Research article

Effort in the face of difference: Feeling like a non-prototypical group member motivates effort

TYLER G. OKIMOTO1* AND AMY WRZESNIEWSKI2

1 UQ Business School, The University of Queensland, Brisbane, Australia; 2 Yale School of Management, Yale University, New Haven, USA

Abstract

Three studies examined the relationship between individuals’ perceived “prototypicality” in a group, their subsequent self-presentation goals, and individual effort in that group. Consistent with the finding that feelings of marginal ingroup membership status elicit a desire to seek stronger social connections within ingroups, we predicted that non-prototypical group members will have more salient self-presentation goals than prototypical members, and as such will exert more individual effort to exhibit the value of their membership to the group. Correlational Study 1 confirmed that non-prototypical group members may be more likely than prototypical members to volunteer for activities that would benefit their group. Two experimental studies were then conducted to test the causal influence of feelings of prototypicality while also identifying theoretically relevant moderating conditions of perceived task efficacy (Study 2) and public versus private task performance (Study 3). These findings suggest that effortful performance in groups is partly motivated by the desire to foster social ties. Copyright © 2012 John Wiley & Sons, Ltd.

Classic theories of motivation (e.g., Maslow, 1943) and more recent theoretical innovations in group dynamics (e.g., Anderson & Chen, 2002; Baumeister & Leary, 1995; Deci & Ryan, 2000) tout the importance of psychological motivations to maintain and foster social connections with the groups to which individuals belong. The perception that one’s connection to the group is lacking or under threat is upsetting, eliciting anxiety and feelings of insecurity that can heighten the desire to seek greater inclusion in the group (Bartel & Dutton, 2001; Lewin, 1948; Noel, Wann, & Branscombe, 1995). Individual behavior in groups is therefore likely to be shaped, in part, by membership status cues—information that conveys how connected individual members are to others in the group.

The status of one’s connection to the group can be inferred from any number of social cues, including overt inclusion or exclusion (e.g., Leary & Baumeister, 2000; Williams, 2001), interpersonal treatment (e.g., De Cremer, 2002; Tyler & Blader, 2003), or similarity to other group members (e.g., Branscombe, Spears, Ellemers, & Doosje, 2002; Jetten, Branscombe, Spears, & McKimmie, 2003). Much of the work on social connections and marginal group membership has focused on feelings of “prototypicality”—the extent to which an individual feels like a typical or representative group member who shares similar characteristics with the majority of other members (see Hogg, 2005; Turner, 1985). Group members who differ from the group norm in their qualities and characteristics are more self-aware about the state of their inclusion or acceptance in the group and are more likely to feel marginal and insecure compared with more prototypical members (Baumeister & Leary, 1995; Kramer, 1998; Louis, 1980; Moreland, 1985).

Given their marginal status in the group, non-prototypical group members are likely to desire stronger social connections (i.e., greater inclusion or more central group membership) to satisfy their belongingness needs (Baumeister & Leary, 1995). As such, non-prototypical group members are also more sensitive to situational cues that provide information regarding the quality of their membership (Leary & Baumeister, 2000; Pickett, Gardner, & Knowles, 2004), particularly when they believe their membership status is in a state of transition (Gonzalez & Tyler, 2007; Jetten, Branscombe, & Spears, 2002; Wright, Taylor, & Moghaddam, 1990). Consistent with this idea, research has shown that new group members are particularly likely to feel marginal to the group, are more sensitive to membership cues, and are more likely to take advantage of opportunities to enhance social connections with the group compared with veteran members (Bartel, 2006; Stewart, 1982). Perhaps related to their group affiliation desires, research has suggested that non-prototypical group members are more likely than prototypical members to exhibit attitudes consistent with those of the ingroup (for a complete review, see Leary, 2010). For example, non-prototypical members conform to ingroup norms more than prototypical members (Noel et al., 1995; Tajfel, 1978) and are more likely to be loyal to the ingroup (Jetten, Hornsey, & Adarves-Yorno, 2006; Jetten et al., 2003), take risks that might benefit the ingroup (van Knippenberg, van Knippenberg, & van Dijk, 2000), exhibit
greater derogation and competitiveness against outgroups (Ellemers, Spears, & Doosje, 2002; Jones & Pittman, 1982; Noel et al., 1995; Van Kleef, Steinel, Van Knippenberg, Hogg, & Svensson, 2007), and cooperate with other ingroup members (De Cremer, 2002). Such ingroup loyalty is likely to signal to other group members that an individual embodies the group and its values (Noel et al., 1995).

Prototypicality, Self-presentation Goals, and Effort

It is clear from past research that broader concerns for social connections and belongingness underlie reactions to feelings of prototypicality. However, research has not yet provided direct evidence of exactly why people respond to non-prototypicality with attitudes that are consistent with the ingroup identity. Some research has suggested that non-prototypical members exhibit more positive ingroup attitudes in an attempt to exhibit the value of their membership to others in the group and gain greater group acceptance, which we refer to as a “self-presentation goal” (see Barreto & Ellemers, 2000; Noel et al., 1995)—regulating behavior with the goal of creating a specific impression for an audience (Jones & Pittman, 1982). Consistent with this self-presentation account, research has shown that non-prototypical membership only affects subsequent attitudes when those attitudes are visible to other group members (e.g., Barreto & Ellemers, 2000; Jetten et al., 2003, 2006; Noel et al., 1995; Van Kleef et al., 2007). Nonetheless, these accounts have neither provided direct evidence of heightened self-presentation goals following information about the prototypicality of an individual’s characteristics in the group nor has mediational evidence been obtained to verify that self-presentation goals explain these effects.

