

Are we on a learning curve or a treadmill? The benefits of participative group goal setting become apparent as tasks become increasingly challenging over time

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Abstract

A large body of research has pointed to the utility of individual and group goal setting as a performance enhancement strategy. However, group goal setting is more complex than individual goal setting as the group context often strengthens the desire for voice and the possibility of resistance. In line with this idea, we test the prediction that goal-related performance improvements should be more marked where groups participate in goal setting rather than having goals imposed—particularly as they become increasingly hard to achieve. These ideas are tested in two experiments ($N_{groups} = 27, 72$). Both confirm the capacity for group goal setting to enhance brainstorming performance. More importantly, both studies also show that the benefits of participative goals relative to imposed goals becomes more marked as goals become more difficult over time. In line with social identity and self-categorization principles, we suggest that this is because increases in participatively set goals appear to provide opportunities for collective self-actualization and self-enhancement while increases in imposed goals do not. Copyright © 2008 John Wiley & Sons, Ltd.

Mr Bell, the chief inspector of schools in England, told a conference in York that the government had been absolutely right to set ambitious national targets which helped schools focus and brought about a momentum for change. But, he added: “One of the things inspectors find is that an excessive or myopic focus on targets can actually narrow and reduce achievement by crowding out some of the essentials of effective and broadly based learning. . . . The harder the targets become, the more tempting it is to treat them with cynicism or defeatism.” It was time ministers listened more to head teachers, continued Mr Bell. “I have a very real concern that the innovation and reform that we need to see in our schools may be inhibited by an over-concentration on targets. It would be an irony indeed if the tool of improvement ended up inhibiting the improvement that is now required.” (The Guardian, 2003).

For employees in every place of work—hospital, office, shop, factory, prison, barracks, school, or university—this is the age of targets. Indeed, goal-setting is *the* tool of choice for those seeking to enhance productivity in organizations and in society more generally (West, Borrill, & Unsworth, 1998). And for good reason: a large body of research attests to the value of goal setting as “a motivational technique that works” (Latham & Locke, 1979, p. 68; Miner, 1984). Supporting this claim, a plethora of studies demonstrate that performance improves when individuals are invited to set themselves specific, difficult goals rather than simply to “do your best.” Providing the preconditions for this effect are favorable (e.g., given moderate task complexity, commitment, ability to achieve the task), striving for challenging goals leads, on average, to an increase in individual performance of around 0.6 (± 0.2) SD (Locke & Latham, 1990, 2002).

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Research suggests that at least four mediating processes underpin the efficacy of goal setting. From the accumulated evidence, it appears that difficult and specific individual goals motivate people (a) to exert more *effort* (e.g., to work faster or harder) during task performance, (b) to continue working on the task until the performance goal is reached (to display *persistence*), (c) to direct their attention to behavior and outcomes that are relevant for goal attainment (i.e., to *focus* on the task in hand), and (d) to develop and use appropriate task strategies (i.e., to engage in *planning*, see Locke, 2000; Wegge, 2001).

To date, the effects of goal setting have largely been examined in studies of individual performance (Locke & Latham, 1990). Far fewer studies have explored the impact of group goals (i.e., goals that teams or other organizational units are required to achieve) on group performance. Nevertheless, there is mounting evidence that group goal setting can also be effective. For example, Wegge and Haslam (2005) found that several group goal-setting strategies (e.g., directive and participative group goal setting) led to performance improvements in brainstorming tasks that were roughly double those associated with “do your best” (DYB) instructions. Such findings are in line with a meta-analysis of 10 studies by O’Leary-Kelly, Martocchio, and Frink (1994) which found that the performance of groups striving for a specific, difficult group goal was almost 1 SD higher than the performance of groups that did not have specific, difficult goals. Again, then, the efficacy of group goal-setting procedures is impressive. Indeed, this strategy would appear to be an even more effective performance enhancement tool than individual goal setting.

Nevertheless, in some cases the practice of setting goals for groups has also been observed to lead to *reductions* in performance. Wegge and Haslam (2006) found that pseudo-participative group goal setting (in which a supervisor was seen to behave unfairly) led to deliberate goal rejection and collective underperformance. This finding accords with Taylor’s (1911, p. 14) observation that groups can sometimes engage in *soldiering* to keep performance low and with evidence that groups are often much more potent sources of *resistance* than are individuals alone (Haslam & Reicher, 2006; Kelly, 1993; Reynolds, Oakes, Haslam, Noland, & Dolnik, 2000; Veenstra & Haslam, 2000). The purpose of the present paper is to shed more light on the factors that contribute to the efficacy of group goal setting and that, on occasion, lead performance targets to backfire.

