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Demonstrating knowledge: The effects of group status on outgroup helping

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Abstract

We examined, in two experiments, the notion that members of low status groups, more than members of high status groups, use outgroup helping as a strategic tool to demonstrate their group's knowledge and boost its reputation. In Study 1 (N = 103), we compared outgroup helping in response to requests for help with offering help. As predicted, participants' knowledge was positively related to outgroup helping in response to requests, but only among members of low status groups. Knowledge also predicted the offering of help among members of high status groups. The second study (N = 75) replicated the findings from the requested help condition and showed that the effect disappeared in a condition in which help could not reflect ingroup knowledge. Additional data support a conclusion in terms of a collective strategy to boost the ingroup's reputation by demonstrating ingroup knowledge to the outgroup. The implications for promoting outgroup helping in a salient intergroup context are discussed.

Keywords: outgroup helping, group status, demonstrating knowledge, strategic motives, social identity
Demonstrating knowledge: The effects of group status on outgroup helping

Helping others is a great way to help yourself. Volunteers, for example, often benefit from their work in terms of self-development, learning, and variety in life (Gidron, 1978) and volunteer work is associated with positive affect and self-esteem (Clary et al., 1998), and an increased sense of community and belonging (Omoto & Snyder, 2010). Moreover, helping others can install a sense of meaning and purpose as an individual (Jonas, Schimel, Greenberg, & Pyszczynski, 2002) and as a member of a valued group (van Leeuwen, 2007). Benefits at the group level are also evident in other research, which has shown that helping other groups can serve to exert power and maintain or achieve a dominant position vis-à-vis these groups (Nadler, 2002; Nadler, Harpaz-Gorodeisky & Ben-David, 2009), and it can create a positive impression of the ingroup (Hopkins et al., 2007). In the current paper, we will focus on a specific form of impression management: The potential to demonstrate important knowledge or skills to another group through helping.

Helping relations are unequal by nature. At the core of a successful helping interaction is the notion that the recipient of help is lacking, and in need of, a valued resource - be it money, information, or skills. The provider of help is able to help because he or she is in possession of this resource. This inequality is highly salient at the time of the interaction, emphasizing a status difference in which the helper occupies a higher status position than the helpee. Nadler (Nadler, 2002; Nadler & Halabi, 2006; Nadler et al., 2009) argued that intergroup helping relations can be viewed as power and status relations, in which groups strive to assert their dominance over other groups. Because the act of helping is so strongly associated with a high status position, helping can be used to challenge (for members of low status groups) or reaffirm (for members of groups with insecure high status) existing status positions. For example, Nadler and colleagues (2009, Study 2) demonstrated that members of groups who felt that their status position was under threat were more likely to help the
outgroup that posed the source of this threat (as opposed to a non-threatening outgroup).
Moreover, helping was unrelated to recipients' perceived need for help, which supports the conclusion that helping resulted from an ingroup serving motive: To rehabilitate a threatened social identity.

Helping as an impression management tool

Recently, van Leeuwen and Täuber (2010) presented an overview of ingroup serving motives for outgroup helping. One such motive is the desire to present the ingroup in a favourable light. The use of helping as an impression management tool is nicely demonstrated in research by Hopkins and colleagues (2007), who tested the notion that people can use helping to refute a negative meta-stereotype. They showed that Scottish participants, when confronted with the English stereotype of the Scots as mean, became more generous toward another outgroup (The Welsh). Moreover, salience of the mean stereotype enhanced outgroup generosity but not ingroup generosity. This finding demonstrates that helping can be effective in disconfirming stereotypes that portray the ingroup as having specific antisocial characteristics. In the present research, we aim to take this notion one step further. We will test the hypothesis that group members can help an outgroup in order to demonstrate their group's competence when this competence is questioned. The current research complements earlier research (Hopkins et al., 2007) by showing that group members can communicate their qualities by helping the outgroup that is the source of the threat (a higher status outgroup). It also extends earlier research (Nadler et al., 2009) by showing that it is the demonstration of a specific quality, rather than asserting power or dominance in general, that can be the underlying motive for helping.

The notion that helping and signs of (in)competence are inextricably linked becomes evident when looking at research on assumptive help. Assumptive help can be described as unsolicited support provided without any evidence of need on the part of the recipient.
Demonstrating knowledge (Deelstra et al., 2003; Schneider, Major, Luhtanen, & Crocker, 1996). Although the intention for providing assumptive help can be strategic (e.g., Gilbert & Silvera, 1996; Shepperd & Arkin, 1991), oftentimes it is benign, reflecting a genuine belief that someone else is in need of help and that one is able to provide it. Yet research has shown that recipients of assumptive help are viewed by others as less competent compared to people who were not helped (Gilbert & Silvera, 1996; Graham and Barker, 1990). Recipients of assumptive help have also reported feelings of inadequacy, stress, interpersonal conflict and emotional exhaustion (Beehr, Bowling, & Bennett, 2010; Buunk, Doosje, Jans, & Hopstaken, 1993), lower competence-based self-esteem and depressed affect (Schneider et al., 1996), and signs of reactance (El-Alayli & Messé, 2004).

Given the sometimes dramatic consequences of receiving help for feelings of competence and self-esteem, it is no wonder that people are often averse to seeking help, even when they need it. Although the need for help could promote help-seeking as a means to overcome difficulties, people have been found to refrain from seeking help because of its potentially harmful effects (Nadler, 1991; Ryan, Gheen, & Midgley, 1998; van Leeuwen, Täuber & Sassenberg, 2010; Wills & DePaulo, 1991). Täuber and van Leeuwen (2010) examined, in two studies, the willingness to seek outgroup help among members of high and low status groups. In the first study, they found that members of high status groups refrained from seeking the help they needed to maintain their high status position when their quest for help was visible to the lower status outgroup. However, when help could be sought under private conditions (effectively spying on the outgroup), members of high status groups actually sought more help than members of low status groups. Moreover, results from the second study demonstrated that this effect was limited to situations where the status difference was illegitimate, and thus subject to change. These findings demonstrate that
publicly seeking help can damage the image of a group. If a group is to retain an image of competence, it should not be seen to seek help, even when it is in need of it.

If seeking help can damage the image of high status groups, then the reverse could also be true: Members of low status groups could use the provision of help as a tool to demonstrate their competence to the higher status outgroup, and boost their reputation.

