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How Do Leaders Promote Cooperation? The Effects of Charisma and Procedural Fairness

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The present research examined the effect of leaders' procedural fairness and perceived charisma on an important organizational process: cooperation. Both charisma and procedural fairness were predicted to have a positive effect on cooperation, and procedural fairness and charisma were predicted to interact such that their effects are stronger alone than in conjunction. Results from a scenario experiment, a cross-sectional survey, and a laboratory experiment supported these predictions. Results from the laboratory study also showed that the interactive effect of leader charisma and procedural fairness on cooperation was mediated by their interactive effect on the sense of group belongingness. It is concluded that leader charisma and procedural fairness may engender cooperation because they appeal to relational concerns.

In groups and organizations it is often crucial that members devote extra time, energy, and effort to interdependent tasks and actions that benefit the group or organization. This contribution of individual effort, time, and resources to collective projects is referred to as *cooperation* (e.g., Smith, Carroll, & Ashford, 1995; Van Vugt, Snyder, Tyler, & Biel, 2000; cf. Katz, 1964). However, it is not self-evident that individuals in organizations cooperate, because many situations have a mixed-motive character. For example, people may not go beyond job descriptions or may not invest enough energy and time in team projects because once the goals of these projects and tasks have been achieved, many can enjoy their benefits, regardless of their contributions (i.e., one may “free ride” on the efforts of others; Kerr, 1983; Organ, 1988). However, if all organizational or group members act in such a self-interested manner, team projects may fail and the interests of the individual, group, or organization will not be served. Thus, outcome interdependence (Wageman, 1995) creates a need to cooperate, whereas the potential personal benefits of noncooperation create a threat to cooperation.

This *mixed-motive* character (i.e., the tension between personal and collective interests) creates situations known as *social dilemmas* (Komorita & Parks, 1994) or *organizational dilemmas* (Kramer, 1991). The social dilemma nature of many group and organiza-

tional relationships may be one of the key obstacles to establishing cooperation (Tenbrunsel & Messick, 1999). Therefore, given the importance of cooperation to the effective functioning of organizations (Katz, 1964), it is crucial to understand what factors motivate individuals to cooperate in social and organizational dilemmas. In the present study, we focused on a factor that may be of particular importance in this respect: leadership (De Cremer & Van Vugt, 2002). We examined how leadership may motivate group members to cooperate in social dilemmas by focusing on two factors considered crucial to leaders' effectiveness in engendering cooperation: procedural fairness (e.g., Tyler & Lind, 1992) and perceived charisma (e.g., Shamir, House, & Arthur, 1993; cf. transformational leadership; Bass & Avolio, 1993). We tested the hypothesis that charisma and procedural fairness have an interactive effect on cooperation and that this effect is mediated by group belongingness.

Cooperation and Leadership

Research in social dilemmas has worked from the assumption that leaders may promote cooperation by restricting self-interested actions (e.g., Messick et al., 1983). As a result, mainly instrumental means to promote cooperation have been examined, such as sanctioning systems in which cooperation is rewarded and noncooperation is punished (e.g., McCusker & Carnevale, 1995; Tenbrunsel & Messick, 1999). Such systems may work to some extent, but the potential side effects are that punishments and rewards undermine intrinsic motivation (Deci & Ryan, 1985); once economic incentives are removed, cooperation is likely to drop. Moreover, not all cooperative behaviors are easily monitored or incorporated in incentive systems (cf. the distinction between task performance and contextual performance—citizenship behavior; Borman & Motowidlo, 1993; Organ, 1988). As a consequence, incentive systems targeted at individuals' self-interest alone seem not to have the desired effect. Therefore, we suggest that cooperation, by its very nature, is at least in part contingent on group-oriented motivations (cf. Tyler, 1999). How, then, may leaders foster such motivations?

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Research on group belongingness (i.e., including others as part of one's self; cf. Aron, Aron, Tudor, & Nelson, 1991) and social identification (i.e., the perception of oneness with, or belongingness to, a group or organization; Ashforth & Mael, 1989) suggests that cooperation may be induced by leaders fostering positive within-group relations and thereby engendering a sense of group belongingness (i.e., which in this respect may be equated with identification; cf. Ashforth & Mael, 1989). There is evidence that individuals have a fundamental need to belong to social groups (Baumeister & Leary, 1995) and that fulfillment of this need may promote cooperation because it leads individuals to assign more weight to the group's interest (De Cremer, in press). By fostering a sense of belongingness (i.e., "we"; Ashforth & Mael, 1989; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), leaders may shift the emphasis from the pursuit of solely individual interests to the pursuit of group or organizational interests, thus fostering cooperation within groups (i.e., self-interest becomes defined at the group level; De Cremer & Van Vugt, 1999; van Knippenberg, 2000). For this reason, the present study focused on two leadership features associated with leaders' ability to foster group belongingness: procedural fairness and charismatic leadership.