THE SOCIAL DIMENSION OF GOAL SETTING

Evidence that group goal setting can be effective, but that its effects appear to be more dependent on the characteristics of the goal setter than is the case in individual goal setting raises the question of whether the same mechanisms underpin the two processes (Hinsz, 1995). By and large, researchers tend to answer this question in the affirmative, suggesting that the processes responsible for the two effects are essentially identical (i.e., increased effort, persistence, focus, and planning; Durham et al., 2000; Knight et al., 2001; Locke & Latham, 1990). At first blush, this proposition would appear plausible since individual performance is obviously a critical ingredient of team performance. However, there are a number of reasons to doubt the proposition that group and individual goal setting effects are routinely identical.

In the first instance, the setting of group goals typically takes place in situations where groups of individuals perform complex tasks together. In itself, such situations can arouse specific (social) emotions such as evaluation apprehension or fear of social rejection. In the same vein, group work typically involves additional processes such as communication and collaborative planning that are not routinely required for individual performance (e.g., Moreland, Argote, & Krishnan, 1996; Postmes, Haslam, & Swaab, 2005; Weick & Roberts, 1993). In line with this view, Weldon and Weingart (1993) proposed a model that points to the importance of three group-level mechanisms: (a) *group planning* (e.g., talking about who should do what, when, and where in the team), (b) *co-operation within the team* (e.g., listening to others’ ideas, helping team-mates do their work), and (c) *morale building communication* (e.g., supportive exchanges that build a sense of efficacy and enthusiasm within the group and “jolly it along”). In this model, it is suggested that setting specific and difficult group goals promotes these processes that have the potential to facilitate team performance because, among other things, they improve the quality of group plans and the expectancy of success. Consistent with Weldon and Weingart’s (1993) model, we assume that several *group-specific mechanisms* are responsible for group goal-setting effects. However, in extending this analysis, Wegge and Haslam (2003) have suggested that additional insights from social identity and self-categorization theories (Tajfel & Turner, 1979; Turner, 1985, 2005; Turner, Oakes, Haslam, & McGarty, 1994) should also be taken into account.

A SOCIAL IDENTITY APPROACH TO GOAL SETTING EFFECTS

Wegge and Haslam's (2003) analysis of goal-setting effects centers around two aspects of social and organizational context: (a) the level of goal achievers' self-categorization (i.e., whether they define themselves in terms of a unique *personal identity*, or a *social identity* that is shared with other group members) and (b) the self-categorical relationship between goal setters and goal achievers (in particular, whether or not they share the same social identity).

If goals are set at a group level, this increases the likelihood that goal achievers will define themselves in terms of a shared social identity (i.e., as members of the same group, as "we" or "us"; Wegge & Haslam, 2005). Among other things, this is because group goals tend to provide a sense of common fate and purpose (*cf.* Campbell's, 1958, analysis of entitativity) that defines the ingroup as a distinct social category. This should be particularly true when group goals are somewhat competitive (Worchel, Rothgerber, Day, Hart, & Butemeyer, 1998). This practice is common in contemporary organizations where "league tables" are often recommended as a basis for identifying and rewarding superior team performance (Ghoshal & Bartlett, 1997; Parker & Slaughter, 1988). Consistent with this idea, prior research has confirmed that, when performing standard brainstorming tasks, group members identify more highly with groups if they engage in group goal setting than if they are merely instructed to "do your best" (Wegge & Haslam, 2005; see also Widmeyer & Ducharme, 1997).

Related to this point, goals also channel and focus self-relevant exertion (Wegge & Haslam, 2003). That is, they serve as lenses which concentrate the energies of the self and thereby increase its impact on selected aspects of behavior and/or the performance environment. Group goals thus have the capacity to direct and give meaning to a shared social identity which organizes the behavior of (potentially) disparate individuals (e.g., Aube & Rousseau, 2005; Moreland et al., 1996; Turner, 1991; Weick & Roberts, 1993). These effects whereby group goals both (a) reinforce group-level categorization and (b) inform the content of shared social identity are not only related, but also likely to be mutually reinforcing. Indeed, the fact that group goal setting brings into play additional processes of social identification, social influence, co-operation, and co-ordination helps explain why this often leads to more positive outcomes than individual goal setting (Haslam, Ryan, Postmes, Spears, Jetten, & Webley, 2006; Hinsz & Nickell, 2004; O'Leary-Kelly et al., 1994; Wegge, 2000).

In sum, group goal setting may be effective partially because it involves processes that contribute both to the *formation of a shared social identity* and to the *increased salience of this identity* within a specific performance context (e.g., along suggested by Oakes, Haslam, Morrison, & Grace, 1995; Oakes, Turner, & Haslam, 1991). If this analysis is correct, then the degree to which a group can use a goal-setting strategy to improve performance should depend critically on whether the targets that are set are perceived to be its own (i.e., those of an ingroup over which it has *ownership*, rather than those of an outgroup).