According to social identity theory (Tajfel, 1978; Tajfel & Turner, 1979), membership in groups that compare negatively to other groups on important characteristics is damaging to one's self-esteem. Group members can pursue a number of individual and collective strategies to deal with this threat to their social identity (Tajfel & Turner, 1979). Scheepers and colleagues (Scheepers, Spears, Doosje, & Manstead, 2006) distinguished between collective strategies with an instrumental function and those with an identity function. The instrumental function is defined by the achievement of certain (material) goals and is triggered by a realistic competition over resources. The identity function is defined by the creation and expression of a positive, distinct, and meaningful social identity, and operates under conditions of social competition (i.e., a non-material competition for positive social identity; Tajfel & Turner, 1979). When group members use helping to demonstrate their competence to the outgroup and boost their collective reputation, they are effectively engaged in a form of social competition, in which the aim is to impress another group and to establish a more positive image of the ingroup. It is worthy to note that social competition could occur even at the expense of realistic group outcomes, since outgroup helping could provide an instrumental benefit for the outgroup, but a social or identity-related benefit for the ingroup (van Leeuwen et al., 2010).

Limitations: Ability and prescriptive norms

When members of low status groups consider helping as a means to demonstrate their competence, they face two limitations. The first concerns the degree to which they actually
possess this competence. It seems obvious that a specific competence needs to be present in order to demonstrate it. Moreover, outgroup helping should increase as this competence increases. Although Clary and Orenstein (1991) have stressed the importance of taking into account helpers' task-relevant skills in analyses of helping behaviour, few studies have actually done so, and those that did, produced mixed results (Barnett, Thompson, and Pfeifer, 1985; Dovidio and Gaertner, 1981; Shotland & Heinold, 1985). The current research aims to fill this gap in existing literature by investigating the link between the ability to help and the frequency with which this help is extended to members of another group.

The second limitation involves behavioural norms that are associated with existing status differences. Status, like power, contributes to a functional social hierarchy which provides a psychologically appealing kind of order that clarifies roles and facilitates coordination (Jost, Kay & Thorisdottir, 2009). This social hierarchy comes with a set of prescriptive norms: Based on a person's position in the status hierarchy, there are clear expectations of what a person should, and should not do (Magee & Galinsky, 2008). And therein lies the problem for members of low status groups: In order to advance themselves, they should exhibit behaviours and display competencies that are associated with higher status people - yet society could view this as role-breaking behaviour and punish them accordingly.

Research has shown that people who violate prescriptive norms that are based on their status position in society are often condemned (Anderson, Ames, & Gosling, 2008; Rudman, 1998). For example, Rosen, Mickler and Collins (1987) found that participants whose offer of help to a needy (thus lower status) participant was rejected viewed this rejection as a violation of their expectations, and reported more negative affect and more unfavourable evaluations of the recipient than those whose offer was accepted. The situation might change, however, when the low status group is responding to a direct request for help from the higher
status group. A request for help signals that the help seeker views the person or group to whom the request is directed as a legitimate provider of help. Moreover, following a request from a higher status person is in line with behaviour expected from lower status people (Goodman & Gareis, 2004). A request for help may therefore create a legitimate window of opportunity for particularly members of low status groups to display their competence through helping - a window that could remain closed in the absence of such a request.

The current research

In this paper, two studies are presented in which we investigate the degree to which members of high and low status groups use outgroup helping as a means of demonstrating their competence vis à vis the outgroup. We have developed an experimental paradigm in which the frequency of helping is studied under highly controlled conditions. Participants are led to believe that they are part of a university team whose performance is compared to that of a team from a rivalling university situated in the same town. After a short knowledge quiz, they received bogus feedback indicating that their team either outperformed (high ingroup status) or was outperformed by (low ingroup status) the other team. In a subsequent, more elaborate knowledge quiz, they were asked to collaborate with the other team. Specifically, while answering the quiz questions, participants were given a number of opportunities to help the other team. The frequency of helping constitutes the main dependent variable. Participants' own performance in the quiz is used as an indicator of their ability to help. This experimental paradigm yields a number of advantages (see also Engelmann & Fischbacher, 2009, and Seinen & Schram, 2006). First, we can directly observe helping behaviour, rather than beliefs or intentions. Second, we have a reliable indicator of the ability to help. And third, it allows us to compare helping behaviour between a number of different conditions, which could never be compared in a non-experimental setting. In Study 1, helping in response to a request for help is compared to (voluntarily) offering help. In Study 2, help that
reflects the helper's own knowledge (a demonstration of competence) is compared to help that does not reflect the helper's knowledge. In both studies, we tested the notion that members of low status groups, more so than members of high status groups, will use helping as a means of demonstrating their knowledge.

Study 1

Study 1 was designed to provide a first test of our general hypothesis as well as to tackle the possible limitation in terms of societal norms that particularly members of low status groups face when they consider to use outgroup helping as a means of improving the ingroup's reputation. We reasoned that members of low status groups would be less reluctant to demonstrate their ability through helping in response to a request for help than in the form of an (unrequested) offer of help. We therefore compared the frequency of outgroup helping in a condition in which participants received specific requests for help to the frequency of help in a condition in which participants could voluntarily offer help to the outgroup. Overall, we expected group members' knowledge (reflecting their ability to help) to be positively related to outgroup helping (Hypothesis 1a). More importantly, we predicted that knowledge would be more strongly related to outgroup helping among members of low status groups compared to members of high status groups when helping occurred in response to specific requests. However, when help could only be offered to the outgroup, we expected this pattern to be absent (Hypothesis 1b).

Although responding to requests for help has never been empirically compared to the offering of help, a few differences between the two forms of help can be identified that could affect the frequency of helping. Receiving a request for help could evoke a greater sense of obligation to comply than the mere existence of an opportunity to offer help (Petrova, Cialdini, & Sills, 2007). Moreover, a request for help is a clear signal that help is needed, whereas in the absence of such a request participants can only guess whether their offer of
help will be welcomed by the recipient. We thus anticipated that, overall, more help would be extended in the requested help condition compared to the offering help condition (Hypothesis 2a), and that participants in the requested help condition would report a greater sense of obligation to help as well as a higher perceived need for help on the part of the recipient than participants in the offering help condition (Hypothesis 2b).

Method

Participants and design. 103 students from the VU University Amsterdam (44 men, 59 women, $M_{\text{age}} = 21$, $SD = 2.41$) participated in this study. Participants were randomly distributed across the four cells of a 2 (Group Status: low vs. high) x 2 (Help Type: requested help vs. offering help) between participants experimental design. Knowledge was a measured, continuous variable indicating participants' ability to help.

