongly identify with the group that the authority represents (i.e., identification moderates procedural fairness effects; e.g., Tyler & DeGoey, 1995). This clearly supports the idea that procedural fairness conveys identity information because people who do not identify with the group should care less about such information. Further, identification is also known to explain why procedural fairness increases employee cooperation (i.e., identification mediates procedural fairness effects; Blader & Tyler, 2009). Identification is also relevant for leader prototypicality effects. In fact, research shows that the effectiveness of leader prototypicality in influencing important outcome variables, such as support for the leader, is restricted to high identifiers, regardless of whether this is in the laboratory or the field (Giessner & van Knippenberg, 2008; Ullrich et al., 2009; van Dijke & De Cremer, 2008, 2010). Hence, although not including identification as a variable in our analyses is a limitation, leader prototypicality as a moderator of the Procedural Fairness for Self \times Procedural Fairness for Others interaction is consistent with the identity processes that we set out to study.

In sum, building our analysis on well-supported theory and rigorously testing our ideas across different research methods makes us confident in our claim that leaders who treat all members of the workgroup in a fair manner are likely to elicit relatively high levels of cooperation but only when these leaders are prototypical.

References

- Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp. 267–299). New York, NY: Academic Press.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. New York, NY: Sage.
- Blader, S., & Tyler, T. (2009). Testing and extending the group engagement model: Linkages between social identity, procedural justice, economic outcomes, and extrarole behavior. *Journal of Applied Psychology, 94*, 445–464.
- Bolino, M. C. (1999). Citizenship and impression management: Good soldiers or good actors? *Academy of Management Review, 24*, 82–98.