WHEN GROUP GOAL SETTING CEASES TO BE EFFECTIVE

It is here that the second element of the social identity approach to group goal-setting effects—the self-categorical relationship between goal achievers and goal setters—comes into play. The implication of the foregoing analysis is that in order for group goals to have a positive impact on performance, it is important for those goals to become aligned with the definition, norms, and interests of the *ingroup* (Haslam, Powell, & Turner, 2000; Turner, 2005; van Knippenberg & Ellemers, 2003; Van Dick, Wagner, Stellmacher, & Christ, 2004). Anecdotally, we know that in applied contexts this is not always the case: targets are typically set by executives and officials who are often removed from the group whose performance they seek to influence. Furthermore, over time, those outsider targets risk being rejected on "the shop floor" (e.g., as is illustrated by the increasingly cynicism surrounding government targets in the UK—of which the opening quotation from *The Guardian* is indicative).

For this reason, the capacity for goals to be seen (and internalized) as valid foci for the energies of group members depends critically upon those who set them being defined as ingroup rather than outgroup members. Approaches to leadership and creativity derived from self-categorization theory have shown that leaders who are perceived to represent an ingroup are more effective in eliciting followership than those seen as representing an outgroup (e.g., Adarves-Yorno et al., 2006, 2007; Haslam et al., 2001; Hogg & van Knippenberg, 2004; Platow & van Knippenberg, 2001; Platow et al., 1997; Turner & Haslam, 2001). In similar vein, group members are likely to respond much more enthusiastically to group

goals that are perceived to be set participatively by an ingroup, than when they are imposed by a leader who is not clearly “one of us” (Duck & Fielding, 1999, 2003; Reicher, Haslam, & Hopkins, 2005).

It is important to note that goal setting theory has not previously discussed the role of shared identity between goal setters and goal strivers in establishing high (group) goal commitment. Nonetheless, prior research has investigated a range of variables that could relate to this role—including the leadership behavior of goal setters (see Earley & Shally, 1991; Klein, Wesson, Hollenbeck, & Alge, 1999; Locke & Latham, 2002). In particular, one leadership behavior that speaks to the importance of shared social identity, and which has received some attention in goal setting research, is *participation in goal setting*. From this, it is apparent that goal commitment is typically higher if employees have a voice in the process of setting performance goals (Klein et al., 1999; Roberson, Moye, & Locke, 1999; see the corresponding trend in the data diagnosed by O’Leary-Kelly et al., 1994, p. 1297). However, almost all the studies that have explored this issue have done so at the individual level. Accordingly, it is less clear whether participation contributes to the impact of group goal setting and, if so, what this role is (Wegge, 2000; Wegge & Haslam, 2003, 2005).

In the same vein, only a few studies have analyzed the problem of goal rejection. Erez and Zidon (1984) and Vance and Colella (1990) examined this phenomenon by increasing the difficulty of goals in a continuous way so that goals set by an authority were increasingly seen as impossible. Both studies found that assigned goals were ultimately rejected by most individuals when goal difficulty became extremely high. In addition, the work of Wright, Hollenbeck, Wolf, and Mahan (1995) shows that the point of transition from basic goal acceptance to goal rejection is influenced by the specific operationalization of goal difficulty. Compared to a between-subject design where absolute goal difficulty is manipulated between groups, lower performance due to increased goal difficulty is more likely to be observed if goals are manipulated *within*-subjects (e.g., by asking participants initially to improve their performance by 20% and subsequently by 20% more in the next trial). Surprisingly, in all three previous empirical studies into this issue it was also found that some individuals’ performance remained high even when the authority set impossible goals. Again, though, we do not know if this phenomenon generalizes to the group level. This lacuna is of theoretical interest because, as explained above, we hypothesize that at the group level goals are more likely to be rejected if those who set them are perceived to be unreasonable.

THE PRESENT RESEARCH

On the basis of the above arguments, we hypothesize that it is when group goals (a) become unreasonably high and (b) have not clearly emanated from an ingroup source that they are most likely to prove ineffective or to “backfire.” This is the distinctive new hypothesis that the present research was designed to test. At a more basic level, though, it also sought to confirm the findings of previous research (e.g., O’Leary-Kelly et al., 1994) by demonstrating the capacity for group goal setting to enhance performance relative to conditions in which groups are merely instructed to “do your best.” In this regard, it is worth noting that only two previous goal-setting studies have explored the brainstorming performance of teams and these have produced inconsistent results (see Wegge & Haslam, 2005). Thus, there would appear to be some utility in finding more general support for the effectiveness of group goal setting in relation to brainstorming (a commonly used task for both experimental and practical purposes; see Paulus, 2000, Paulus, Dugosh, Dzindolet, Coskun, & Putman, 2002).