Procedure. Upon entering the experimental laboratory, participants were received by an experimenter who seated them in separate cubicles in front of a computer, which was used to provide instructions and register responses. The study was introduced as a study into general development and knowledge among students of different universities. It was explained that in the first part of the study, small teams of students from different universities would compete with each other in a knowledge quiz. Participants were ostensibly connected with 2 other students from their own university to form a VU team, that would compete in a knowledge quiz with a similarly created team from the University of Amsterdam (UA team). In the first knowledge quiz, 15 questions selected from the game Trivial Pursuit were presented to each participant with the instruction to answer them to the best of their ability. It was explained that these questions aimed to assess their general knowledge level. The total number of correct answers within each 3-person team (max. 45) constitutes the team’s collective performance, which would be compared to that of the rivalling UA team. Unknown to participants, in the low status condition, the questions were more difficult than those
Demonstrating knowledge presented in the *high status condition*, the purpose of which was to support the subsequent status feedback. The selection of the knowledge questions was based on a pre-test with 30 questions (*N* = 106).

Upon completion of the first knowledge quiz and after a short waiting period, (bogus) feedback was provided on the teams’ performances. In the *low status condition*, participants read that the UA team had outperformed their VU team with 31 compared to 22 correct answers. In the *high status condition*, these scores were reversed so that the VU team had outperformed the UA team.

Instructions for the second part of the study were then provided. It was explained that the investigators were also interested in comparing knowledge levels between students from different cities in the country. For that reason, the VU team’s and the UA team’s collective performance in the next round of the knowledge quiz would be compared to that of other (6-person) teams from other cities. In addition, the teams’ separate performances would be compared to each other. Introducing a cooperative goal (in addition to a continued competitive goal) served to legitimate the exchange of help between the teams. The upcoming quiz contained 40 questions, which were identical in the low status and high status conditions. Example questions are "Which city on the Thames has more Indian restaurants than Bombay and New Delhi combined?" (the correct answer is London), and "What became, in 1991, as a result of artificial moons used for communication, espionage, and navigation, the 'first space war'?" (the correct answer is the Gulf war). To stimulate the exchange of help, the questions were selected from the Genus Edition, which is considered the more difficult version of Trivial Pursuit. Participants could type in their answers to each question, which were later coded as correct or incorrect (= Knowledge).² It was explained that, for practical reasons, the VU team could help the UA team during the first 20 questions of the quiz (but not vice versa). It was announced that after a short break, ostensibly to
synchronize the teams, these roles would be reversed. In reality, the study ended before the reversal of roles.

While working on the first 20 questions of the quiz, participants in the requested help condition could expect to receive a certain number of messages from members of the UA team in which they request their help. The text of the message read: "Someone from the UA team requested your answer to the last question. Would you like to send your answer to the UA team?". These requests for help were pre-programmed such that every participant received a total of 16 messages\(^3\) at random intervals during the quiz. Participants could then click on a 'yes' or a 'no' button and continue with their own quiz. In the offering help condition, participants were given the opportunity to offer their answers to the UA team during the quiz. Ostensibly to avoid overcrowding of the UA team with offers, participants had 16 opportunities to make such offers. While working on the quiz, participants received 16 messages from the computer at random intervals with the following text: "The possibility exists to offer your answer to the last question to someone from the UA team. Would you like to offer your answer to the UA team?" (yes/no).

After the first part of the quiz and while waiting for the teams to be synchronized, a brief questionnaire was administered. The effectiveness of the manipulation of group status was checked with 2 items ("How good was the performance of the UA team in the first round? and "How good was the performance of the VU team in the first round?" 1 = \textit{very poor}, 7 = \textit{very good}). \textit{Feelings of obligation} were measured with three items (e.g., "To what extent did you feel obligated towards the UA team to share your answers with them?"; 1 = \textit{not at all}, 7 = \textit{very much}; \(\alpha = .86\)). \textit{Perceived need} was measured with 1 item ("To what extent did you believe that the UA team needed the answers from the VU team?").
Upon finishing the questionnaire, participants were told that for technical reasons, the second part of the quiz (with the possibility of seeking help from the UA team) could not continue. They were subsequently debriefed, paid and thanked for their participation.

Results

Manipulation checks. The manipulation of group status was successful. Both status checks were analysed in full factorial analyses of variance, which yielded main effects of Group Status only. Participants in the low group status condition rated their own team’s performance lower ($M = 2.90, SD = .83$) than participants in the high group status condition ($M = 5.48, SD = 1.16$), $F(1, 99) = 169.69, p < .001, \eta^2_p = .63$. Participants in the low group status condition also rated the other team’s performance higher ($M = 4.75, SD = .84$) than participants in the high group status condition ($M = 3.56, SD = 1.21$), $F(1, 99) = 32.94, p < .001, \eta^2_p = .25$.

Providing help. Knowledge (transformed to $z$-scores), Group Status (-1 = low status, 1 = high status) and Help Type (-1 = requested help, 1 = offering help), as well as all possible interaction terms, were entered into a regression analysis with helping as the dependent variable. The analysis was significant, $F(7, 95) = 7.60, p < .001, R^2_{adj} = .36$, and revealed a number of main and interaction effects. Supporting Hypothesis 1a, Knowledge was a significant predictor in the analysis, $\beta = .23, t = 2.52, p < .05$, showing that participants were more inclined to help the UA team as they knew more answers in the quiz. Supporting Hypothesis 2a, Help Type was also a significant predictor of helping, $\beta = -.43, t = -5.08, p < .001$, showing that more help was given in response to a direct request ($M = 11.78, SD = 2.94$) than in the form of an offer ($M = 8.26, SD = 3.66$). The analysis further revealed a significant interaction between Group Status and Help Type, $\beta = -.17, t = -2.04, p < .05$. Simple slope analysis (Aiken & West, 1991) showed that the effect of Help Type was significant in the low group status condition, $\beta = -.43, t = -2.13, p < .05$, as well as in the high group status...
Demonstrating knowledge condition, $\beta = -1.02, t = -5.07, p < .001$. In the low group status condition, more help was given in response to a request ($M = 11.16, SD = 2.93$) than in the form of an offer ($M = 8.92, SD = 3.64$). In the high group status condition, this effect was even more pronounced (for responding to a request, $M = 12.40, SD = 2.86$; for offering, $M = 7.63, SD = 3.63$).