Procedural Fairness and Cooperation

The fairness of treatment that people receive, or *procedural fairness*, exerts a powerful influence on their attitudes and behavior (Lind & Tyler, 1988; Thibaut & Walker, 1975). Literature on procedural fairness has provided evidence that fair procedures enacted by an authority (e.g., providing voice in decision procedures; Folger, 1977) communicate important relational information with respect to one's standing within the group (e.g., Folger, 1993; Tyler & Lind, 1992; Vermunt, van Knippenberg, van Knippenberg, & Blaauw, 2001). Enactment of fair procedures expresses a positive social evaluation (respect, belongingness), whereas unfair procedures express disrespect and marginality within the group or organization (Tyler & Lind, 1992). As a consequence, procedural fairness influences one's sense of self-worth and belongingness to the group or organization (Koper, van Knippenberg, Bouhuijs, Vermunt, & Wilke, 1993; Tyler, 1999). Fair treatment may thus motivate individuals to engage in group-oriented behavior (Tyler, 1999), as such being conducive of cooperation in social and organizational dilemmas (Tyler & DeGoeij, 1995; Van Vugt & De Cremer, 1999).

Charismatic Leadership and Cooperation

The notion that leaders may engender cooperation by fostering a sense of group belongingness may also be found in theories of charismatic and transformational leadership. Charismatic leadership is proposed to appeal to group members' motives, aspirations, and preferences and to motivate people to go beyond self-interest (House & Baetz, 1979). Through such behaviors as the articulation of a vision and taking personal risks and making personal sacrifices to realize the vision, charismatic leadership is believed to bolster a sense of group belongingness and thus to shift group members' focus from self-interest to collective interest (Bass & Avolio, 1993; Conger & Kanungo, 1987; Shamir et al., 1993).

Although there is evidence that charismatic and transformational leadership may enhance group performance (e.g., Howell & Avolio, 1993) and cooperative behavior, such as organizational

citizenship behavior (e.g., Podsakoff, MacKenzie, Moorman, & Fetter, 1990), there is notably less research into the proposed processes underlying this influence (Podsakoff, MacKenzie, Paine, & Bachrach, 2000). An exception is a study by De Cremer (in press) in which leaders perceived as charismatic (operationalized as making personal sacrifices for the collective good; Yorges, Weiss, & Strickland, 1999) increased group member cooperation. This effect was found only among individuals with a pro-social orientation and not among those who were dispositionally inclined to cooperate (prosocial orientation). This finding supports our assertion that leaders perceived as charismatic might promote cooperation because they motivate others to pursue the group or organizational interest.

The Present Study: The Interactive Effects of Charisma and Procedural Fairness

Thus, there is some evidence that cooperation is enhanced when a leader uses fair procedures and when the leader is perceived as charismatic. The present study extends these earlier findings in two ways: It is the first to focus on the interactive effects of leaders' procedural fairness and charisma, and it is the first to focus on group belongingness as a mediating variable in the relationship between leader behavior and cooperation.

Two lines of research suggest that the effects of leader charisma and procedural fairness are stronger on their own than in conjunction. First, research on core and peripheral group member status suggests that once people feel included in the group, further confirmations of group belongingness exert less of an effect on group member attitudes and behavior (Noel, Wann, & Branscombe, 1995; van Knippenberg, van Knippenberg, & van Dijk, 2000). This suggests that once group belongingness is instilled by the leader through either procedurally fair behavior or behavior that is perceived as charismatic, further actions by the leader (i.e., charismatic behavior or procedurally fair behavior, respectively) have less impact on group belongingness and, hence, on cooperation. Second, procedural fairness has less impact when the situation is already evaluated positively, for example because outcomes are favorable, than when circumstances are less favorable (Brockner & Wiesenfeld, 1996). This suggests that procedural fairness has a weaker effect on group belongingness and cooperation when both are already ensured through other factors (i.e., charisma).

Although the main focus of the present study was on the interactive effect of leaders' charisma and procedural fairness, we also included hypotheses about the main effects of charisma and procedural fairness on cooperation, because there is only limited empirical evidence for these effects, and replication of earlier findings is therefore valuable:

Hypothesis 1: Leaders' procedural fairness is positively related to cooperation.

Hypothesis 2: Leaders' perceived charisma is positively related to cooperation.

Hypothesis 3: Leaders' procedural fairness and perceived charisma interact, such that the effects of procedural fairness on cooperation are stronger when the leader's perceived charisma is low, and vice versa, the effects of perceived charisma

on cooperation are stronger when the leader is less procedurally fair.

Both laboratory research and field research have their strengths and weaknesses, and the strengths of the one may compensate for the weaknesses of the other (Dipboye, 1990). Therefore, we tested Hypotheses 1–3 in a scenario experiment (Study 1), a field survey (Study 2), and a laboratory experiment (Study 3). The scenario experiment allowed us to draw conclusions concerning causality, whereas the field study allowed us to extend our study to people in actual organizations and to another measure of cooperation. The laboratory experiment was designed to provide an experimental replication of the findings of Studies 1 and 2, to extend these findings to a measure of actual behavior, and to provide a test of our hypothesis about the role of group belongingness.

Hypothesis 4: Group belongingness mediates the interactive effect of leaders' procedural fairness and perceived charisma on cooperation.