Perhaps as a consequence of this lack of specification, research on the consequences of prototypicality has only documented differences in attitudinal adherence to ingroup norms or expectations (e.g., competitive attitudes toward outgroups, positive ingroup attitudes, and ingroup attitude conformity). Research has not yet provided evidence of the implications of these attitudes to create changes in motivation and exactly what that motivation entails. Specifically, if the more positive ingroup attitudes of non-prototypical group members reflect greater concern with their self-presentation in the group, they should be more likely to exert effort in the group when this effort reflects the value of their membership in the group. In other words, if the effects of prototypicality are indeed driven by self-presentation goals as we have suggested, these effects should extend beyond mere attitude congruence. The desire to present oneself as a valuable group member should motivate other types of group-directed ingratiating behavior, including individual task effort.

Our focus on intragroup dynamics complements the typical focus of existing prototypicality research, which has largely been confined to intergroup contexts where outgroup comparisons were made particularly salient (cf., De Cremer, 2002; van Knippenberg et al., 2000). Thus, it is not entirely clear whether the effects of prototypicality reflect a strictly intergroup phenomenon or if they also occur in absence of a salient outgroup referent. If non-prototypical membership indeed drives behavior because of an enhanced desire for social connections, the presence of an outgroup comparison should not be a necessary precondition.

In the current research, we argue that the effects of prototypicality extend beyond ingroup attitude congruence documented in past research to other types of group-ingratiating behaviors. Specifically, we predict that non-prototypical group members will be more likely than prototypical members to be concerned with presenting themselves as “good” group members and that these self-presentation goals partly explain subsequent willingness to exert individual effort on behalf of their group. Effort, in this case, serves as a way for individuals to exhibit the value of their membership to others in the group in an attempt to gain greater acceptance. We test these predictions by examining both prosocial behavioral intentions (i.e., commitments to volunteer for the group’s benefit) and individual performance on an effortful group task, outcomes that provide evidence for individual motivation beyond the attitudinal indices of ingroup favoritism and loyalty documented in past research. We predict the following:

Hypothesis 1

Non-prototypical group members will have more salient self-presentation goals compared with prototypical group members, and these goals will predict individual effort on behalf of the group.

This straightforward hypothesis serves as an interesting contrast to prior work on social identification and effort. Feeling like a prototypical group member may also help instill stronger identification with that group (for example, through feelings of cohesion; see Karau & Williams, 1993). As identity research in minimal group contexts implies, simply learning that one has relevant attributes or attitudes in common with group members may be sufficient to lead one to believe that others in the group are similar and are to be liked and valued (e.g., Byrne, 1961, 1971; Tan & Singh, 1995; Wilder, 1986), facilitating stronger group identification. As prototypical group members are more likely to be identified with the group, they also become more invested in the overall performance of that group because the group’s performance, and the resulting intergroup status associated with that group becomes more self-relevant (Tajfel & Turner, 1979; Turner, 1975). As such, prototypical (and thus more highly identified) group members may be more likely to act for the benefit of the group, even if they are working under an individual performance-based reward system (Gagnon & Bourhis, 1996). Indeed, Karau and Williams (1993) found that group identification increased task effort in just this fashion.

Our view, however, is not inconsistent with this perspective; rather, we propose that individual effort in groups may be simultaneously motivated both by desires for positive self-evaluation through the successful performance of the group (Festinger, 1954; Tajfel & Turner, 1979; Turner, 1975) and by the desire to enhance one’s connections to that group (Baumeister & Leary, 1995; Leary, 2010). Specifically, non-prototypical group members may sustain a lower level of identification with the group compared with prototypical members but also may be more vigilant for opportunities to present themselves as valuable group members to improve those connections (e.g., Barreto & Ellemers, 2000; Postmes, Branscombe, Spears, & Young, 1999). In sum, prototypical group members may maintain higher levels of identification.
on average than non-prototypical members, increasing effort to enhance positive self-relevant regard for the ingroup. In contrast, however, those same prototypical members may be less motivated by self-presentation goals than non-prototypical members, thereby reducing effort geared towards enhancing social connections.

Importantly, these predictions suggest that prototypicality cues elicit two opposing sources of motivation: increased motivation via enhanced group identification and decreased motivation via diminished self-presentation goals. Such opposing motives may sometimes mask the motivating effects of prototypicality, with self-presentation goals and identification acting as “suppressors” of the other (see Shrout & Bolger, 2002). Thus, although evidence of a negative relationship between prototypicality and effort is strongly suggestive of self-presentation goals, the direct link may often be obscured by the simultaneous effects of identification, cohesion, or other related processes that predict the opposite pattern. Although often inseparable in natural settings, we can empirically isolate and examine these diverging motives. In the current research, we do so by directly measuring self-presentation goals and establishing evidence of an indirect effect (see Shrout & Bolger, 2002). In two studies, we offer evidence that non-prototypicality makes self-presentation goals more salient and that these goals mediate the link between non-prototypicality and effort (Hypothesis 1). However, it may also be instructive to first show the effect of non-prototypicality on motivation when controlling for identification to establish evidence of suppression. Therefore, we first documented evidence of suppression in a preliminary correlational pilot (Study 1) before proceeding to the two main experimental studies of the paper (Studies 2 and 3).

**When Does Prototypicality Make Self-Presentation Goals Salient?**

Although tests of an indirect effect help to specify whether or not the negative relationship between prototypicality and effort is indeed because of heightened self-presentation goals, we can also offer insight into this process by examining key moderating conditions that influence behavior. As we have argued, effortful tasks serve as an opportunity to enhance social connections through individual task performance in which one can exhibit one’s value as a group member. However, this argument suggests that there are limits to the motivating effect of non-prototypical membership. If intragroup effort is indeed a strategic behavior driven by the desire for acceptance, self-presentation goals should only be salient in situations where non-prototypical group members perceive an opportunity to exhibit the importance of their contribution to the group. Thus, these effects should be limited to contexts where effort has the potential to enhance their inclusionary status. In other words, non-prototypical members should only report active pursuit of self-presentation goals and exert more effort than prototypical members when they believe that increased effort will result in greater inclusion. However, non-prototypical group members are unlikely to be motivated by self-presentation goals when the context prevents individual effort from garnering ingroup appreciation (i.e., when effort does not fulfill self-presentation goals). In the current investigation, we examine two conditions that prevent the attainment of self-presentation goals.