This interaction was qualified by Knowledge, as demonstrated by a significant three-way interaction, $\beta = .21, t = 2.31, p < .05$. The simple slopes are presented in Figure 1a and Figure 1b. The three-way interaction was first explored by testing for the simple interaction effects between Knowledge and Group Status within each level of Help Type (cf. Aiken & West, 1991). In support of Hypothesis 1b, this interaction was significant in the requested help condition, $\beta = -.18, t = -2.17, p < .05$, but not in the offering help condition, $\beta = .12, n.s.$.

Inspection of the slopes presented in Figures 1a and 1b reveals that members of low status groups, but not high status groups, extended more help to the outgroup in response to a direct request and to the extent that they were able to help. Simple slope analyses for each cell of the design revealed that Knowledge was significantly related to helping among members of low status groups who could help by responding to a request, $\beta = .18, t = 2.23, p < .05$. In addition, Knowledge was significantly related to helping among members of high status groups who could offer help to the other team, $\beta = .27, t = 3.19, p < .01$. None of the other slopes presented in Figures 1a and 1b was significant.

*Feelings of obligation and perceived need.* The extent to which participants felt obligated to share their answers with the other team yielded a main effect of Help Type only, $F(1, 99) = 4.77, p < .05, \eta^2_p = .05$. Participants responding to a request for help reported stronger feelings of obligation ($M = 4.53, SD = 1.40$) than participants offering help ($M = 3.92, SD = 1.42$). Analysis of the recipient's perceived need for help also revealed a main effect of Help Type only, $F(1, 99) = 18.74, p < .001, \eta^2_p = .16$. Participants responding to a request for help reported perceiving a higher need for their help on the part of the recipient
Demonstrating knowledge ($M = 5.32, SD = 1.24$) than participants offering help ($M = 4.21, SD = 1.39$). These results confirm Hypothesis 2b. Both feelings of obligation and perceived need correlated positively with helping ($r = .30, p < .01$ and $r = .42, p < .001$, respectively). When added as predictors to the regression analysis of helping as reported earlier, they both contributed independently to the prediction of helping ($\beta = .18, p < .05$ and $\beta = .10, p < .05$, resp.). The main effect of Help Type decreased somewhat in size (from $\beta = -.43$ to $\beta = -.32$) but remained significant ($p < .001$). None of the other effects decreased in magnitude.

**Discussion**

Because responding to requests for help has never been empirically compared to the offering of help, little is known about possible differences in factors that drive these processes. The present study clearly demonstrated that members of low status groups respond differently to the opportunity to provide these types of help than members of high status groups. We aimed to show that members of low status groups could use outgroup helping as a means of demonstrating their competence, to the extent that this competence is present of course. In line with our reasoning that offering help is a type of behaviour that is more commonly expected from high status groups than low status groups, we observed that participants’ knowledge was positively related to helping among members of low status groups who could respond to requests for help, but not among those who could offer help without requests. The opposite pattern was observed for members of high status groups - here, knowledge was positively related to offering help but not to responding to requests for help.

This latter finding was unexpected, and given the complete absence of prior research comparing offering help versus responding to requests, we can only speculate as to the underlying mechanism. Offering help is a type of behaviour more commonly expected from high status groups than low status groups. In fact, a presumed status difference seems to
underlie most forms of assumptive help, in which help is offered without a direct request or clear indication of need on the part of the recipient. However, membership in high status groups comes with a burden: When status differences are unstable, members of high status groups are under constant stress to maintain their advantaged position in the hierarchy (see Täuber & van Leeuwen, 2010). When high status respondents in our study received a request for help from a member of a lower status group, they probably had little choice but to comply, since refusing to help can function as a red flag, questioning the high status group's competence. After all, members of high status groups owe it to their advantaged position to help those that are less advantaged - a prescriptive norm which is reflected in the concept 'noblesse oblige' (Vanbeselaere, Boen, van Avermaet, & Buelens, 2006). To refuse a simple request could be suspicious. However, when one is free to offer help and the recipient's need is not apparent, members of high status groups might have been extra vigilant not to demonstrate a lack of knowledge. Given that a higher knowledge level is expected from the high status group than the low status group, participants in this condition could have refrained from offering their help to the lower status outgroup unless they felt absolutely sure they could demonstrate a knowledge level fitting their high status position.

Receiving a request for help differs from the opportunity to offer help in a number of ways. A request could evoke a sense of obligation to comply. A request is also a signal that help is needed, whereas in the absence of a request, group members can only guess as to the helpee’s needs. In the current study we did find evidence of stronger feelings of obligation to comply in the requested help condition, as well as a higher perceived need for help on the part of the outgroup. Although both were significant predictors of helping, neither could explain the observed three-way interaction on the frequency of helping. Research has also shown that low status people are more likely to comply with a request from a higher status person than vice versa (Guéguen, 2002). However, in the current study there was no
difference between members of low and high status groups in their reported feelings of obligation to comply. A more likely conclusion for the current findings is therefore that a request for help signals that the group to whom the request is directed is viewed as a legitimate provider of help by the help seeker. Members of low status groups may feel inhibited to offer their help to a higher status group because such behaviour is incongruent with societal norms of how members of low status groups should behave vis à vis high status groups. These norms are so ingrained that they could inhibit behaviour even when personal competence is not a limitation of any sort. Women, for example, are expected by society to behave modestly. Competent women who self-promote their competence are socially punished for their norm-breaking behaviour (Rudman, 1998). Likewise, competent members of low status groups who offer their help to higher status outgroups could expect social punishment - unless they have received a signal, in the form of a request for help directed specifically towards them, that their help is welcome.

The results that were observed among participants responding to requests for help were in line with our expectation that helping can be used as a tool to demonstrate ingroup competence to the outgroup with the aim of improving the ingroup's image. However, the results so far could also provide evidence for an alternative explanation. Specifically, in terms of social identity theory (Tajfel & Turner, 1979) which describes behaviour as a continuum ranging from interpersonal to intergroup behaviour, members of low status groups could have shifted to the interpersonal pole of the continuum, and viewed themselves as unique individuals, different from other members of the low status group. As a result, participants in the low group status condition might have been motivated to demonstrate to the other team their personal competence, and to show that, whilst their team members may have performed poorly in the quiz, they are unlike their team in the sense that they do possess sufficient knowledge. Previous research (von Hippel et al., 2005) has shown that people can cope with
Demonstrating knowledge by denying the accuracy of the stereotype (a collective strategy), or by denying its self-relevance (an individual strategy). In the second study we will therefore include measures to assess whether helping among members of low status groups is a reflection of an individual strategy with the aim of creating distance between the self and the ingroup, or of a collective strategy aimed at improving the image of the ingroup.