Study 1

In Study 1, we used the public good paradigm, developed to study cooperation in social and organizational dilemmas (Messick & McClelland, 1983). In this paradigm, group members are asked to contribute toward the establishment of a public good. Provision of the good provides each group member with a (monetary) bonus. Once the public good is provided for, however, every group member can benefit, regardless of his or her contributions. This *impossibility of exclusion* (Olson, 1965) leads individuals to think that if it is possible to consume the good even without contributing substantially to its provision, it is in one's personal interest not to contribute (Dawes, 1980). Thus, emergence of cooperation may be problematic, because the pursuit of personal self-interest may lead to noncooperation.

A number of different behaviors may lead to perceptions of charisma (Bass & Avolio, 1993; Conger & Kanungo, 1987; Shamir et al., 1993). Following earlier experimental research by Yorges et al. (1999), who demonstrated that a leader making personal sacrifices to achieve the collective vision rather than personally benefiting from his or her action was perceived as more charismatic (cf. De Cremer, in press; Shamir et al., 1993), we adopted a similar manipulation to influence perceptions of charisma.

The manipulation of procedural fairness constituted allowing group members a voice in decision procedures versus not allowing them such latitude. Voice is an important aspect of the fairness of decision procedures (Folger, 1977; Thibaut & Walker, 1975) and has been associated with a range of fairness-based reactions, including cooperation in social dilemmas (Van Vugt & De Cremer, 1999).

Method

Participants and Design

Sixty-two students (34 men and 28 women) from a Dutch business school participated voluntarily in the study. The design was a 2 (self-sacrificing vs. benefiting behavior) \times 2 (procedural fairness: voice vs. no voice) between-subjects factorial. Participants were assigned randomly to the experimental conditions.

Procedure

After the participants listened to a lecture in psychology, a business scenario with the properties of a step-level public good dilemma (van de Kragt, Orbell, & Dawes, 1983) was distributed. Participants were told that they had to imagine being a member of an organizational group in which each member was a manager of a unit of a company called "Mind Vision." All units worked independently and competed for organizational resources and rewards. Each fiscal quarter, units received resources, worth DFL 40,000 (40,000 Dutch guilders, \approx \$18,000) from a common pool referred to as the "Mind Vision good." Participants were told that financial planners of Mind Vision designed an investment plan, which allowed each unit to contribute some or all of the resources received into the plan. If the sum of the investments of all managers equaled or exceeded DFL 140,000 (\approx \$63,000), the money invested would be doubled and distributed among all seven units. All managers would then receive part of the bonus, regardless of their contribution. However, if the total sum invested was less than DFL 140,000 (\approx \$63,000), all investments would be lost. In the latter case, each manager would thus lose his or her investment.

Self-sacrificing versus benefiting behavior manipulation. After participants received the information on the business scenario, they were informed that because of the complexity of the situation, someone within their group had been selected as leader to monitor the decisions. The task of this leader was to supervise and distribute the investments of the others and to make decisions concerning the division and rewards of future work in the group. Participants were told that the leader had specific ideas about leading this group of managers. In the *sacrificing* condition, participants were told that their leader considered management as follows:

The leader will be spending much time on this case, thereby reducing the amount of time he [she] is able to spend on his own work. Furthermore, in order to acquire as much information as possible concerning investment policies, he [she] volunteers to follow extra courses. All these extra activities may make it difficult for him [her] to meet his [her] own quotas at work. Also, he [she] does not decide to withhold ten percent from the invested budget to help cover any of his [her] personal costs. In sum, it will not be easy to do this task, as he [she] will have to invest himself [herself] a lot as well.

In the *benefiting* condition, the participants were told that their leader approached the situation as follows:

The leader will come in contact with new investors and enjoy attention from other work departments and even other companies. As such, his [her] job will definitely help him [her] in getting a promotion within the company or outside the company. Moreover, because of all this attention, he [she] thinks he [she] will have enough information available to make decisions, making extra financial courses unnecessary to follow. Furthermore, he [she] decides to withhold ten percent of the invested budget to help cover any of his [her] personal costs. In sum, being involved in this task motivates him [her] to obtain benefits from it.

Procedural fairness manipulation. Next, the procedural fairness manipulation was introduced. In the *voice* condition, participants were told that the leader would like to know their opinion about how the decision making should proceed. In the *no-voice* condition, participants were told that the leader would not ask their opinion with respect to this issue.

Dependent Measures

All answers were rated on 7-point scales ranging from 1 (*not at all*) to 7 (*very much so*).

Manipulation checks. Two questions assessed whether the manipulation of the leader's sacrificing versus benefiting behavior was successful (Yorges et al., 1999): "To what extent does this leader sacrifice?" and "To

what extent does this leader benefit?" ($r = -.65, p < .001$). To test whether sacrificing–benefiting behavior affected perceived charisma, we used Bass and Avolio's (1989) Charisma Scale (e.g., "This leader has the respect of others"; Cronbach's $\alpha = .86$). To check the effectiveness of the procedural fairness manipulation, participants were asked to what extent they considered the procedures used as fair.

Contributions to the public good. Finally, participants were asked to indicate how much they wished to invest (ranging from DFL 0 to 40,000 [\$0 to \approx \$18,000]), constituting the measure for cooperation. After this, participants were debriefed and thanked.