In order to test these ideas, two experiments were conducted. These were modeled on previous research by Wegge (2000; Wegge & Haslam, 2005) and involved small groups of three or four students working on brainstorming tasks to devise novel uses for everyday objects. In both studies, small groups took part in a series of brainstorming exercises in three discrete phases. In Phase 1, all groups were instructed to identify as many uses as possible for a common household object (a broom) in a 5-minute period. Following the standard procedures of previous research (e.g., Wegge & Haslam, 2005), this established a “DYB” baseline against which performance in subsequent phases could be compared. In subsequent phases, groups had to do the same for two other objects (a kitchen knife and a bicycle tyre), but here they were randomly assigned to one of three (in Experiment 1) or five (in Experiment 3) independent conditions. One of these was a *control* condition, in which the groups were simply asked in each phase to continue to “DYB.” In other conditions, the groups in Phases 2 and 3 were invited to set the goal of improving their performance in relations to goals that were either set by the experimenter, or set by the groups themselves with reference to a goal suggested by the experimenter.

EXPERIMENT 1

In addition to the control condition, this study had two goal setting conditions—in which goals were either imposed by the experimenter or participatively set by the groups themselves. In the *imposed goals* condition, goals were presented as targets for improvement that the experimenter thought were achievable and appropriate on the basis of previous research. In the *participative goals* condition, groups were given the same information by the experimenter but asked to reflect on this and determine for themselves a goal that they thought was achievable and appropriate. Goal difficulty was also manipulated across two phases of the study. In Phase 2, participants were given (or suggested) the goal of generating 20% more uses for objects than they had in Phase 1 (a goal which around 28% of groups achieved in DYB conditions); in Phase 3 this increased to 40% more than in Phase 1 (a goal which 12% of groups achieved in DYB conditions).

In line with the reasoning articulated above, this study tested three key hypotheses:

H1: *That performance on the brainstorming task would be superior when group goals were set (i.e., in either participative or imposed goal conditions) than when they were not (in the DYB control condition).*

H2: *That performance on the brainstorming task would be superior when group goals were participatively set rather than imposed.*

H3: *That support for H2 would be more pronounced as goals became increasingly difficult—such that the benefits of participatively set group goals relative to imposed group goals would be more pronounced in Phase 3 than in Phase 2.*

Method

Participants and Design

Participants were 101 British undergraduates taking part in a day-long team-building course. The median age of participants was 19; 79 were female and 21 male. The study was run in three sessions. Within each session, participants were randomly assigned to small groups containing three or four students and groups were randomly assigned to one of three experimental conditions each associated with a different type of goal: *control* (DYB), *imposed goals*, and *participative goals*. There were nine groups in each condition (DYB: 3 groups of 3 people, 6 of 4; imposed: 2 of 3, 7 of 4; participative: 2 of 3, 7 of 4).

Procedure

At a pre-specified point in the team-building program, participants were randomly assigned to groups of three or four people. Each group was then assigned to work at a separate table, with tables spread widely apart inside a large marquee. Each group was given a calculator and told that they would take part in a three-phase brainstorming study in which their task was to identify uses for common household objects within a specified period of time. Groups were told that they would receive instructions for the task at the start of each of the study's phases.

In Phase 1, all groups were given a single sheet with the target word “broom” at the top and told to generate as many uses as they could for this within a 5-minute period. They then worked together on this task, with one person recording the different uses that were generated by the group. At the end of 5 minutes, responses were collected and a new sheet distributed. In Phase 2, the target word was “kitchen knife,” and in Phase 3 “bicycle tyre.” Groups were given 5 minutes to complete each phase.

Independent and Dependent Variables

For groups in the control condition, the instructions in each phase remained the same—to generate as many uses as possible for the object in question. However, to ensure comparability with the tasks performed by other groups (and not

arouse suspicion if they saw people on other tables using calculators), at the start of Phase 2, groups were instructed to multiply the number of people in their group by 1.2 and to write this number in a box on their response form, and at the start of Phase 3 to multiply the number of people in their group by 1.4.

In the imposed goals condition, groups were provided with an instruction sheet in Phase 2 which informed them that:

Previous research suggests that the experience of performing the first task should improve performance over the two tasks by about 20%. Accordingly, add up the number of uses you generated on the first task and multiply this number by 1.2 and write this in the box below. [This box said "Goal = . . . uses."] Your goal in this second task is therefore to generate at least 20% more uses for objects than you did in Task 1 (i.e., the number you have written in the box above).