Study 2

The goal of the second study was to provide a more stringent test of the hypothesis that members of low status groups can use outgroup helping to demonstrate their knowledge in order to boost the reputation of their group. To this end, we manipulated the degree to which help reflects participants’ own knowledge, and thus allows them to pursue a social competition strategy. In all conditions participants received requests for help from the other team, as Study 1 has shown that members of low status groups are more inclined to demonstrate their knowledge in response to a request than as a voluntary offer of help. In one condition the help actually reflected participants’ existing knowledge – identical to the requested help condition in Study 1. However, we compared this to a control condition in which participants could help by sending to the other team the correct answer for that particular question as generated by the experimenter (and the other team is aware of this). Importantly, this type of help is extremely useful to the recipient (more useful perhaps than participants’ own answers as they know for sure this answer is correct). However, the crucial difference between these conditions lies in the fact that only participants who can share their own answers can demonstrate their own knowledge to the outgroup – participants who can share the experimenter’s correct answers can be of equal (if not more) service to the outgroup, but they cannot demonstrate their knowledge. We expected that participants’ knowledge would only be positively related to outgroup helping among members of low
status groups who can share their own answers, but not among those who can share the
experimenter’s answers, nor among members of high status groups (Hypothesis 1).

If outgroup helping is a means of improving the collective reputation of the group, then
there should be simultaneous evidence of a strengthening of group ties. Strong ingroup ties,
after all, are a necessary requirement for social competition (Ellemers, Spears, & Doosje,
1997; Klandermans, 2000; Wright & Tropp, 2002). If, on the other hand, outgroup helping is
a means of demonstrating how the self is different from other members in the low status
group, we should observe evidence of a weakening of ingroup ties. The strength of ingroup
ties is reflected in the cognitive awareness of the ingroup (ingroup salience), the degree to
which it contributes to one's social identity (social identification), and the degree to which
one's self-esteem is based on this group membership (collective self-esteem; see Luhtanen &
Crocker, 1992). We therefore expected that, when participants can share their own answers,
members of low status groups would have higher levels of collective self-esteem, team
identification and team salience than members of high status groups. However, when
participants can share the experimenter's answers, we expected this pattern to be reversed
(Hypothesis 2). The reversal (rather than absence of any effect) was predicted because high
group status contributes positively to social identity (Tajfel & Turner, 1979), and in the
absence of the potential to change the status difference through demonstrating (lack of)
knowledge, high group status should elicit higher ingroup identification, salience, and self-
esteeom compared to low group status.

An additional goal of this study was to assess different motives that could underlie
helping. We included measures of impression management, cooperation, and reciprocity to
this end. We expected that the desire to create a favourable impression of the own team
through helping would be higher among members of low status groups who can help through
sending their own answers than among members of high status groups in this condition,
whereas no difference was expected among group members can share the experimenter's answers (Hypothesis 3).
Although cooperation and reciprocity might also play a role in group members' decisions to help, we did not expect them to be affected by our manipulations.

Method

Participants and design. A total of 75 students from the VU University Amsterdam (26 men, 49 women, $M_{age} = 21, SD = 3.51$) participated in this study. Participants were randomly distributed across the four cells of a 2 (Group Status: low vs. high) x 2 (Help Type: own answer vs. experimenter’s answer) between participants experimental design. The number of correct answers was included as a continuous variable (Knowledge).

Procedure. The procedure was similar to that used in the first study, with a few exceptions. To avoid fatigue, we changed the length of the second knowledge quiz to 30 questions - 15 of which were presented to participants with the opportunity to provide help to the other team. While working on the task, participants received 10 pre-programmed requests for help from the UA team. Participants in the own answer condition were told that the answers they would send to the UA team were their own answers to previous questions, correct or not. Participants in the experimenter’s answer condition were told that the answers they would send to the UA team came from a file with correct answers generated by the experimenter that was stored on the laboratory server. The UA team was informed of the origin of the answers they might be receiving. In the own answer condition, the text of the message read: “Someone from the UA team requested your answer to a prior question. Would you like to send your answer to the UA team?” In the experimenter’s answer condition, the message read: “Someone from the UA team requested the correct answer to a prior question. Would you like to send this answer to the UA team?”.

Upon finishing the first part of the quiz, a questionnaire was administered. The effectiveness of the manipulation of group status was checked with the same 2 questions as in
Demonstrating knowledge

Study 1. Unless otherwise indicated, all other items were introduced with the text “To what extent to these statements apply to you” and answers were assessed on 7-point scales (1 = not at all, 7 = very much). Scales were created by averaging the items. Team identification was measured with three items (“I feel committed to the VU team”, “I identify with the VU team”, “I feel strong ties with the other students in the VU team”; \( \alpha = .94 \)). Team-based collective self-esteem was measured with four items adapted from Luhtanen and Crocker (1992), two of which pertain to private collective self-esteem (e.g., “Thinking about being a member of this VU team makes me feel good”) and two pertain to public collective self-esteem (e.g., “Others would respect the VU team”). Because PCA with VARIMAX rotation revealed only one underlying construct (76% explained variance), these four items were averaged into one scale for collective self-esteem (\( \alpha = .89 \)). Team salience was measured with two items ("To what extent did your thoughts go out to the VU team while working on the quiz" and "How salient was the VU team for you during the quiz", \( r = .71 \)).

The extent to which participants helped the other team to create a more positive impression of their group (impression management) was assessed in two ways. First, participants were asked directly in two items to what extent the desire to demonstrate their team's knowledge played a role in their decision to help the other team ("To show the UA team that the VU team has more knowledge than they do" [overall \( M = 2.71, SD = 1.57 \]) and "To show the UA team that the VU team is better than they are" [overall \( M = 4.08, SD = 1.91 \)]. Because such impression management motives can be expected to be suppressed by social desirability concerns, we also assessed the general desire to present the performance of the own team to the UA team in a more, or less, favourable light. Participants were presented with a picture of the hypothetical performance of the VU team of 50% correct answers, and were given the opportunity to adjust this performance level, using a slider, to the level that they would like to present to the UA team as the actual VU team's performance [overall \( M = \)
Demonstrating knowledge [53.88%, SD = 14.31]. These three measures were transformed into z-scores, and because PCA with VARIMAX rotation revealed only one underlying factor (63% explained variance), and reliability analysis showed sufficient internal consistency (α = .70), they were averaged into one reliable scale for impression management motivation.