First, when group members’ efforts are unlikely to yield a level of task performance that advances their goal of increased esteem in the group, the motivation to put forth effort on behalf of the group should be curtailed. For example, self-presentation goals are unlikely to be salient when performing individual tasks that require a specific skill or ability that is assumed to be robust to changes in effort; such individual effort is not expected to yield a contribution of distinction or result in the desired intragroup esteem. As such, non-prototypical group members will be concerned with self-presentation and thus be motivated to exert effort for self-presentation goals, when they believe that their performance on a given task is controllable (i.e., high task efficacy) versus dispositional (i.e., low task efficacy). In other words, the difference in the self-presentation motives of prototypical and non-prototypical group members should be moderated by perceived controllability or efficacy.

Second, a non-prototypical member should only be concerned with self-presentation when individual efforts are visible, facilitating the opportunity to elicit intragroup esteem. Thus, when members’ efforts are not identifiable or visible to others, motivation to make an effort on behalf of the group should be curtailed. Indeed, past research has shown that non-prototypical membership only affects ingroup attitudes when these attitudes are visible to other group members (Jetten et al., 2003, 2006; Noel et al., 1995; Van Kleef et al., 2007). In the current research, we explore both task efficacy (Study 2) and performance visibility (Study 3) as potential moderators. Specifically, we predict the following:

**Hypothesis 2**

Non-prototypical group members will report more salient self-presentation goals than prototypical group members but only (i) in the absence of information suggesting low task efficacy and (ii) when individual efforts are public as opposed to private. Moreover, the interactive pattern of self-presentation goals will predict subsequent effort on behalf of the group.

Notably, we examine context-specific self-presentation goals, rather than general motives; such goals should therefore also be affected by the efficacy for and visibility of that specific task. Studies 2 and 3 will also examine different indices of effort, adding to the generalizability of the research. Study 2 examines effortful individual performance on an unpleasant group task, whereas Study 3 examines student volunteer behavior on behalf of the university.

**STUDY 1**

Prior to the experimental investigations, we examined preliminary correlational data from a natural setting to establish the presence and nature of the relationship between prototypicality and effort on behalf of the group. As noted earlier, it is instructive to show evidence that non-prototypicality predicts effort when controlling for identification. Such a pattern provides evidence that feelings of non-prototypicality may indeed motivate effort but that the opposing effect of identification may mask this negative relationship (i.e., suppression).
Method

Participants included 109 full-time Masters of Business Administration (MBA) students volunteers (66% male; mean age = 28). They completed two ostensibly unrelated surveys, and 95% of the students participated. The first survey assessed perceived group prototypicality by using a single-item measure assessing 7-point scale agreement (1 = strongly disagree, 7 = strongly agree; adapted from Platow & Van Knippenberg, 2001) with the statement, “I am a good example of a [University of XYZ] MBA student.” Group identification was also measured using two 7-point scale items (r = .74; adapted from Ellemers, Spears, & Doosje, 1997) assessing agreement with the statements, “I identify with other [University of XYZ] MBA students,” and “I feel strong ties with other [University of XYZ] MBA students.” As expected, there was a correlation between reported prototypicality and identification, r = .62, p < .001. The second survey was presented on behalf of a student-run volunteer program that raises money to supplement income for students with non-profit internships and assessed future volunteer intentions by soliciting a time commitment (in hours) from students. Notably, voluntemer may be a domain that is particularly well suited for exhibiting one’s value to the group as significant volunteer efforts are often uncommon and can easily be broadcast to other group members. In this MBA student context, volunteering in this context is a public discretionary behavior; individuals who volunteer regularly are routinely recognized for their efforts, and traditionally over 50% of the MBA class volunteers by the time of graduation.

Results and Discussion

We regressed future volunteer intentions onto the prototypicality and identification measures, while controlling for past volunteer time contributions to the internship program, β = .65, t (105) = 9.33, p < .001, thus, factoring out potential program commitment confounds and providing a particularly conservative test of the hypothesis. Results indicated that strongly identifying group members were more likely to volunteer than weakly identifying group members, β = .23, t (105) = 2.58, p = .01 (ΔR² = .032). Moreover, prototypical group members were less likely to volunteer than non-prototypical members, β = -.18, t (105) = 1.99, p < .05 (ΔR² = .019). Additional collinearity diagnostics indicated that the overlap between identification and prototypicality was not statistically problematic (tolerance > .60; no condition index > 10; no overlap in variance proportions > .50). The overall regression was also significant, adjusted R² = .48, F(3,105) = 33.57, p < .001.

These preliminary findings suggest the existence of a source of motivation implicated by non-prototypicality, one that is distinct and predicts effort in the opposite direction from group identification. When controlling for the positive relationship between identification and effort, a negative relationship between prototypicality and effort was revealed, a suppressor variable leading prototypical group members to reduce their willingness to volunteer. To further probe this effect, we conducted two experimental investigations that isolate the effects of prototypicality and attempt to establish that self-presentation goals are responsible for any negative relationship between prototypicality and effort.

STUDY 2

Method

Participants included 93 undergraduates (30% male, mean age = 19.3) recruited from an introductory psychology course. Over the course of the study, participants completed two task sessions assessing effort, one before and one after the experimental manipulations. The study employed a 2 × 2 between-subjects design, with prototypicality (similar vs different) and task efficacy (control vs low efficacy) as independent variables. Participant prototypicality was manipulated by varying similarity to other group members on artificial personality traits (adapted from Jetten et al., 2003) on the basis of results from a personality inventory administered at the start of the experimental session.