These instructions were repeated in Phase 3, but this time the target was to increase output by 40%.

In the participative goals condition, groups were provided with an instruction sheet which informed them that:

Previous research suggests that the experience of performing the first task should improve performance over the two tasks by about 20%. Based on this information, you should *set yourselves* a group goal reflecting the number of uses you will aim to generate on this task. Write this goal in the box below. [This box said "Goal = . . . uses."]

These instructions were repeated in Phase 3, but again this time the target was to increase output by 40%. In the participative goals condition, all nine groups accepted the goal suggested by the experimenter in Phase 2 (100%; so here the mean participative goal, M_{goal} , was to improve by 20%), and six (67%) accepted it in Phase 3 ($M_{\text{goal}} = +32\%$).

The dependent variable was the number of unique ideas generated. At the end of the task, the experimenter and an assistant added up and verified the number of unique uses for each object that the groups had generated. Their ratings were identical.

Results

The number of uses generated in Phase 1 (the baseline) was subtracted from the number of uses generated in Phases 2 and 3. Means are presented in Figure 1, with higher scores indicating greater performance improvement.¹ Alternatively, these absolute scores can be represented in terms of percentage improvement, relative to the baseline performance in Phase 1. This yields slightly different data,² with relevant means presented in Table 1.

Absolute scores were subjected to a 2 (Phase (goal difficulty): easy, hard) \times 3 (Condition (goal type): control, imposed goals, participative goals) analysis of variance with repeated measures on the first factor. Although statistical power was limited (as a result of small cell sizes), α (for both primary and secondary analyses) was set at .05. However, in light of this, it is useful to consider tests of statistical significance alongside measures of effect size (Cohen, 1977).

This analysis revealed a marginally significant effect for experimental condition (goal type), $F(2,24) = 2.85$, $p = .08$, $\eta_p^2 = .19$. However, this effect was qualified by a marginally significant interaction between condition and phase, $F(2,24) = 2.59$, $p = .09$, $\eta_p^2 = .18$. This interaction was followed up by focused tests of the experiment's main hypotheses.

Tests of Hypothesis 1

In order to test H1, the number of uses generated for objects in the control condition was compared with the number of uses generated in the two conditions where group goals were set in the last two phases of the study. This contrast was not

¹One potential confound in the study is the fact that in conditions where participants set their own goals, some of the groups decided to set themselves a lower goal than the one specified by the experimenter (and the study design). We would suggest that this is not a major conceptual problem, since the internalization of goals set by an experimenter might also differ in the same way. Moreover, if some groups set themselves lower goals than those suggested this would be a conservative confounding, since it would lead one to expect lower performance for groups with lower goals and thus this would actually work against H1 and H2. Nevertheless, to address this issue, in both Experiments 1 and 2, analysis was repeated using deviation from the set goal as a covariate. This did not change the results substantively and in neither case was this covariate significant (Experiment 1, $t_{\text{Phase 2}} = 0.90$, $t_{\text{Phase 3}} = 1.29$; Experiment 2, $t_{\text{Phase 2}} = -1.52$, $t_{\text{Phase 3}} = -1.28$).

²Although not identical to absolute scores, the subsequent pattern of results did not change if analysis was based on this measure of percentage improvement relative to baseline. In particular, the overall analysis revealed the same interaction between experimental condition (goal type) and phase (goal difficulty), $F(2,24) = 3.10$, $p = .06$, $\eta_p^2 = .21$.

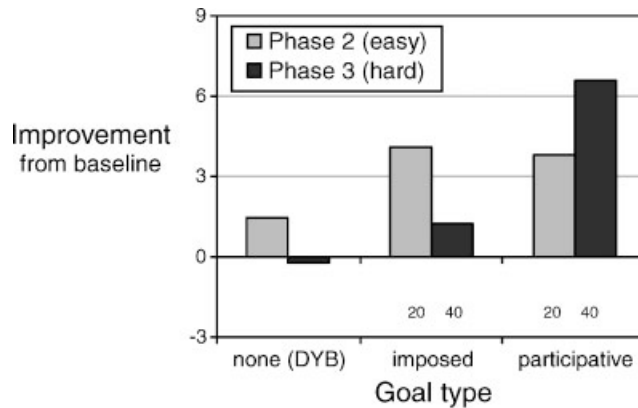


Figure 1. Experiment 1: change in performance from Phase 1 baseline as a function of Condition (goal type) and Phase (goal difficulty)

Table 1. Experiment 1: mean percentage change in performance from Phase 1 baseline as a function of Condition (i.e., goal type) and Phase (standard deviations in brackets)

	Condition (goal type)		
	None—DYB	Imposed	Participative
Phase 2 (easy)	13.9 (38.2)	20.0 (14.7)	20.6 (22.7)
Phase 3 (hard)	4.3 (30.0)	9.8 (26.9)	33.1 (22.6)

significant in Phase 2 ($M_{\text{DYB}} = 1.44$, $M_{\text{goals}} = 3.94$; $t(24) = 1.34$, $p = .19$) but was marginally significant in Phase 3 ($M_{\text{DYB}} = -2.22$, $M_{\text{goals}} = 3.88$; $t(24) = 1.92$, $p = .06$). The former effect was medium sized (Cohen's $d = .55$) and the latter effect was large ($d = 0.78$).