*Cooperation* and *reciprocity* were assessed by asking participants to what extent a number of motives played a role in their decisions to help the other team. The degree to which cooperation played a role was assessed with three items ("Improving collaboration between the VU team and the UA team", "Improving the performance of the VU-UA team combination", and "Improving relations between the VU team and the UA team"; α = .84). The degree to which participants helped the other team with the aim of eliciting reciprocity was assessed with two items ("Favouring the UA team in the hopes of getting the favour returned in the second round of the quiz" and "Sending a signal to the UA team that they should help the VU team in the second round of the quiz"; r = .70).

**Results**

*Manipulation checks.* Both status checks were analysed in full factorial analyses of variance, which yielded main effects of Group Status only. Participants in the low group status condition rated their own team’s performance lower (M = 2.87, SD = 1.28) than participants in the high group status condition (M = 5.35, SD = 1.06), F(1, 71) = 87.71, p < .001, η²p = .54. Participants in the low group status condition also rated the other team’s performance higher (M = 5.29, SD = .93) than participants in the high group status condition (M = 3.30, SD = 1.00), F(1, 71) = 77.99, p < .001, η²p = .52. These findings show that the group status manipulation was successful.

*Providing help.* Knowledge (transformed to z-scores), Group Status (-1 = low status, 1 = high status) and Help Type (-1 = own answer, 1 = experimenter’s answer), as well as all possible interaction terms, were entered into a regression analysis with helping as the
Demonstrating knowledge dependent variable. The analysis was significant, $F(7, 67) = 3.93$, $p = .001$, $R_{adj}^2 = .22$. Help Type was a significant predictor of helping, $\beta = .44$, $t = 4.21$, $p < .001$, and showed that more help was given by participants in the experimenter’s answer condition ($M = 9.18$, $SD = 1.55$) compared to participants in the own answer condition ($M = 7.14$, $SD = 2.59$). Knowledge was also a marginally significant predictor in the analysis, $\beta = .22$, $t = 2.00$, $p = .05$, showing that participants were more inclined to help the UA team as their own performance in the quiz was higher.

The analysis further revealed a significant three-way interaction, $\beta = .22$, $t = 2.05$, $p < .05$. The slopes are presented in Figures 2a and 2b. Tests for the simple interaction between Group Status and Knowledge within each level of Help Type revealed that this interaction was significant in the own answer condition, $\beta = -.23$, $t = -2.14$, $p < .05$, but not in the experimenter’s answer condition, $\beta = .09$, n.s. Simple slope analysis for each cell of the design showed that Knowledge was only significantly related to helping among members of low status groups who could help by giving their own answer, $\beta = .27$, $t = 2.61$, $p < .05$. None of the other slopes presented in Figure 2a and Figure 2b was significant. Together, these results confirm Hypothesis 1 in showing that the capacity to help (reflected by participants' knowledge) was positively related to outgroup helping only among members of low status groups and only when help reflected participants' own knowledge.

**Collective self-esteem, team identification and team salience.** Multivariate analysis of variance on collective self-esteem, team identification, and team salience with Group Status and Help Type as independent variables yielded a significant multivariate interaction $F(3, 69) = 4.46$, $p < .01$, $\eta_p^2 = .16$. Separate univariate analyses of these scales revealed that this interaction pattern was evident for team-based collective self-esteem, $F(1, 71) = 11.75$, $p = .001$, $\eta_p^2 = .14$, team identification, $F(1, 71) = 5.97$, $p < .05$, $\eta_p^2 = .08$, as well as team salience, $F(1, 71) = 8.59$, $p < .01$, $\eta_p^2 = .11$. No main effects were found. The relevant means are
presented in Table 1. As predicted in Hypothesis 2, within the own answer condition, team identification, team-based self-esteem and team salience were higher among members of low status groups than among members of high status groups. In the experimenter’s answer condition, this pattern was reversed, although only significant for collective self-esteem.

Impression management. A significant interaction was found on the impression management scale, \( F(1, 71) = 5.76, p < .05, \eta_p^2 = .08 \). Confirming Hypothesis 3, the desire to create a positive impression of the group was higher among members of low status groups who could share their own answers than among members of high status groups in this condition (see Table 1). In the experimenter’s answer condition, members of high and low status groups did not differ from each other.

Cooperation and reciprocity. Analysis of cooperation revealed a non-significant trend for Help Type only, \( F(1, 71) = 3.16, p = .08, \eta_p^2 = .04 \). Participants sharing the experimenter’s answer reported somewhat more cooperation (\( M = 4.68, SD = 1.63 \)) than participants sharing their own answer (\( M = 5.28, SD = 1.25 \)). No significant main- or interaction effects were found for reciprocity.

Discussion

Study 2 presented a number of interesting findings in support of our general hypothesis. First, replicating the first study, knowledge of participants who could share their own answers was positively related to helping in the low group status condition but not in the high group status condition. The fact that knowledge was unrelated to helping among participants who could share the experimenter’s correct answer indicates that helping was not an egalitarian strategy aimed at improving the performance of the members of the other team to a level matching that of the ingroup. Second, participants in the low group status condition who could share their own answers showed higher levels of collective self-esteem, team identification and team salience than participants in the high group status condition. This
result is particularly interesting because it is the opposite of the pattern that is generally found when comparing high and low status groups under stable conditions, in which higher levels of identification and self-esteem are found among members of high status groups (e.g., Ellemers, van Knippenberg, & Wilke, 1990). The reversal of this traditional pattern is a strong indicator of a strategy in which members of low status groups (but not high status groups) gear up to challenge the outgroup. And third, among participants who could share their own answers, those in the low group status condition reported a stronger impression management motivation than those in the high group status condition. Of equal importance is the fact that all of these findings were either absent in the experimenter’s answer condition, or even reversed (for collective self-esteem). This means that none of the findings in the own answer condition can be interpreted as a mere by-product of group status. Instead, they should be viewed as an indicator of a collective strategy to demonstrate knowledge, employed only by members of low status groups and only to the extent that a demonstration of knowledge through helping was actually feasible.