Results

Manipulation Checks

A 2 (procedural fairness) \times 2 (sacrificing vs. benefiting) analysis of variance (ANOVA) on the average score of the sacrificing and benefiting question yielded a significant main effect for sacrificing–benefiting, $F(1, 58) = 201.06, p < .001$, indicating that the self-sacrificing leader was evaluated as more sacrificing than the benefiting leader ($M_s = 5.13$ vs. 2.71 , respectively). Neither the main effect of procedural fairness, $F(1, 58) = 1.25, p = .26$, nor the interaction, $F(1, 58) = 2.36, p = .13$, was significant.

A two-way ANOVA on the average charisma score revealed a main effect for sacrificing–benefiting, $F(1, 58) = 11.63, p < .01$. Participants in the sacrificing condition saw the leader as more charismatic ($M = 4.41$) than participants in the benefiting condition ($M = 3.54$). Neither a main effect for procedural fairness, $F(1, 58) = 1.81, p = .18$, nor a Procedural Fairness \times Sacrificing–Benefiting interaction, $F(1, 58) = .03, p = .86$, was found.

A two-way ANOVA on the fairness question revealed a main effect for procedural fairness, $F(1, 58) = 12.93, p = .001$: The procedure was judged as more fair in the voice condition ($M = 4.37$) than in the no-voice condition ($M = 3.20$). Neither a main effect for sacrificing–benefiting, $F(1, 58) = .82, p = .36$, nor a Procedural Fairness \times Sacrificing–Benefiting interaction, $F(1, 58) = .12, p = .73$, was found. On the basis of these findings, we may conclude that our manipulations were successful.

Hypothesis Tests

A two-way ANOVA on participants' contributions yielded a significant main effect of procedural fairness, $F(1, 58) = 14.61, p < .001$, showing that contributions were higher when voice rather than no voice was given ($M_s = \text{DFL } 22,710.78$ [\approx \$10,000] vs. $\text{DFL } 18,784.19$ [\approx \$8,500], respectively). In addition, a significant main effect of sacrificing–benefiting was found, $F(1, 58) = 22.85, p = .001$: Contributions were higher in the sacrificing than in the benefiting leader condition ($M_s = \text{DFL } 23,203.00$ [\approx \$10,500] vs. $\text{DFL } 18,291.96$ [\approx \$8,000], respectively). Finally, an interaction between procedural fairness and sacrificing–benefiting emerged, $F(1, 58) = 4.30, p < .05$. As predicted, participants in the benefiting leader condition contributed significantly more when voice was given than when no voice was given ($M_s = \text{DFL } 21,321.42$ [\approx \$9,500] vs. $\text{DFL } 15,262.50$ [\approx \$6,800], respectively), $F(1, 60) = 13.77, p < .001$, whereas no significant difference in contributions was found between the voice and no-voice condition in the sacrificing leader condition ($M_s = \text{DFL } 24,100.13$ [\approx \$10,800] vs. $\text{DFL } 22,305.88$ [\approx \$10,000], respectively), $F(1, 60) = 0.65, p = .42$. In the same

voice condition, sacrificing–benefiting had a significant effect on contributions in the no-voice condition, $F(1, 60) = 19.11, p < .001$, but not in the voice condition, $F(1, 60) = 2.35, p = .13$.

Study 2

Study 1 replicated earlier findings that leaders' procedural fairness and perceived charisma have a positive effect on cooperation (Hypotheses 1 and 2). Of primary importance, procedural fairness and perceived charisma had stronger effects alone than in conjunction (Hypothesis 3). This is a novel finding, and an important aspect of Study 1 is that it allows us to establish causality in this relationship. Even so, an obvious question is whether these effects may also be observed in field settings. Study 2 was designed to address that question.

In Study 2, we operationalized cooperation as organizational citizenship behavior. Organizational citizenship behavior (OCB) refers to activities that go beyond job requirements and benefit others or the collective without necessarily benefiting the individual (Organ, 1988) and includes aspects such as interpersonal helping, taking the consequences of one's own actions for others into account, and keeping up-to-date on organizational matters (e.g., Podsakoff et al., 2000). OCB has been argued to reflect the organizational cooperative behavior that Katz (1964) and others alluded to (Organ, 1988). Moreover, because OCB may benefit the collective without necessarily benefiting the self, and one may benefit from others' OCB without engaging in OCB oneself, engagement in OCB arguably reflects the trade-off between personal and collective interest typical for organizational dilemmas. Indeed, in line with our argument, previous research has shown that OCB is positively related to procedural fairness (e.g., Moorman, 1991) and charismatic and transformational leadership (e.g., Podsakoff et al., 1990).

Method

Participants

One hundred and fifty Dutch business students (80 women, 70 men) who were enrolled in an organizational behavior class voluntarily filled out our questionnaire. Participants were told that we were interested in examining perceptions of supervisors at work. As more or less without exception students do a variety of jobs during their college years, we asked the student participants about their present or most recent job (an estimated 85% reported on their current job; on average, students engaged in their job for 10 hr per week, and all students had some relevant work experience). Students were asked to think about their direct supervisor and to answer some questions with this person in mind.