Tests of Hypothesis 2

In order to test H2, the number of uses generated for objects in the conditions where group goals were set by the experimenter was compared with the number of uses generated in the conditions where goals were participatively set in each of the last two phases of the study. This contrast was not significant in Phase 2 ($M_{\text{imposed}} = 4.11$, $M_{\text{participative}} = 3.78$; $t(24) = 0.16$, $p = .88$) but was significant in Phase 3 ($M_{\text{imposed}} = 1.22$, $M_{\text{participative}} = 6.56$; $t(24) = 2.16$, $p = .04$). The former effect was negligible (Cohen's $d = .07$) but the latter effect was large ($d = 1.02$).

Tests of Hypothesis 3

In order to test H3, the number of uses generated for objects in the two conditions where group goals were set was subjected to a 2 (Condition (goal type): participative, imposed) \times 2 (Phase (goal difficulty): easy vs. hard) analysis of variance with repeated measures on the second factor. Consistent with H3, the only effect to emerge from this analysis was a marginally significant interaction between goal type and phase, $F(1,16) = 3.62$, $p = .07$, $\eta_p^2 = .19$. As the foregoing analyses to test H2 indicated, this arose from the fact that whereas there was no difference in the performance of groups whose goals had been set participatively rather than imposed when those goals were easy (i.e., in Phase 2), in Phase 3 when

the goals were hard the performance of groups with participatively set goals exceeded that of groups with goals set by the experimenter.

Discussion

The results of this study lend provisional support to our hypotheses. Consistent with previous research and with H1 (e.g., O’Leary-Kelly et al., 1994; Wegge & Haslam, 2005), there was evidence that brainstorming groups that were given specific, challenging goals out-performed those that were not (although this effect was only marginally significant in Phase 3). Consistent with H2, there was also some evidence that groups whose goals were participatively set out-performed those whose goals were set by the experimenter. However, as predicted under H3, this effect was apparent only when the goals were hard (to improve performance by 40%) and not when they were relatively easy (to improve performance by 20%). In this way, the results accord with the predictions of the social identity approach to goal setting which suggests that groups are more likely to be motivated to achieve difficult goals when it is clear that these emanate from an ingroup source. Where goals have been set participatively by the group itself this should self-evidently be the case and so, as observed here, performance gains are more likely to be achieved than when goals are externally generated and their difficulty (and associated unreasonableness) encourages groups to entertain the possibility that the person setting them is not “one of us” (Duck & Fielding, 1999) and therefore not a legitimate source of influence (Turner, 1991; see also Postmes, Spears, Lee, & Novak, 2005).

There were, however, two limitations of this experiment. First, it is apparent that while the hypothesized effects were quite large in magnitude (Cohen, 1977), the study’s small sample size meant that their significance was generally marginal. Accordingly, it would clearly be desirable if the above effects could be replicated with a larger sample, where statistical power would be greater.

Second, because goal difficulty was manipulated within-groups (i.e., across Phases 2 and 3), the operationalization of goal difficulty was confounded with the fact that group goal setting was actually used twice as a performance improvement strategy. This increase in goals over time can itself be either problematic (e.g., if employees feel that they are on an accelerating treadmill) or not (if the increase in goals is perceived to provide an opportunity for structured learning over time). To investigate this issue further, it was therefore clearly desirable to manipulate goal difficulty not only within but *also between* groups. With these issues in mind, a second study was conducted.

EXPERIMENT 2

The design of this study was very similar to that of Experiment 1. However, to correct the problems of low power of Experiment 1, 72 groups took part in this study. Moreover, in order to address the confound between goal difficulty and the repeated use of group goal-setting instructions in Study 1, the study incorporated a between-groups manipulation of goal difficulty in addition to the within-groups manipulation used in Experiment 1. This involved giving groups in the *easy goals* conditions instructions/invitations to improve performance by 20% in Phase 2 and 40% in Phase 3, and those in the *hard goals* conditions instructions/invitations to improve performance by 40% in Phase 2 and 80% in Phase 3 (a goal which only 4% of groups achieved in DYB conditions). As a result, this study incorporated five between-groups conditions (control, participative easy goals, participative hard goals, imposed easy goals, imposed hard goals), rather than the previous study’s three.