Upon arriving at the experimental session, participants were directed into one of the three private computer workstations under the assumption that they were working with two other participants. They were told that, as a group, they would be participating in two studies during the course of the session; the first study would be testing a new personality measure, whereas the second would investigate “virtual work,” exploring group dynamics when group members worked on a collective task in separate locations (e.g., telecommuting). It was also made explicit that both their personality scores and their group task performance would be shared with the other two group members; thus, individual task performance was visible.

Participants first completed a personality measure described as the “JAMOS Personality Inventory.” The inventory included a subset of a “Big 5” personality inventory (NEO-PI; Costa, 1996) and a hidden figures test (similar in design to “Hidden Patterns Test CF-2” in Ekstrom, French, & Harman, 1976). After completion of the inventory, participants were told that they would have a chance to see the personality results for themselves and all of their group members later in the experimental session.

For the second part of the study, participants completed two 10-minute sessions of a computerized vigilance task (adapted from Harkins & Petty, 1982; Harkins & Szymanski, 1989), monitoring computer stimuli as a virtual work group. Computer screens were divided vertically into three equally sized sections, and participants were told that each group member would monitor one section of the screen, making the task additive in nature. They were instructed to press the space bar as fast as possible when the stimulus (a 24-point font dot) flashed on their portion of the screen. During each of the two 10-minute sessions, 16 dots were flashed in the appropriate section of the screen. Although the stimuli were not hard to see, participants consistently reported that the task was extremely boring; thus, maintaining vigilance required effort. Participants were told to press the space bar as quickly as possible when they saw the stimulus in their portion of the screen and that the goal was to achieve the best combined
performance on the task (i.e., quickest reactions). So, although the task was completed in private, participants expected their individual performance to be revealed to the other two group members at the end of the study.

After a short tutorial, participants completed a baseline 10-minute task session that did not count towards the group performance outcome. Then, while waiting for the experimenter to set up for the second session, participants were given their personality test results, as well as copies of the results of their other group members, to pursue for 6 minutes (prototypicality and efficacy manipulations to be detailed later). Participants then completed the second (post-manipulation) 10-minute task session (main dependent measure). After the task, participants completed a brief survey assessing their impressions of the virtual work experience.

Experimental Manipulations

Prototypicality. Prototypicality was manipulated by providing false personality feedback, altering similarity on fake personality traits (see Jetten et al., 2003). This personality-based method was utilized instead of existing social categories or traits (e.g., gender, college major, and age) because existing stereotypes associated with these characteristics may confound the effect of the manipulation by creating expectations regarding the performance of other group members on subsequent tasks. For the manipulation, participants reviewed their own scores on five fictional personality traits, as well as the scores of their other two group members. The valence of the personality scores was even (two high, two low, and one in the middle of the scale) and counterbalanced to control for any potential effects of high versus low scores. Participants in the non-prototypical condition were described as being very different on four of the five personality traits compared with the other two group members, whereas participants in the prototypical condition were described as being very similar to the other members on four of the five personality traits. Participants were also provided with a brief description of the personality inventory, and the traits it assessed (which were intentionally vague), fabricated by the researchers, but created to look like it had been photocopied from a psychology textbook.

Efficacy. Participant scores on one of the five personality traits, “Aeolism,” were consistently described as low compared with the other group members in all conditions. We used this low Aeolism score to manipulate task efficacy by altering whether or not the trait Aeolism was described as related to “perceptual intelligence.” Specifically, in the low efficacy condition, the textbook excerpt described the trait Aeolism as a proven measure of perceptual intelligence, stating that individuals high in Aeolism were better at perceptual and spatial tasks and that these scores translate into job behaviors (e.g., electronic console monitoring). In contrast, in the control condition, the textbook excerpt stated that Aeolism is completely unrelated to perceptual attention and that individuals high on Aeolism perform no differently than those low on Aeolism on any perceptual task.

Measured Variables

Manipulation Checks. To check the effectiveness of the prototypicality manipulation, we used a Venn diagram measure (Bergami & Bagozzi, 2000; Tropp & Wright, 2001) assessing the degree to which participants perceived overlap between their own unique characteristics and those of the group (from 1 = no overlap at all, to 8 = complete overlap). A check of perceived efficacy was also included that consisted of a composite average of three 7-point scale questions (e.g., “How competent do you think you are at this type of perceptual attention and distraction task?”; single factor extracted with loadings > .57, explaining 55.6% of the variance).

Self-Presentation Goals. To verify that changes in effort resulted from salient desires to present oneself as a “good” group member, we included a composite scale measure assessing self-presentation goals in the final questionnaire. Participants rated their 7-point scale agreement with two statements (r = .50): “I want to show my group that I am very good at this” and “If I did poorly on this task, people will look down on me.”

Effort. Consistent with the instructions and group goal given to participants (i.e., quickest reactions), effort was measured by examining average stimulus reaction times, assessed by how quickly participants pressed the space bar after the dot flashed on the screen, with faster reaction times indicating more effortful performance. We employed this measure to attain the purest measure of effort possible, devoid of individual differences in ability. For ease of interpretation, reaction time scores were reverse coded so that higher numbers indicate more effort. Accuracy (correct hits vs misses) was also recorded, but given the simple nature of the task, there was very little variance.