We reasoned in the general introduction of this paper that group members who use helping to demonstrate their competence to the outgroup and boost their collective reputation, are effectively engaged in a form of social competition, in which the aim is to impress another group and to establish a more positive image of the ingroup. Although the high levels of identification, self-esteem and team salience among members of low status groups who could share their own answers are indicative of a social competition strategy, they are equally indicative of a more realistic competition strategy, in which the aim is to improve the actual performance outcome of the team. Social and realistic competition are both forms of social change, and both require a strengthening of ingroup ties. Realistic competition implies the delivery of a high performance outcome – preferably higher than that of the outgroup. However, participants’ actual performance (in terms of the number of correct answers) was
not affected by the manipulations. More importantly, a realistic competition strategy would have resulted in lower, rather than higher levels of outgroup helping. After all, outgroup helping is a way of supporting the outgroup at an instrumental level (van Leeuwen et al., 2010), which would negatively affect the ingroup’s chances of beating them in the knowledge quiz. The current findings are therefore more in line with an interpretation in terms of social competition, aimed at promoting the image of the ingroup, than one in terms of realistic competition, aimed at defeating the other team in the knowledge quiz.

A noteworthy finding in this study is the fact that the overall levels of helping among participants who could share the experimenter’s answer were higher than those among participants who could share their own answer - in fact, they almost reached the ceiling of ten requests. It is possible that participants simply shared fewer answers generated by themselves than answers generated by the experimenter because in the latter case they were assured that all these answers were correct – the help could thus have had a greater utility. However, existing literature suggests an alternative explanation. When participants can share their own answers, they can help the outgroup by providing a product that they generated by themselves. On the other hand, participants who share the experimenter's answers essentially have the power to help (or hinder) the outgroup by providing or withholding a product that is not really theirs. This could have installed a sense of undeserved power among participants. Research has shown that people who have unidirectional power over outgroup members feel responsible not to abuse this power, particularly when the basis for this power is arbitrary (Sachdev & Bourhis, 1985; Vanbeselaere et al., 2006). This explanation is also in line with the observed trend that participants sharing the experimenter’s answer reported somewhat more cooperation as underlying motive than participants sharing their own answers. In effect, the ability to send the experimenter’s correct answers to the outgroup could have triggered a
sense of responsibility among participants not to abuse their position by denying the outgroup their requested help.

General Discussion

The current research was set up to test the general hypothesis that members of low status groups can challenge existing status relations by demonstrating their competence to the higher status outgroup through outgroup helping. The results from two experiments supported this prediction. In Study 1, the ability to help, as reflected by participants' performance level in a knowledge quiz, was positively related to outgroup helping among members of low status groups (but not among members of high status groups) who responded to direct requests for help. This pattern was replicated in the second study. Supporting the conclusion that helping was used to demonstrate knowledge, in Study 2 the observed association between knowledge and helping among members of low status groups was absent when the help could not reflect their own knowledge. Moreover, members of low status groups in that study who were able to demonstrate their own knowledge through helping reported a stronger motivation than members of high status groups to have done so in order to create a more competent impression of their team. Additional measures of team identification, salience and collective self-esteem in the second study also provided support for an interpretation in terms of a collective attempt to boost the ingroup's image, as opposed to an individual strategy in which group members distance themselves from the low status group.

Previous research has uncovered a number of strategic motives for outgroup helping (Hopkins et al., 2007; Nadler et al., 2009; van Leeuwen & Täuber, 2010). The current research is the first to investigate the notion that helping can be used to demonstrate a specific competence to the outgroup – and in doing so, challenge existing status relations. Social change can take many forms, from blatant hostile competition and discrimination, to
more benign behaviours including promotional strategies and collective action (Scheepers et al., 2006). The strength of helping as an impression management tool lies in the fact that helping is generally viewed as positive behaviour. Rather than competing with another group over who's best (which will increase intergroup tensions instead of reducing them), a group could present its competence in a more benevolent way by helping the other group. Because of its effectiveness in demonstrating competence as well as its relatively benign nature, helping other groups is a promising tool to handle the potentially threatening effects of low group status.

*Ability and group status*

An important factor in demonstrating competence through helping is group members’ ability to help. In the current research, group status was manipulated via bogus feedback, ensuring that there was no systematic difference between high and low status groups in their actual ability to help. With ability and status thus separated, members of low status groups were the ones found to be most likely to display their competence through helping. The fact that the relationship between ability and helping was clearly affected by our manipulations, and varied from strongly positive to absent, indicates that ability is not merely a precondition for helping (along the lines of “Those who can, do, and those who can’t, don’t”), but a variable of interest in and of itself. It is somewhat surprising then to find that the ability to help has rarely been a topic of investigation in prior research. The interest value of ability lies in the fact that it is a quality that is communicated through the act of helping. That is, helping someone implies that one is able to help and thus demonstrates this ability very clearly. Not helping someone is more diffuse, as it could mean a lack of the ability to help, but also a lack of motivation to help, or the belief that help is not required. When the ability to help reflects an important quality, and when group members are motivated to demonstrate this quality to another group, ability could be an important predictor of helping.
Demonstrating knowledge

In the current research, group status was operationalised as group competence. In the absence of other meaningful differences, a notable difference in collective competence would be the primary determinant of the teams’ relative standing (cf. Ellemers et al., 1997). This operationalisation is a form of situational status, in which group differences emanate from conditional (dis)advantages (e.g., Ellemers et al., 1997; Nadler et al., 2009). Structural status, in contrast, refers to the stratification of groups in society in which differences are institutionalised, such as those between men and women (Nadler et al., 2009). A structural status difference typically involves real groups that have a long-standing history in society, and is relatively stable and difficult to change. A situational status difference, on the other hand, is more fluid, and changes as a result of situational outcomes. For outgroup helping to be considered an effective strategy for changing social status relations, it seems important that group members view the intergroup status difference as subject to change. Future research should address the question if, and under what conditions, outgroup helping is also considered effective when status differences are structural in nature.

The glass ceiling: Prescriptive norms

When people are both able and motivated to help, they could still face a dilemma in which their offer of help is not appreciated by the recipient. An offer of help could communicate that the helper believes that he or she possesses a certain quality which the recipient of help is lacking. To the extent that this is in line with the social reality (i.e., qualified people offering to help less qualified people) the helper could feel that the offer is justified and will be appreciated by the recipient (regardless of whether this is actually the case). However, an offer of help from a member of a low status group to a higher status outgroup may be viewed as a violation of social norms and expectations of how members of low status groups should behave (Magee & Galinsky, 2008; Rudman, 1998). Moreover, if an offer is rejected, the low status group member's attempt to boost his or her social identity
Demonstrating knowledge could be thwarted (Rosen et al., 1987). Prescriptive norms associated with low group status can form a 'glass ceiling', inhibiting members of low status groups to improve their position by offering help to a higher status outgroup.