Method

Participants and Design

Participants were 226 students enrolled in an introductory psychology course at an Australian University. The median age of participants was 19; 159 were female and 67 were male. The study was run in 11 sessions. Participants were randomly

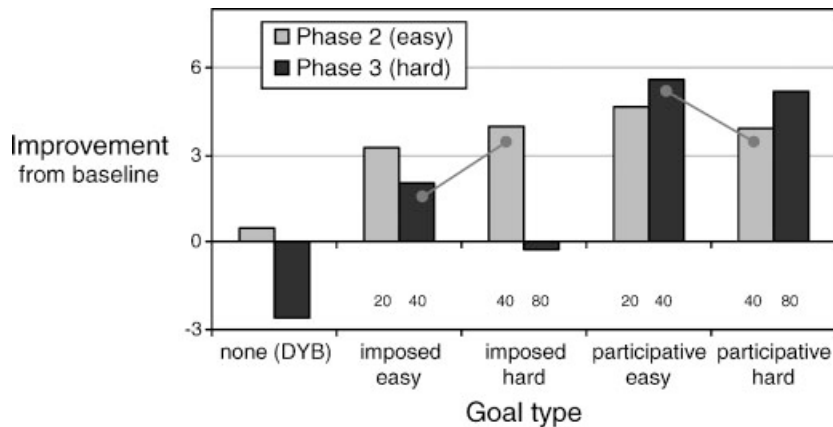


Figure 2. Experiment 2: change in performance from Phase 1 baseline as a function of Condition (goal type) and Phase (goal difficulty). *Note:* Lines join conditions in which the same goal (to improve by 40%) was set

assigned to small groups containing three or four students and within each session groups were randomly assigned to one of five experimental conditions each associated with a different type of goal: *control* (DYB; 16 groups: 14 of 3 members, 2 of 4), *participative easy goals* (12: 10 of 3, 2 of 4), *participative hard goals* (15: 13 of 3, 2 of 4), *imposed easy goals* (13: 11 of 3, 2 of 4), *imposed hard goals* (16: 14 of 3, 2 of 4).

Procedure

The procedure was identical to that of Experiment 1, except for the following minor differences. In this study, each group performed the brainstorming tasks in a separate small room located off a main laboratory and the study also included an additional set of instructions for more challenging participatively set and imposed goals (40 and 80% improvements). These new instructions suggested that previous research indicated that baseline (Phase 1) performance should improve by 40% in Phase 2 and 80% in Phase 3. In the participatively set easy goals condition, 11 groups accepted the goal suggested by the experimenter in Phase 2 (93%; here the mean goal, M_{goal} , was to improve by 19.0%), and 8 (67%) accepted it in Phase 3 ($M_{\text{goal}} = +30.6\%$); in the participatively set hard goals condition 13 groups accepted the goal suggested by the experimenter in Phase 2 (87%, $M_{\text{goal}} = +38.2\%$), and 9 (60%, $M_{\text{goal}} = +61.0\%$) accepted it in Phase 3.

Results

As in Experiment 1, improvement was measured by subtracting the number of uses for objects generated in Phase 1 (the baseline) from the number of uses generated in Phases 2 and 3. Means are presented in Figure 2. Again, these absolute scores can be represented in terms of percentage improvement, relative to the baseline performance in Phase 1. This yields slightly different data,³ with relevant means presented in Table 2.

Resultant absolute scores were subjected to a 2 (Phase (goal difficulty): easy vs. hard) \times 5 (Condition (goal type): control, imposed easy goals, imposed hard goals, participative easy goals, participative hard goals) analysis of variance with repeated measures on the first factor. For both primary and secondary analyses α was set at .05.

This analysis revealed main effects for both experimental condition (goal type), $F(4,67) = 4.40$, $p < .01$, $\eta_p^2 = .21$, and experimental phase (goal difficulty), $F(1,67) = 5.73$, $p = .02$, $\eta_p^2 = .08$. However, both these effects were qualified by a significant interaction between goal type and phase, $F(4,67) = 4.16$, $p < .01$, $\eta_p^2 = .20$. Means for this interaction are

³As in Experiment 1, although not identical to absolute scores, the subsequent pattern of results did not change if analysis was based on this measure of percentage improvement relative to baseline. In particular, the overall analysis revealed the same interaction between experimental condition (goal type) and phase (goal difficulty), $F(4,67) = 3.29$, $p = .02$, $\eta_p^2 = .16$.