Pilot Study

An independent pilot study was conducted to (i) pretest the effectiveness of the effort measure and (ii) pretest the effectiveness of the prototypicality manipulation in a simple two-cell experiment by using the new paradigm (holding the efficacy control condition constant). Participants in the pilot study included 44 undergraduates (32% male, mean age = 18.8). The manipulation check of prototypicality showed that participants in the prototypical condition (M = 3.68, SD = 1.32) perceived significantly more overlap with their group than participants in the non-prototypical condition (M = 2.82, SD = 1.33), t(42) = 2.16, p < .05. Effort (i.e., average reaction time, reverse coded) was regressed onto baseline (time 1) effort and prototypicality, adjusted $R^2 = .54$, F(2,41) = 26.07, p < .001. Accuracy (hits/misses) was not a significant predictor when included in the regression (representing a speed/accuracy tradeoff), so it was not included in the analysis. There was a significant effect of baseline effort, $\beta = .72$, t (41) = 6.98, p = .01; more effort at the baseline predicted post-manipulation effort. There was also a significant negative effect of prototypicality on effort, $\beta = -.21$, t (41) = 2.02, p = .05 ($\Delta R^2 = .044$). Participants manipulated to think of themselves as non-prototypical group members exerted more effort than those manipulated to think they were prototypical, supporting Hypothesis 1. Given the successful manipulation of prototypicality by using a personality-based paradigm (Jetten et al., 2003) and considering its significant effect on individual effort towards a group goal, we proceeded with Study 2 in its full 2 x 2 design.
Results

Manipulation Checks. Using a regression framework, analysis of the Venn diagram check of prototypicality indicated that participants in the prototypical condition \((M = 3.80, SD = 1.76)\) reported significantly more overlap with the group in their characteristics and qualities than participants in the non-prototypical condition \((M = 3.02, SD = 1.59)\), \(\beta = .23, t (92) = 2.22, p < .05\). There were no significant effects of efficacy or the interaction between efficacy and prototypicality on the prototypicality manipulation check. Examination of the perceived efficacy check indicated that participants in the control condition \((M = 4.43, SD = 1.02)\) reported themselves to be better on the task than those in the low efficacy condition \((M = 4.05, SD = .97)\), \(\beta = .20, t (92) = 1.96, p = .05\). No significant effects were found for prototypicality or the interaction between efficacy and prototypicality on the efficacy manipulation check.

Self-presentation Goals. The measure of self-presentation goals was regressed onto the manipulations of prototypicality, efficacy, and their interaction. There was no significant main effect of prototypicality on self-presentation goals, \(\beta = -.03, t (88) = -.32, p = .75\), or efficacy, \(\beta = -.02, t (88) = -.16, p = .88\). There was, however, a significant interaction between prototypicality and efficacy, \(\beta = .26, t (88) = 2.53, p = .01 (\Delta R^2 = .068)\). Simple slope analysis indicated that in the efficacy control condition, participants manipulated to believe they were nonprototypical reported stronger self-presentation goals than those who believed they were prototypical, \(\beta = -.28, t (88) = -1.90, p = .06\). In the low efficacy condition, there was no significant difference between the self-presentation goals of non-prototypical and prototypical group members, \(\beta = .24, t (88) = 1.68, p = .10\). See Figure 1 for the pattern of means.

Effort. Effort (i.e., average reaction time, reverse coded) was regressed onto baseline (time 1) effort, as well as the manipulations of prototypicality, efficacy, and their interaction, adjusted \(R^2 = .49, F (4,87) = 22.65, p < .001\). There was a significant effect of baseline effort, \(\beta = .70, t (87) = 9.24, p < .001\); more effort at baseline predicted greater post-manipulation effort. There were no significant main effects of prototypicality, \(\beta = -.04, t (87) = .58, p = .57\), or efficacy, \(\beta = .10, t (87) = 1.28, p = .20\). These effects, however, were further qualified by a significant interaction between prototypicality and efficacy, \(\beta = .22, t (87) = 2.85, p = .005 (\Delta R^2 = .046)\). Simple slope analyses (Aiken & West, 1991) indicated that in the efficacy control condition, participants manipulated to believe they were prototypical exerted less effort than those who believed they were non-prototypical, \(\beta = -.26, t (87) = -2.44, p < .05\). In contrast, in the low efficacy condition, there was no significant difference between the effort of prototypical and non-prototypical group members, as predicted, \(\beta = .17, t (87) = 1.61, p = .11\). See Figure 1 for the pattern of raw score means.

Mediation Analysis. When considering self-presentation goals as an additional predictor in the regression, self-presentation goals had a significant effect on effort, \(\beta = .17, t (86) = 2.09, p < .05\). Mediation analysis was therefore conducted by utilizing Shrout and Bolger’s (2002) bootstrapping procedures for evaluating indirect effects, procedures that are more appropriate for testing mediation in studies with small sample sizes (see also Preacher & Hayes, 2008). The analysis indicated a marginally significant indirect effect from the interaction to effort, through self-presentation goals, \(\beta = .05, SE = .029, p = .06, 95\% CI = .100 to .003\). Note, however, that mediation conclusions should be interpreted with caution because, due to the constraints of the paradigm, this mediator was not measured in the appropriate causal order. This concern is remedied in Study 3.

Discussion

Consistent with our theoretical arguments and in support of Hypothesis 1, Study 2 showed that non-prototypical group members were more concerned with self-presentation than prototypical members. However, this was not always the case. When led to believe that their increased efforts were likely to be unsuccessful (low task efficacy), there was no difference in reported self-presentation goals of prototypical and non-prototypical group members, supporting Hypothesis 2. Furthermore, these self-presentation goals appeared to translate into individual task effort. Importantly, this study establishes the causal effect of prototypicality on both heightened self-presentation goals and individual effort on behalf of the group. This finding also suggests that prototypicality is not only related to a desire to present oneself as sharing common ingroup values and attitudes (e.g., ingroup favoritism, loyalty, and cooperation) but also to task-relevant effortful behavior as both may elicit value-based judgments by group members.

It should be reiterated that our manipulation of prototypicality may have elicited other related motivations. Specifically, the prototypical condition may have also fostered higher identification than the non-prototypical condition, either through the similarity-breeds-attraction hypothesis or feelings of greater group homogeneity. However, as argued earlier, identification would impact effort in the opposite direction as feelings of prototypicality. Thus, rather than an alternative mechanism for our effect, identification in this instance would act as a competing suppressing mechanism, possibly masking the impact of salient self-presentation goals. In support of our arguments, the results of Study 2 indicated a clear negative effect of prototypicality on effort, suggesting that self-presentation motives dominated any potential effects of identification that may have been elicited by the manipulation.