- Bolino, M. C., & Turnley, W. H. (2005). The personal costs of citizenship behavior: The relationship between individual initiative and role overload, job stress, and work-family conflict. *Journal of Applied Psychology, 90*, 740–748.
- Cohen-Charash, Y., & Spector, P. E. (2001). The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes, 86*, 278–321.
- Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology, 86*, 386–400.
- Colquitt, J. A. (2004). Does the justice of the one interact with the justice of the many? Reactions to procedural justice in teams. *Journal of Applied Psychology, 89*, 633–646.
- Crosby, F. (1976). A model of egoistical relative deprivation. *Psychological Review, 83*, 85–113.
- Dawson, J. F., & Richter, A. W. (2006). Probing three-way interactions in moderated multiple regression: Development and application of a slope difference test. *Journal of Applied Psychology, 91*, 917–926.
- De Cremer, D., Stinglhamber, F., & Eisenberger, R. (2005). Effects of own versus other's fair treatment on positive emotions: A field study. *Journal of Social Psychology, 145*, 741–744.
- De Cremer, D., & Tyler, T. R. (2005). Managing group behavior: The interplay between procedural justice, sense of self, and cooperation. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 37, pp. 151–218). San Diego, CA: Academic Press.
- DeGoeij, P. (2000). Contagious justice: Exploring the social construction of justice in organizations. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 22, pp. 51–102). Greenwich, CT: JAI Press.
- Den Hartog, D. N., Van Muijen, J. J., & Koopman, P. L. (1997). Transactional versus transformational leadership: An analysis of the MLQ. *Journal of Occupational and Organizational Psychology, 70*, 19–34.
- Derlaga, V. J., & Grzelak, J. (1982). *Cooperation and helping behavior*. New York, NY: Academic Press.
- Deutsch, M. (1985). *Distributive justice: A social psychological perspective*. New Haven, CT: Yale University Press.
- Edwards, J. R. (2008). Seven deadly myths of testing moderation in organizational research. In C. E. Lance & R. J. Vandenberg (Eds.), *Statistical and methodological myths and urban legends: Received doctrine, verity, and fable in the organizational and social sciences* (pp. 145–166). New York, NY: Routledge.
- Ensher, E. A., & Murphy, S. E. (1997). Effects of race, gender, perceived similarity, and contact on mentor relationships. *Journal of Vocational Behavior, 50*, 460–481.
- Epitropaki, O., & Martin, R. (1999). The impact of relational demography on the quality of leader-member exchanges and employees' work attitudes and well-being. *Journal of Occupational and Organizational Psychology, 72*, 237–240.
- Evans, M. G. (1985). A Monte Carlo study of the effects of correlated method variance in moderated multiple regression analysis. *Organizational Behavior and Human Decision Processes, 36*, 305–323.
- Fielding, K. S., & Hogg, M. A. (1997). Social identity, self-categorization, and leadership: A field study of small interactive groups. *Group Dynamics, 1*, 39–51.
- Giessner, S. R., & van Knippenberg, D. (2008). "License to fail": Goal definition, leader group prototypicality, and perceptions of leadership effectiveness after leader failure. *Organizational Behavior and Human Decision Processes, 105*, 14–35.
- Grant, A. M., & Mayer, D. M. (2009). Good soldiers and good actors: Prosocial and impression management motives as interactive predictors of affiliative citizenship behavior. *Journal of Applied Psychology, 94*, 900–912.
- Hains, S. C., Hogg, M. A., & Duck, J. M. (1997). Self-categorization and leadership: Effects of group prototypicality and leader stereotypicality. *Personality and Social Psychology Bulletin, 23*, 1087–1100.
- Harrison, D. A., Price, K. H., & Bell, M. P. (1998). Beyond relational demography: Time and the effects of surface- and deep-level diversity on work group cohesion. *Academy of Management Journal, 41*, 96–107.
- Hogan, R., Curphy, G. J., & Hogan, J. (1994). What we know about leadership: Effectiveness and personality. *American Psychologist, 49*, 493–504.
- Hogg, M. A. (2001). Subjective uncertainty reduction through self-categorization: A motivational theory of social identity processes. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 11, pp. 223–256). New York, NY: Wiley.
- Hogg, M. A., & van Knippenberg, D. (2003). Social identity and leadership processes in groups. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 35, pp. 1–52). San Diego, CA: Academic Press.
- Jones, D. A., & Skarlicki, D. P. (2005). The effects of overhearing peers discuss an authority's fairness reputation on reactions to subsequent treatment. *Journal of Applied Psychology, 90*, 363–372.
- Kray, L. J., & Lind, E. A. (2002). The injustices of others: Social reports and the integration of others' experiences in organizational justice judgments. *Organizational Behavior and Human Decision Processes, 89*, 906–924.
- Lee, K., & Allen, N. J. (2002). Organizational citizenship behavior and workplace deviance: The role of affect and cognitions. *Journal of Applied Psychology, 87*, 131–142.
- Liden, R. C., Erdogan, B., Wayne, S. J., & Sparrowe, R. T. (2006). Leader-member exchange, differentiation, and task interdependence: Implications for individual and group performance. *Journal of Organizational Behavior, 27*, 723–746.
- Lind, E. A., Kray, L., & Thompson, L. (2001). The social construction of injustice: Fairness judgments in response to own and others' unfair treatment by authorities. *Organizational Behavior and Human Decision Processes, 75*, 1–22.
- Lind, E. A., & Tyler, T. R. (1988). *The social psychology of procedural justice*. New York, NY: Plenum Press.
- Lipponen, J., Koivisto, S., & Olkkonen, M. E. (2005). Procedural justice and status judgments: The moderating role of leader ingroup prototypicality. *Leadership Quarterly, 16*, 517–528.
- Moorman, R. H., & Blakely, G. L. (1995). Individualism-collectivism as an individual difference predictor of organizational citizenship behavior. *Journal of Organizational Behavior, 16*, 127–142.
- Platow, M. J., Reid, S., & Andrew, S. (1998). Leadership endorsement: The role of distributive and procedural behavior in interpersonal and intergroup contexts. *Group Processes & Intergroup Relations, 1*, 35–47.
- Platow, M. J., & van Knippenberg, D. (2001). A social identity analysis of leadership endorsement: The effects of leader ingroup prototypicality and distributive intergroup fairness. *Personality and Social Psychology Bulletin, 27*, 1508–1519.
- Podsakoff, P. M., Ahearne, M., & MacKenzie, S. B. (1997). Organizational citizenship behavior and the quantity and quality of work group performance. *Journal of Applied Psychology, 82*, 262–270.
- Reicher, S., & Hopkins, N. (1996). Seeking influence through characterizing self-categories: An analysis of anti-abortionist rhetoric. *British Journal of Social Psychology, 35*, 297–312.
- Scandura, T., & Graen, G. B. (1984). Moderating effects of initial leader-member exchange status on the effects of leadership intervention. *Journal of Applied Psychology, 69*, 428–436.
- Shamir, B., House, R. J., & Arthur, M. B. (1993). The motivational effects of charismatic leadership: A self-concept based concept. *Organizational Science, 4*, 577–594.
- Simon, B., Lücken, M., & Stürmer, S. (2006). The added value of respect: Reaching across inequality. *British Journal of Social Psychology, 45*, 535–546.
- Skarlicki, D. P., & Folger, R. (1997). Retaliation in the workplace: The