Procedural Fairness

Procedural fairness was assessed with four items based on Moorman's (1991) questionnaire, including "Your supervisor considered your viewpoint" and "Your supervisor provided you with timely feedback about his/her decisions and its implications." Questions were answered on a 7-point scale ranging from 1 (*not at all*) to 7 (*very much so*), and responses were combined to form an average procedural fairness score.

Charisma

Charisma perceptions were assessed with eight items based on Bass and Avolio's (1989) measure, including "Your supervisor sets high standards" and "Your supervisor has a vision that spurs people on." Questions were

answered on a 7-point scale ranging from 1 (*not at all*) to 7 (*very much so*), and responses were combined to form an average charisma score.

Organizational Citizenship Behavior

OCB was assessed with four items based on Konovsky and Organ’s (1996) measure, including “I am always on time” and “I do not take unnecessary breaks.” Participants responded on a 5-point scale ranging from 1 (*not at all*) to 5 (*very much so*). Items were combined to form an average OCB score.

Results

Means, standard deviations, and intercorrelations for the study variables are displayed in Table 1. To test our hypotheses, we conducted hierarchical regression analysis in which OCB was predicted by main effect terms (charisma and procedural fairness) at Step 1 and the interaction term at Step 2 (see Table 2). Following Aiken and West (1991), procedural fairness and charisma were centered (i.e., by subtracting the mean from each score), and the interaction term was based on these centered scores. Table 2 shows the regression results: OCB was positively related to procedural fairness (Hypothesis 1) and charisma (Hypothesis 2). Furthermore, the interaction between charisma and procedural fairness (Hypothesis 3) was significant. We conducted simple slopes analysis to further analyze this interaction (Aiken & West, 1991). When charisma was low (one standard deviation above the mean), procedural fairness was more strongly related to OCB ($\beta = .50, p < .001$) than when charisma was high (one standard deviation below the mean; $\beta = .26, p = .05$). Looking at the simple slopes for charisma, we found that when procedural fairness was low (one standard deviation above the mean), charismatic leadership was associated with higher levels of OCB ($\beta = .33, p < .005$), whereas the extent to which the leader was charismatic was unrelated to OCB when procedural fairness was high (one standard deviation below the mean; $\beta = .09, p > .35$). Thus, the results show that procedural fairness is more strongly related to cooperation (i.e., OCB) when the leader is relatively low in charisma, and, conversely, that charismatic leadership is more strongly related to OCB when the leader is procedurally unfair.

Study 3

Whereas Study 2 might be faulted for its cross-sectional mono-method design and Study 1 for its scenario character, in combina-

Table 1
Means, Standard Deviations, and Intercorrelations of Organizational Citizenship Behavior, Procedural Fairness, and Charisma, Study 2

Variable	<i>M</i>	<i>SD</i>	Organizational citizenship behavior	Procedural fairness	Charisma
Organizational citizenship behavior	4.04	0.98	(.85)		
Procedural fairness	3.86	0.83	.59	(.85)	
Charisma	3.32	0.80	.51	.69	(.90)

Note. *N* = 150. All correlations are significant at *p* < .001. Coefficients alpha are displayed within parentheses on the diagonal.

Table 2
Results of Hierarchical Regression Analysis of Organizational Citizenship Behavior on Procedural Fairness and Charisma, Study 2

Variable	β	<i>R</i> ²	<i>R</i> ² _{adjusted}	<i>R</i> ² _{change}	<i>dfs</i>
Step 1		.37	.36	.37	2, 147
Charisma	.20*				
Procedural fairness	.45**				
Step 2		.39	.37	.02	3, 146
Charisma × Procedural Fairness	.15*				

Note. The dependent variable was organizational citizenship behavior. Total *F*(3, 146) = 31.33, *p* < .001.

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

tion, Studies 1 and 2 yield evidence that leaders’ procedural fairness and perceived charisma interact to affect cooperation. The results were consistent over study type (scenario vs. field) and measure of cooperative behavior (contribution to the collective good vs. OCB). In Study 3 we aimed to extend these findings by measuring actual cooperative behavior rather than reported behavior and by testing the mediating role of group belongingness (Hypothesis 4). To do so, in Study 3 we used the public good dilemma paradigm that was used in Study 1, but this time we focused on actual decision behavior rather than hypothetical decisions. In addition, in line with Yorges et al. (1999), Study 3 also tested whether perceptions of charisma mediated the effect of our manipulation of leader’s sacrificing versus benefiting behavior on cooperation to establish that this effect was indeed due to the behavior’s effect on perceived leader charisma.

Method

Participants and Design

Ninety-nine undergraduate students from a Dutch university were paid DFL 10 (≈ 4\$) for voluntary participation. The students were randomly assigned to a 2 (procedural fairness) × 2 (self-sacrificing vs. benefiting behavior) between-subjects design.

Procedure

Participants arrived at the laboratory in groups of six. Each participant was seated in a separate cubicle with a personal computer. All instructions were given via the computer.