It is interesting to note the specific patterns of means in the measure of effort in this study. As expected, we found that non-prototypicality elicited elevated self-presentation goals but only in absence of an efficacy threat. However, the pattern for task effort was slightly different. Rather than showing a non-prototypical effort reduction in the low efficacy condition, it appears that participants in both prototypicality conditions were exerting more effort (see Figure 1). It is apparent from these patterns that self-presentation goals were not the only salient motive-driving effort. More specifically, it is likely that the low efficacy manipulation may have threatened personal self-esteem (i.e., “you are not good at this task”), constituting another source of motivation and a general increase in effort in the low efficacy condition that shifts the pattern of this interaction. However, regardless of the presence of other sources
of motivation, our direct assessment of self-presentation goals reflected the predicted pattern, goals that partly explained (i.e., mediated) the interaction pattern of prototypicality and task efficacy on effortful behavior.

**STUDY 3**

As noted earlier, we propose a social mechanism for the effect of non-prototypicality on effort on behalf of the group. Specifically, we assert that non-prototypical group members have more salient self-presentation goals (and the implied motives for ingroup respect) than prototypical members. However, to earn the appreciation or respect of one’s ingroup members, one’s efforts must be visible to others in the group. As such, the extent to which effort is public versus private should serve as a key moderator of the relationship between prototypicality and subsequent motivation. This assertion is consistent with a tradition of research citing public/private effects (often referred to as accountability) as implicating self-presentation motives (e.g., Barreto & Ellemers, 2000; Jetten et al., 2003, 2006; Noel et al., 1995; Van Kleef et al., 2007). In other words, non-prototypical group members should only have salient self-presentation goals when they know their behavior will be visible to other group members. Prototypical group members, on the other hand, are relatively less concerned with self-presentation and thus should not be as strongly affected by visibility. Study 3 tests this prediction by examining prosocial behavior as the dependent measure (similar to the preliminary correlational investigation), examining student volunteer intentions on behalf of their university.

**Method**

Participants included 100 undergraduate and graduate students (34% male, mean age = 24.5) recruited for paid research survey participation at an Australian university. The study employed a 2 x 2 between-subjects design, with prototypicality (similar vs different) and visibility (public vs private) as independent variables. The survey was presented as mandated and funded by University Student Services to assess students’ experiences at the university, while also seeking out volunteers to help enhance the on-campus student experience. Participants began by answering a number of questions regarding their feelings about the university and being a student. The survey included the manipulation of prototypicality and its manipulation checks, described in the following text. Participants then read a letter from the head of the Student Services division, inviting them to help raise money for on-campus activities by volunteering their time to make phone calls and/or write personal letters to alumni asking for donations to the student union.

**Experimental Manipulations**

**Prototypicality.** In Study 3, we manipulated prototypicality by asking participants to reflect on how they are similar (vs different)
to other students at their university (following Haslam, Oakes, Reynolds, & Turner, 1999; Wenzel, 2002). Specifically, participants in the prototypical condition were asked to “think about what makes you similar to other students at [University of XYZ],” and to complete the following statement in three different ways: “I am similar to other [University of XYZ] students because….” In contrast, participants in the non-prototypical condition were asked to “think about what makes you different from other students at [University of XYZ],” and to complete the following statement in three different ways: “I am different from other [University of XYZ] students because….”

Visibility. To manipulate the public/private nature of volunteering, the content of the letter from student services was altered. In the public condition, the letter stated as follows:

All volunteers will be publicly recognized by name (listing volunteer activities) on a ‘Thank You’ poster that will be hung in the library at the end of the year, and in the first edition of our new student newsletter that will be sent to all current students.

In contrast, in the private condition, the letter from student services read as follows:

We would like to note, however, that your decision to volunteer or not to volunteer will remain completely anonymous (as will the extent of your volunteer activities). No one will know if you do or do not decide to volunteer.

Measured Variables

Manipulation Check. No explicit check of visibility was employed because the manipulation was rather straightforward. To check the effectiveness of the prototypicality manipulation, we asked participants to rate their agreement on a 7-point scale (1 = strongly disagree, 7 = strongly agree) with the statement “I have a lot in common with other [University of XYZ] students.”

University Identification. Although the procedures instructing participants to reflect on their existing similarities/differences are in direct accordance with the prototypicality construct, we note that this procedure is also commonly employed as a way to manipulate group identification (see Haslam et al., 1999). Thus, this manipulation may elicit both feelings of prototypicality and heightened social identity, and as noted earlier, the two motives may both affect effort but in different directions. To assure that this possible confound did not undermine the influence of prototypicality through a suppression effect, we included a measure of identification as an additional manipulation check and if significant, a control variable. Participants rated their 7-point scale agreement (1 = strongly disagree, 7 = strongly agree) with the statement “I identify with other [University of XYZ] students.”

Self-presentation Goals. A 2 × 2 analysis of variance was conducted on self-presentation goals. Analysis indicated no significant main effect of prototypicality on self-presentation goals, F(1,96) = 0.06, p = .81, or visibility, F(1,96) = 1.78, p = .19. However, these null effects were qualified by a significant interaction between prototypicality and visibility, F(1,96) = 3.76, p = .05 (ΔR² = .037). Participants in the non-prototypical condition reported greater self-presentation goals in the public condition (M = 5.06, SD = 1.10) compared with the private condition (M = 4.20, SD = 1.33). In contrast, there was no difference

<table>
<thead>
<tr>
<th>Self-presentation goals</th>
<th>Predictor</th>
<th>Standardized β</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prototypicality</td>
<td>−.01</td>
<td>−0.05</td>
<td></td>
</tr>
<tr>
<td>Visibility</td>
<td>.13</td>
<td>1.36</td>
<td></td>
</tr>
<tr>
<td>Prototypicality × Visibility</td>
<td>−.21</td>
<td>−2.08*</td>
<td></td>
</tr>
<tr>
<td>Identification</td>
<td>Prototypicality</td>
<td>−.06</td>
<td>−0.62</td>
</tr>
<tr>
<td></td>
<td>Visibility</td>
<td>.02</td>
<td>0.18</td>
</tr>
<tr>
<td></td>
<td>Prototypicality</td>
<td>−.11</td>
<td>−1.07</td>
</tr>
<tr>
<td>Volunteer intentions</td>
<td>Prototypicality</td>
<td>−.02</td>
<td>−0.25</td>
</tr>
<tr>
<td></td>
<td>Visibility</td>
<td>.07</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>Prototypicality</td>
<td>−.06</td>
<td>−0.61</td>
</tr>
<tr>
<td></td>
<td>× Visibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-presentation goals</td>
<td>.31</td>
<td>3.10**</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.