We would argue that this dilemma that inhibits particularly members of low status groups to display their competence through outgroup helping could be resolved to the extent that members of low status groups believe that their offer of help is legitimate. This perception of legitimacy could be achieved in various ways. As demonstrated in the current research, the high status group could request the low status group's assistance. Such a direct request is a clear signal that help is welcome. An offer of help to a higher status outgroup could also be legitimized when it pertains to a specific dimension on which the lower status group holds an advantage. In an organisation, for example, a research and development department may have a higher status than an administrative department. Nonetheless, members of the administrative department could legitimately offer help to their colleagues from research and development in domains that are in line with their own administrative expertise.

The legitimacy of help could further be enhanced through the introduction of social or institutional norms that promote positive interaction and collaboration between groups. When only competitive goals exist or when intergroup cooperation is not expected or stimulated, an offer of help will likely be viewed with suspicion (e.g., a member of a basketball team offering a higher ranking competing team some tips on how to improve their play). Research has shown that people who are offered help by a competitor can react adversely, showing anger and reduced attraction to the potential helper (Worchel, Wong & Scheltema, 1989). Cooperative goals, however, legitimize the exchange of help. Rather than automatically interpreting an offer of help as a sign that the helper believes that he or she is more capable than the recipient, it could also be interpreted as a signal that one means to collaborate in
order to meet the collective goal. It is important to note that cooperative goals do not eliminate more competitive, or ingroup serving, goals. In fact, most task settings consist of a mixture of cooperative and competitive goals (Komorita & Parks, 1995). These mixed motive situations constitute a fruitful background for those types of help that are rooted in more ingroup serving motives. When an organisation, for example, signals to its members that collaboration between departments is expected and needed, an offer of help, even from a lower status department to a higher status one, is less likely to be viewed with suspicion by the recipient. At the same time, the departments remain functionally and psychologically distinct units, thus enabling the provision of help as a tool to demonstrate a specific departmental quality.

Superordinate identities

The motivation to demonstrate a specific ingroup quality, like many other strategic motives for outgroup helping, is inextricably linked with the salience of the ingroup-outgroup categorisation. That is, if the motivation to help is rooted in the need to demonstrate ingroup competence, the ingroup should be identifiable to others as the source of help. Collectively demonstrating an ingroup quality to another group also requires a strengthening of ingroup ties, raising ingroup identification and self-esteem. This means that the ingroup-outgroup categorisation needs to be sufficiently salient for this type of helping to occur. Previous researchers have suggested that intergroup collaboration can be improved by emphasizing a shared superordinate identity (e.g., Gaertner et al., 1999; Levine et al., 2005, Nadler et al., 2009). However, if the ingroup-outgroup categorisation is simultaneously downplayed in favour of the shared superordinate identity, the motivation (and the opportunity) to demonstrate an ingroup quality through helping will likely be reduced. For example, Hopkins and colleagues (2007) found that Scottish participants were more inclined to help the Welsh in an attempt to counteract the English stereotype of the Scots as mean. To serve this
purpose, it is important that Scottish-English categorization is salient, and not just an overarching identity of British citizens in general. Only when the behaviour can be identified as Scottish, can it be used to present the group in a more favourable light. To the extent that a reluctance to help outgroup members originates from negative outgroup attitudes or a mere tendency to favour the ingroup, it could be very effective if group members were made aware of the fact that, at a higher level, they all belong the same inclusive group. However, if the motivation to help another group is of a more strategic nature, aimed at demonstrating an ingroup quality, it appears crucial that the ingroup-outgroup categorisation is sufficiently salient as well.
References


van Leeuwen, E. (2007). Restoring identity through out-group helping: Beliefs about


Footnotes

1 It should be noted that a request for help from a higher status outgroup does not automatically imply that the outgroup views the ingroup as more competent or highly qualified. It merely creates an opening for members of low status groups to legitimately help a higher status outgroup. Given this opportunity, members of low status groups still need to prove themselves by displaying their competence through helping.

2 There were no effects of the manipulations on participants’ performance in the knowledge quiz. Overall, participants provided a correct answer to 13 out of 20 questions.

3 The relatively high number of requests or offer opportunities served to maximise variance in helping. Participants did not receive requests or offer opportunities for all questions (100%) as this could have been seen as suspicious (i.e., participants might think that there is something wrong with the computer program, or think that the other team is not taking the task seriously).

4 Participants generally have a good sense of how good they are at the quiz, which means that participants in the own answer condition can effectively estimate the utility of their help. Participants sharing someone else’s answers (i.e., the experimenter’s) cannot estimate this utility without additional information about whether these answers are correct or not. As a result, in the absence of such additional information we cannot be sure if (a lack of) helping in the experimenter’s answers condition is attributable to the inability to demonstrate one’s own knowledge, or to an insecurity about the utility of the help. We therefore chose to inform participants that the experimenter’s answers they would be sharing were all correct, which creates a more conservative test of our prediction.

5 There were no effects of the manipulations on participants’ performance in the knowledge quiz. Overall, participants provided a correct answer to 7 out of 15 questions.
Table 1  Means for ingroup ties and motives for helping, Study 2

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<th></th>
<th>own answers</th>
<th>experimenter’s answers</th>
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</thead>
<tbody>
<tr>
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<td>high status</td>
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<td></td>
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<td>3.79b (1.56)</td>
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<td>3.51b (1.65)</td>
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<td>team salience</td>
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<td>2.88b (1.26)</td>
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<td>-.39b (.63)</td>
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<tr>
<td>cooperation</td>
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<td>4.55a (1.90)</td>
</tr>
<tr>
<td>reciprocity</td>
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<td>3.65x (1.89)</td>
</tr>
</tbody>
</table>

*Note.* Standard deviations in parentheses. Means with different subscript differ significantly from each other (*p* < .05) in tests for the simple main effect of Group Status within the own answers condition (a, b) and the experimenter’s answers condition (x, y).
Figure captions

Figure 1a  Responding to requests for help from the other team, Study 1
Figure 1b  Offering help to the other team, Study 1
Figure 2a  Sharing own answers with the other team, Study 2
Figure 2b  Sharing experimenter's answers with the other team, Study 2
Figure 1a
Figure 1b
Figure 2a
Figure 2b