Introduction to the public good dilemma. Participants were introduced to an investment task in which people could earn money for themselves and for their group. Each participant received an endowment of 300 Dutch cents (≈ \$1.50) and was free to choose how much he or she wanted to contribute (ranging from 0 to 300 cents [\$ 0 to ≈ \$1.50]). The total amount contributed by the group would be multiplied by two and then divided amongst all group members, regardless of their contribution. The amount one decided not to contribute would accrue to oneself.

Next, participants were told that to resemble real-life groups, the computer would randomly select a group member who would be appointed as the group leader and who would supervise and distribute the contributions. Shortly after this, participants were informed that one of the other group members had been selected to be the group leader.

Self-sacrificing versus benefiting behavior manipulation. Participants were told that the group leader would be asked to give his or her opinion regarding the group task. Participants then had to wait for a while until the

computer forwarded a bogus e-mail in which the group leader communicated his or her opinion. In the self-sacrificing condition, the leader said the following:

If the group performs well I don't think it is necessary that the leader is allowed to take more from the obtained outcomes. Although this task is not an easy one, I don't need any extras. Furthermore, if it turns out that extra time is required to monitor all the decisions and recalculation of the division of the contributions is required, I will not hesitate to do this. Finally, I think that we should have no problems in performing well as a group!

In the *benefiting* condition, the leader communicated the following message:

If the group performs well I find it necessary that the leader is allowed to take more from the obtained outcomes (i.e., take a bigger part from the financial bonus). Since this task is not an easy one, I think this is a valid argument. Furthermore, if it turns out that extra time is required to monitor all the decisions and recalculation of the division of the contributions is required, I will not do this. Finally, since this is a complex group situation, I'm not convinced that we will perform well as a group.

Procedural fairness manipulation. After this message was relayed in the voice condition, the participants received the communication that the leader had decided that the group members could give their opinion about how the investments should be divided. In the no-voice condition, no such voice was given.

Dependent Measures

Aside from the measure of contributions to the public good, all responses were assessed on a 7-point scale ranging from 1 (*not at all*) to 7 (*very much so*).

Manipulation checks. To test whether the manipulation of self-sacrificing versus benefiting behavior was successful, we asked the same two questions as were posed in Study 1, with evidence that the manipulation was successful ($r = -.30, p < .005$). Furthermore, to test whether the leader behaviors affected perceptions of charisma, we used the same charisma scale as was used in Study 1 (Cronbach's $\alpha = .94$). To assess the effectiveness of our procedural fairness manipulation, we asked participants to what extent "this leader gave them the opportunity to voice their opinion," "they considered the leader to be fair," "they considered the decision of the leader with respect to voicing your opinion as fair," and "they were satisfied with this leader with respect to voicing one's opinion" (Cronbach's $\alpha = .95$).

Group belongingness. To assess group belongingness, we used three items that were adapted from the scale developed by Brown, Condor, Mathews, Wade, and Williams (1986), which specifically focuses on the extent to which people feel a sense of oneness with and belongingness to a group (cf. Aron et al., 1991; Ashforth & Mael, 1989). Participants were asked to what extent "they felt they belonged to their group," "felt strong ties with their group," and "identified with their group" (Cronbach's $\alpha = .75$).

Contributions to the public good. Participants were asked to indicate how much they wished to contribute (ranging from 0 to 300 Dutch cents [\$0 to \approx \$1.50]), which constituted the measure for cooperation. After this, participants were debriefed and thanked.

Results

Manipulation Checks

A 2 (procedural fairness) \times 2 (sacrificing vs. benefiting) ANOVA on the average score of the sacrificing and benefiting

question revealed a significant main effect of sacrificing–benefiting, $F(1, 95) = 4.76, p < .05$, indicating that the self-sacrificing leader was evaluated to be more sacrificing than the benefiting leader ($M_s = 4.00$ vs. 3.60, respectively). Neither a main effect for procedural fairness, $F(1, 95) = 0.01, p = .91$, nor a Procedural Fairness \times Sacrificing–Benefiting interaction, $F(1, 95) = 0.06, p = .80$, was found.

A two-way ANOVA on the charisma score yielded a significant main effect for sacrificing–benefiting, $F(1, 95) = 72.54, p < .001$. A sacrificing leader was evaluated to be more charismatic than a benefiting leader ($M_s = 4.46$ vs. 3.03, respectively). Neither the main effect of procedural fairness, $F(1, 95) = 3.61, p < .10$, nor the interaction, $F(1, 95) = 3.44, p < .10$, was significant.

A two-way ANOVA on the procedural fairness score yielded a significant effect for procedural fairness, $F(1, 95) = 81.47, p < .001$: The leader was evaluated as more fair when voice was given than when no voice was given ($M_s = 4.58$ vs. 2.66, respectively). A main effect of sacrificing–benefiting was also observed, $F(1, 95) = 52.05, p < .001$ (however, an additional analysis showed that the effect of our sacrificing–benefiting manipulation on cooperation was not mediated by perceived fairness). The interaction was not significant, $F(1, 95) = 0.44, p = .50$. Overall, these findings show that our manipulations were successful.