**p < .01.
between public ($M = 4.38, SD = 1.30$) and private ($M = 4.70, SD = 1.40$) conditions for participants in the prototypical condition.

**Effort**

Volunteer intentions were first examined by analyzing the likelihood to volunteer (yes/no) on the basis of the experimental conditions. An omnibus chi-square test suggested a marginal effect, $\chi^2(3) = 6.66, p = .08$ (Nagelkerke $R^2 = .091$). Further analysis indicated a significant difference between volunteer rates of public (37.5%) versus private (11.5%) conditions for non-prototypical group members, $\chi^2(1) = 4.61, p < .05$, but no significant difference between public (36.4%) versus private (32.1%) conditions for prototypical group members, $\chi^2(1) = 0.18, p = .77$.

**Mediation Analysis**

Notably, there was a significant effect of self-presentation goals on effort, $\beta = .25, r(95) = 2.59, p = .01$. Thus, as with Study 2, mediation analysis was conducted by utilizing bootstrapping procedures for evaluating indirect effects by Shrout and Bolger (2002). Results of the full analysis can be found in Table 1. When considering the mediator, a significant indirect effect of prototypicality on effort was apparent, through self-presentation goals, $\beta = -.06, SE = .034, p < .05, 95\% \text{ CI} = -.124 \text{ to } -.010$.

**Discussion**

Study 3 utilized a real-world setting to illustrate the important moderating role of visibility, implicating the importance of social recognition from other group members (i.e., self-presentation goals). The self-presentation goals of non-prototypical group members were only apparent in public contexts where individual efforts were likely to translate into group esteem, verifying that group recognition underlies these patterns. As in Study 2, these goals were partly responsible for effort on behalf of the group.

It is again important to note the specific pattern of means in this study. Although the patterns observed in the assessment of self-presentation goals are consistent with Hypothesis 2 (and Study 2), this pattern was slightly different for the measure of effort. Specifically, non-prototypical members were not more likely to volunteer than prototypical members in public contexts, but rather they were less likely to volunteer in private contexts. As noted earlier, it is quite likely that there are other motivational processes that differ between prototypical and non-prototypical members (i.e., potential suppressor variables that may mask the simple effect; Shrout & Bolger, 2002). Although the additional measure of identification did not show an effect, our manipulation of prototypicality may still have affected the salience of participants’ university identity (rather than its strength). Particularly because Study 3 manipulated prototypicality by asking participants to reflect on their existing similarities and differences, it is likely to elicit feelings of prototypicality as well as identity salience, and as noted earlier (and documented in Study 1), identity-based constructs may also affect effort but in the opposite direction. This is consistent with the argument by Barreto and Ellermers (2000) that high and low identifiers may both work on behalf of the group but for different reasons (internalized group norms and self-presentation, respectively). Indeed, if we adjust for the main effect of prototypicality (which an identity argument would imply), we find the predicted pattern.

Irrespective of other potential mechanisms in operation, the direct measure of self-presentation goals showed stronger desires for group esteem by non-prototypical members in public conditions as predicted, and the significant indirect effect through self-presentation goals confirms our theoretical arguments. Moreover, our utilization of bootstrapping techniques allows us to assess mediation while accounting for this possible suppression effect; an indirect effect implicates relevant processes even in absence of a significant direct effect (see arguments by Kenny, Kashy, and Bolger (1998); Shrout & Bolger, 2002). More importantly, regardless of the potential influence of other motives, only the efforts of participants manipulated to feel like non-prototypical group members were moderated by visibility, suggesting that only their efforts were driven by desires to self-present as valuable group members.

**GENERAL DISCUSSION**

Over two experimental contexts, we found evidence that self-presentation goals play a role in eliciting individual effort in groups. Our results suggest that effortful behavior may provide group members the opportunity to enhance their membership by exhibiting their value to the group. In these studies, we examined such self-presentation motives as they were elicited by feelings of non-prototypicality in the group. Non-prototypical group members were more motivated by self-presentation goals than prototypical members, and these motives were reflected in their willingness to exert effort on behalf of the group. Notably, this added motivation was only evident when participants were led to believe that their actions were controllable and visible to other group members, implicating underlying social motives. There certainly may be other sources of social information that may make social connections salient (e.g., Kerr & Levine, 2008), and future research is necessary to fully explore the full range of membership cues that impact motivation in group contexts.

These findings represent an important contribution to research on effort in groups by documenting how prototypical and non-prototypical group members might be differently motivated by their desire for social connections. The direct examination of effort as the focal dependent variable reveals that feelings of non-prototypicality affect outcomes beyond the exhibition of group attitude congruence—feeling like a non-prototypical group member can serve as a source of task motivation despite its potential negative impact on group identification. The current research also contributes to the literature by providing the first direct assessment of self-presentation goals as a mediating process between prototypicality and behavior in groups, while also explicating two theoretical moderators that influence the prevalence of these goals.