- roles of distributive, procedural, and interactional justice. *Journal of Applied Psychology*, 82, 434–443.
- Smith, K. G., Carroll, S. J., & Ashford, S. J. (1995). Intra- and interorganizational cooperation: Toward a research agenda. *Academy of Management Journal*, 38, 7–23.
- Stroebe, K., Lodewijckx, H. F. M., & Spears, R. (2005). Do unto others as they do unto you: Reciprocity and social identification as determinants of ingroup favoritism. *Personality and Social Psychology Bulletin*, 31, 831–845.
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7–24). Chicago, IL: Nelson Hall.
- Tsui, A. S., Porter, L. W., & Egan, T. D. (2002). When both similarities and dissimilarities matter: Extending the concept of relational demography. *Human Relations*, 55, 899–929.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. New York, NY: Blackwell.
- Tyler, T. R. (1999). Why people cooperate with organizations: An identity-based perspective. In R. I. Sutton & B. M. Staw (Eds.), *Research in organizational behavior* (Vol. 21, pp. 201–246). Greenwich, CT: JAI Press.
- Tyler, T. R., & Blader, S. L. (2002). Autonomous vs. comparative status: Must we be better than others to feel good about ourselves? *Organizational Behavior and Human Decision Processes*, 89, 813–838.
- Tyler, T. R., & Blader, S. L. (2003). The group engagement model: Procedural justice, social identity, and cooperative behavior. *Personality and Social Psychology Review*, 7, 349–361.
- Tyler, T. R., & DeGoey, P. (1995). Collective restraint in social dilemmas: Procedural justice and social identification effects on support for authorities. *Journal of Personality and Social Psychology*, 69, 482–497.
- Tyler, T. R., & Lind, E. A. (1992). A relational model of authority in groups. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 115–191). San Diego, CA: Academic Press.
- Ullrich, J., Christ, O., & van Dick, R. (2009). Substitutes for procedural fairness: Prototypical leaders are endorsed whether they are fair or not. *Journal of Applied Psychology*, 94, 235–244.
- Valeyre, A., Lorenz, E., Cartron, D., Csizmadia, P., Gollac, M., Illéssy, M., & Makó, C. (2009). *Working conditions in the European Union: Work organization*. Retrieved from <http://www.eurofound.europa.eu/publications/htmlfiles/ef0862.htm>
- van den Bos, K., & Lind, E. A. (2001). The psychology of own versus others' treatment: Self-oriented and other-oriented effects on perceptions of procedural justice. *Personality and Social Psychology Bulletin*, 27, 1324–1333.
- van Dijke, M. H., & De Cremer, D. (2008). How leader prototypicality influences followers' status: The role of procedural fairness. *European Journal of Work and Organizational Psychology*, 17, 226–250.
- van Dijke, M. H., & De Cremer, D. (2010). Procedural fairness and endorsement of prototypical leaders: Leader benevolence or follower control? *Journal of Experimental Social Psychology*, 46, 85–96.
- Van Dyne, L., Cummings, L. L., & McLean Parks, J. M. (1995). Extra-role behaviors: In pursuit of construct and definitional clarity (A bridge over muddied waters). In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior* (Vol. 17, pp. 215–285). Greenwich, CT: JAI Press.
- van Knippenberg, B., & van Knippenberg, D. (2005). Leader self-sacrifice and leadership effectiveness: The moderating role of leader prototypicality. *Journal of Applied Psychology*, 90, 25–37.
- van Knippenberg, D., De Cremer, D., & van Knippenberg, B. (2007). Leadership and fairness: The state of the art. *European Journal of Work and Organizational Psychology*, 16, 113–140.
- van Knippenberg, D., & Hogg, M. A. (2003). A social identity model of leadership effectiveness in organizations. *Research in Organizational Behavior*, 25, 243–296.
- van Knippenberg, D., van Knippenberg, B., & van Dijk, E. (2000). Who takes the lead in risky decision making? Effects of ingroup members' individual riskiness, and prototypicality. *Organizational Behavior and Human Decision Processes*, 83, 213–234.

Received December 8, 2008

Revision received April 22, 2010

Accepted April 29, 2010 ■