Hypothesis Tests

A two-way ANOVA on participants' contributions revealed significant main effects of procedural fairness, $F(1, 95) = 10.75, p = .001$, and sacrificing–benefiting, $F(1, 95) = 12.06, p = .001$, as well as the predicted interaction, $F(1, 95) = 5.37, p < .05$ (see Table 3 for means). As predicted, participants in the benefiting leader condition contributed more when voice was given than when no voice was given, $F(1, 97) = 14.93, p < .001$, whereas in the sacrificing leader condition, no significant difference in contributions was found between the voice and no-voice condition, $F(1, 97) = 0.35, p = .55$. In the same vein, sacrificing–benefiting had a significant effect on contributions in the no-voice conditions, $F(1, 97) = 16.16, p < .001$, but not in the voice conditions, $F(1, 97) = 0.46, p = .50$.

Group Belongingness

A two-way ANOVA on the group belongingness score revealed a significant effect for sacrificing–benefiting, $F(1, 95) = 19.97,$

Table 3
Means of Contributions and Belongingness as a Function of Procedural Fairness and Sacrificing Versus Benefiting Behavior, Study 3

Dependent variable/ Procedural fairness	Sacrificing leader	Benefiting leader
Contributions		
Voice	135.66	122.60
No voice	124.79	59.23
Belongingness		
Voice	4.32	4.25
No voice	4.32	2.70

Note. Contributions could range from 0 to 300 cents Dutch (0 to \$1.50). Group belongingness scores are rated on 7-point scales with higher values indicating higher group belongingness.

$p < .001$; a significant main effect for procedural fairness, $F(1, 95) = 16.95$, $p < .001$; and the predicted interaction between sacrificing–benefiting and procedural fairness, $F(1, 95) = 16.95$, $p < .001$ (see Table 3). Participants in the benefiting leader condition exhibited stronger feelings of group belongingness when voice was given than when no voice was given, $F(1, 97) = 30.11$, $p < .001$, whereas in the sacrificing leader condition no significant difference in feelings of group belongingness was found between the voice and no-voice condition, $F(1, 97) = 0.00$, $p = 1.00$. Also, sacrificing–benefiting had a significant effect on contributions in the no-voice condition, $F(1, 97) = 33.50$, $p < .001$, but not in the voice condition, $F(1, 97) = 0.02$, $p = .88$.

Mediational Analyses

We conducted two mediational analyses. First, we tested whether the interaction of procedural fairness and perceptions of charisma (i.e., our charisma measure) mediated the interaction of procedural fairness and leaders' sacrificing or benefiting behavior on cooperation. We followed procedures described by Hull, Tedlie, and Lehn, (1992), adding perceived charisma as a continuous variable to the ANOVA design and testing both the perceived charisma main effect and the Procedural Fairness \times Perceived Charisma interaction alongside the main and interactive effects of the sacrificing–benefiting manipulation. As expected, the Procedural Fairness \times Perceived Charisma interaction was significant, $F(1, 93) = 4.35$, $p < .05$, whereas the interaction of procedural fairness and the sacrificing–benefiting manipulation was no longer significant, $F(1, 93) = 1.44$, $p = .24$. These results indicate that leaders' sacrificing versus benefiting behavior affected cooperation through its effect on perceived charisma.

Second, to examine whether the interaction of sacrificing–benefiting and procedural fairness on contributions was mediated by feelings of group belongingness (Hypothesis 4), we conducted another mediational analysis. A two-way analysis of covariance (ANCOVA) with group belongingness as a covariate yielded a significant effect for group belongingness, $\beta = .33$, $F(1, 94) = 6.44$, $p < .05$, indicating a positive link between group belongingness and contributions. Moreover, the analysis showed that the interaction effect disappeared, $F(1, 94) = 1.46$, $p = .23$, as compared with the significant interaction, $F(1, 95) = 5.37$, $p < .05$, in the original analysis. This reduction is significant ($z = 2.71$, $p < .01$; cf. Sobel, 1982) and suggests that the Procedural Fairness \times Sacrificing–Benefiting interaction on cooperation is mediated by group belongingness.

Discussion

The social dilemma nature of many collective efforts in organizations may be a major impediment to the cooperation required to achieve collective goals and interests. We proposed that leaders might play an important role in fostering cooperation in such organizational dilemmas. In line with previous research (Tyler & DeGoey, 1995; Van Vugt & De Cremer, 1999), all three studies yielded evidence for the positive relationship between leader procedural fairness and cooperation (Hypothesis 1). Also, all three studies supported the prediction that charismatic leadership engenders cooperation (Hypothesis 2). These findings add to the limited empirical findings about leader behavior and cooperation in social

and organizational dilemmas and illustrate the potentially important role of leader procedural fairness and charisma in cooperation.