The current research benefits from observing realistic behaviors (or behavioral intentions) in real-world contexts by examining decisions to volunteer on behalf of the group and...
actual individual task effort. Both prosocial and task-based forms of behavior yielded similar effects. Moreover, these studies were conducted in both real groups (albeit those composed of students) as well as in artificially created groups. Given our interest in one’s social connections to groups, this minimal group paradigm serves as a particularly conservative test of our primary hypothesis. As we have shown, feeling different from others elicits self-presentation goals even in arbitrary and unimportant groups. The power of these artificial groups is not surprising given the importance of social connection motives in eliciting behavior, even in artificial situations (e.g., Zadro, Williams, & Richardson, 2004). These studies also benefit from different operationalizations of prototypical versus non-prototypical membership (measured in a natural setting, manipulated through false feedback regarding similarity, or manipulated by making existing similarities and differences salient).

It is important to note that although the various constructs surrounding individuals’ connections to the groups in which they belong (e.g., inclusion, prototypicality, cohesion, and identification) are all related and likely to be correlated in real-world settings, they are conceptually distinct and do not always yield the same effects. The current findings surrounding prototypical versus non-prototypical members thus complement work on cohesion (e.g., Karau & Hart, 1998; Karau & Williams, 1997; Mullen & Copper, 1994) and social identification (e.g., Gagnon & Bourhis, 1996; Karau & Williams, 1993) in motivating individuals in groups. Our work suggests the value of a more multifaceted approach to the impact of relational variables on motivation and behavior in groups. Additional research would be necessary to further disentangle the relative importance of these different processes for individual effort in groups. Moreover, it will be important for future research to identify additional moderators and their relative impact. For example, consistent with self-categorization theory (Turner, 1985), we might expect that identity effects would be stronger (i.e., prototypical members exert more effort) in the presence of a competitive outgroup, whereas affiliation-based motivations would be stronger (i.e., non-prototypical members exert more effort) in the absence of a salient intergroup comparison. Notwithstanding the need for distinctions between constructs, the interactions documented in the current research, as well as the meditational evidence implicating self-presentation goals, suggest that our effects are indeed driven partly by desires for enhanced social connections.

Interestingly, these related constructs may not only provide different sources of motivation but may also be potentially interactive. For example, social identification may moderate how respondents react to social connection cues. Research by Jetten et al. (2003) has shown that peripheral (i.e., non-prototypical) members may choose to disengage from the group rather than invest additional personal resources in its success, particularly when faced with potential rejection (see also Brewer, 1991). This pattern, however, may result from the expectation of rejection not simply from peripheral status cues. The operationalizations of prototypicality in the current studies, on the other hand, do not imply that rejection is likely but rather focus on respondents’ current feelings about the typicality of their personal characteristics. Although beyond the scope of the current investigation, we would expect that additional cues signaling rejection might reverse the effect as non-prototypical members may feel that their attempts to increase their membership status are futile and disengage from the group.

The current research may also have important implications for diversity in groups, both demographic and otherwise. Members of groups who think of themselves as different from the group norm (i.e., non-prototypical) may be particularly vigilant for social connection cues and opportunities to exhibit the value of their difference. It is thus possible that group diversity may be particularly motivating for minority members (i.e., demographically non-prototypical) as they attempt to establish the value of their membership in the group. This assertion is consistent with recent research showing that participants who experience feelings of stereotype threat performed worse than non-threatened participants on analytic tasks (consistent with an interference account; Schmader & Johns, 2003) but better on effortful tasks because threatened participants are more motivated to perform well (see Jamieson & Harkins, 2007, 2009). This “mere effort” account may be driven by the same self-presentation motives reported here, and evidence that third-party evaluation (i.e., public performance) is necessary to produce these effects (Jamieson & Harkins, 2010) suggests that this might be the case. Future research exploring the effects of stereotype threat on performance could benefit from including measures of self-presentation goals (and feelings of non-prototypicality) to determine if the specific source of motivation in these paradigms operates in the service of enhancing group esteem.

In the current research, we do not explicitly examine prototypicality as it relates to demographic differences (any existing expectations because of demographics could confound the manipulation of prototypicality). Thus, to realize whether our reasoning does indeed have implications for diversity, future research must be conducted specifically to investigate these provocative research questions using appropriate paradigms.

Taken as a whole, our results highlight the importance of information regarding how prototypical one feels in a group, presenting an understudied antecedent of effort in group contexts. Such cues appear to enhance self-presentation goals, motives that elicit effort as group members attempt to gain the esteem and recognition of their peers.

ACKNOWLEDGEMENTS

The authors would like to thank Steven Blader, Victoria Breseoll, Michael Wenzel, Dan Friedland, Richard Saavedra, and the Organizational Behavior faculty at the Yale School of Management for helpful suggestions on early versions of this research.

ENDNOTES

1. To remain consistent with past research, we use the term “prototypicality” to indicate variance in “typicality” or
“similarity” of group members. However, a strict definition of the word prototypicality implies not just feelings of similarity/difference but similarities/differences on group identity-defining characteristics. It is not the intent of the current investigation to critique or supplant the normative approach to examining prototypicality; however, we note the need for further specificity in this domain of study to identify differences (if there are any) in the effect of perceived variations in prototypical versus typical group characteristics. Importantly for the current investigation, as shown in the past research (e.g., Jetten et al., 2003; Van Kleef et al., 2007), even variance on unimportant and identity-irrelevant characteristics is sufficient to elicit self-presentation goals. The examination of similarities/differences on more central group characteristics should elicit much stronger effects than arbitrary characteristics; thus, employing standard operationalizations that vary typicality or similarity on unimportant characteristics is a particularly conservative way to assess our hypothesized effects.

REFERENCES


Hogg, M. A. (2005). All animals are equal but some animals are more equal than others: Social identity and marginal membership. In K. D. Williams, J. P. Forgas, & W. von Hippel (Eds.), The social outcast: Ostracism, social exclusion, rejection, and bullying (pp. 243–261). New York: Psychology Press.