The core findings of the present study, however, concern the interaction between leader behavior that affects perceptions of charisma and leader procedural fairness. Consistent over three studies, procedural fairness and perceived charisma had stronger effects on cooperation on their own than in conjunction (Hypothesis 3). Moreover, findings from Study 3 demonstrated that this interaction was mediated by group members' feelings of group belongingness (Hypothesis 4). Research in charismatic–transformational leadership has been criticized for providing little information about the possible mechanisms through which leader behavior influences group member behavior (e.g., Podsakoff et al., 2000). The finding that group belongingness mediated the interactive effect of procedural fairness and charisma thus is a step forward in uncovering the process through which leader behavior affects group member cooperation. The finding that procedural fairness and charisma interacted extends earlier research in which fairness and charisma were studied separately by showing that both may affect cooperation through the same process: the fostering of a sense of group belongingness among group members. The observation that procedural fairness moderates the effects of perceived charisma, or, stated differently, that perceived charisma moderates the effects of procedural fairness, may also prove valuable in future research in organizational justice, where (other) leadership behavior is typically not taken into account, and in research in charismatic leadership, where leader fairness typically is not taken into account.

The finding that leader procedural fairness had less impact when the leader was charismatic is consistent with observations that some charismatic leaders may use their charisma to self-interested and potentially immoral ends (House & Howell, 1992) and with recent evidence that leaders that are associated with the collective identity (cf. group belongingness) have more leeway in their behavior (Platow & van Knippenberg, 2001). Conversely, the finding that procedural fairness had more impact when circumstances were less favorable (i.e., when the leader was noncharismatic) adds to the evidence that individuals are more concerned with the fairness of procedures in relatively unfavorable situations (Brockner & Wiesenfeld, 1996). Given that previous studies in that area focused on favorability in terms of the valence or fairness of outcomes (Brockner & Wiesenfeld, 1996), the present results extend these earlier findings to leadership behavior.

The present research also yields additional evidence for the proposition that self-sacrifice is an aspect of charismatic leader behavior (e.g., Shamir et al., 1993). In line with research by Yorges et al. (1999), the current findings demonstrate that leader self-sacrifice increases perceptions of charisma. Moreover, perceived charisma mediated the effect of leaders' sacrificing versus benefiting behavior in the interaction with procedural fairness. In conjunction, these findings corroborate the proposition that self-sacrifice is an aspect of charismatic leadership and, moreover, that it is an aspect that may engender cooperation.

A major strength of the present study is that it involved a variety of research methods. Study 3, the main study, yields experimental evidence with high internal validity for a measure of actual behavior and also provides a test of Hypothesis 4. A potential criticism of Study 3 is that it might be relatively low in external validity. However, the fact that Studies 1 and 2, for which concerns about external validity pose less of a problem, also yielded support

for Hypotheses 1–3 counterargues this potential criticism. Conversely, Study 2 might be criticized for being correlational in nature (i.e., rendering it mute in matters of causality) for relying on self-reported behavior rather than an actual measure of behavior (this also holds for Study 1) and for the fact that all variables were assessed in a single questionnaire (i.e., making common method variance a potential problem). Yet, in combination with the experimental design of Studies 1 and 3 and the assessment of actual behavior in Study 3, these concerns are less of a threat to the overall conclusions of the present study.

Of course, the present study also has its limitations. Our experimental studies relied on single operationalizations of charismatic leadership and procedural fairness. Even though Study 2 used more general measures of procedural fairness and charisma (i.e., arguing in favor of the generalizability of these findings), it seems important to put our hypotheses to the test with a broader range of both charismatic leadership behaviors and behaviors relating to procedural fairness. For instance, it is suggested that the more interactional aspects of procedural fairness (cf. interactional fairness; Folger, 1993) may be more important in fostering a sense of group belongingness than voice (Tyler, 1994). Exploring a broader range of leader behaviors may help us determine the relative importance of different aspects of charisma and procedural fairness and may thus help to refine our theories of charismatic leadership, procedural fairness, and cooperation.

It also seems valuable to extend our field research with other measures of cooperative behavior. In addition to OCB, incorporating other measures, such as contributions to collective resources or social loafing on group tasks, will help to clarify the effects of leader behavior on cooperation in organizations. Related to this is our focus on cooperation in situations of outcome interdependence (i.e., the degree to which significant outcomes an individual receives depend on one's own and others' decisions; Wageman, 1995), which do not necessarily require that people interact to cooperate (cf. Komorita & Parks, 1994)—as was evident in Studies 1 and 3. On the basis of the theoretical argument advanced here, we predict that our conclusions will also hold in situations where cooperative interactions are required (i.e., task interdependence; Wageman, 1995), but this is a question for future research to answer, and, for the time being, the fact that we did not explicitly focus on task interdependence should be regarded as a limitation to the conclusions of the present study.

Another limitation is that all three studies relied on student samples. Although this should not be considered problematic for the experimental studies, where the main aim was to establish the predicted interaction with high internal validity, this should be considered a limitation of Study 2. Even though respondents in Study 2 were indeed employees of a range of organizations, future tests of our hypotheses in the field would do well to focus on employees with a more full-time and longer-term involvement in the organization.

Our results show that group belongingness mediated the effect of procedural fairness and self-sacrificing–benefiting behavior, but this does not mean that other potential mediators may not also play a role. For example, it would be interesting to examine to what extent a self-sacrificing leader serves as a role model for cooperative behavior. Such a role model could lead to cooperation independent of group belongingness. Future research assessing a broader range of potential mediators might make an interesting

contribution to our understanding of the processes underlying the influence of leader behavior on follower action.

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