Table 2. Experiment 2: mean percentage change in performance from Phase 1 baseline as a function of Condition (i.e., goal type) and Phase (standard deviations in brackets)

	Condition (goal type)				
	None—DYB	Imposed easy	Imposed hard	Participative easy	Participative hard
Phase 2 (easy)	1.8 (21.5)	19.6 (17.8)	21.7 (22.3)	23.3 (22.7)	23.1 (25.8)
Phase 3 (hard)	-11.3 (21.6)	17.6 (33.3)	-2.9 (27.0)	22.9 (39.0)	26.5 (37.7)

presented in Table 2 and Figure 2. As in the previous study, this interaction was then decomposed by performing simple tests related to each of the study's three hypotheses.

Tests of Hypothesis 1

In order to test H1, the number of uses generated for objects in the control condition was compared with the number of uses generated in the four conditions where group goals were set in the last two phases of the study. This contrast was significant in both Phase 2 ($M_{\text{DYB}} = 0.50$, $M_{\text{goals}} = 3.95$; $t(67) = 2.87$, $p < .01$) and Phase 3 ($M_{\text{DYB}} = -2.63$, $M_{\text{goals}} = 2.80$; $t(67) = 3.31$, $p < .01$) and both these effects were large ($d = 0.87$, 0.86 , respectively).

Tests of Hypothesis 2

In order to test H2, the number of uses generated for objects in the two conditions where specific group goals were set by the experimenter was compared with the number of uses generated in the two conditions where specific goals were participatively set in each of the last two phases of the study. As in Experiment 1, this contrast was not significant in Phase 2 ($M_{\text{imposed}} = 3.66$, $M_{\text{participative}} = 4.26$; $t(67) = 0.60$, $p = .55$) but was significant in Phase 3 ($M_{\text{imposed}} = 0.41$, $M_{\text{participative}} = 5.37$; $t(67) = 2.72$, $p < .02$). The former effect was small ($d = 0.15$), but the latter was large ($d = 0.86$).

Tests of Hypothesis 3

In order to test H3, the number of uses generated for objects in the conditions where group goals were set was subjected to a 2 (Condition (goal type): imposed, participative) \times 2 (Between-groups goal difficulty: easy, hard) \times 2 (Phase (goal difficulty): easy, hard) analysis of variance with repeated measures on the last factor. Consistent with H3, the only effect to emerge from this analysis was a significant interaction between goal type and phase, $F(1,16) = 9.83$, $p < .01$, $\eta_p^2 = .16$. As indicated by the above analyses relating to H2, this arose from the fact that whereas there was no difference in the performance of groups with participatively set and imposed goals when goals were relatively easy in Phase 2, the performance of groups with participative goals exceeded that of groups with goals set by the experimenter in Phase 3 when these goals were relatively hard.

This point is also reinforced by separate analyses of group performance as a function of goal type and goal difficulty in Phases 2 and 3. In Phase 2, the 2 (Condition (goal type): imposed, participative) \times 2 (Goal difficulty: easy, hard) analysis of variance revealed no effects (all F s $< .50$). However, consistent with H3, in Phase 3 the same analysis revealed (only) a significant effect for goal type—with performance here being superior when goals were set participatively rather than imposed, $F(1,52) = 8.08$, $p < .01$, $\eta_p^2 = .13$.

Importantly, though, contrasts across conditions in Phase 3 indicated that the effect of setting goals participatively was less marked (and actually non-significant) when the (between-groups) goals were challenging (i.e., to improve by 40%; $M_{\text{imposed}} = 2.00$, $M_{\text{participative}} = 5.58$; $t(67) = 1.50$, $p = .14$, $d = 0.53$ —a medium-sized effect) than when those goals were extremely challenging (i.e., to improve by 80%; $M_{\text{imposed}} = -0.88$, $M_{\text{participative}} = 5.20$; $t(67) = 2.84$, $p < .01$, $d = 1.11$ —a very large effect). Indeed, this meant that when the experimenter set the extremely challenging goal of increasing

performance by 80% in Phase 3, groups' performance actually *declined* (non-significantly) relative to their Phase 1 baseline, whereas in all other conditions in which groups were set goals their performance improved significantly from that baseline.

Discussion

The pattern of results in this study is broadly consistent with that observed in Experiment 1. Yet, while the observed effects were of similar magnitude to those in the previous study, here the increased sample size meant that they satisfied conventional criteria for statistical significance. Again, then, consistent with H1, there was evidence that the setting of challenging group goals improved performance on a brainstorming task relative to conditions in which groups were merely required to "do their best." As well as this there was evidence that goals that were set participatively led to superior performance relative to goals that were set by the experimenter (H2). Again, though, this advantage was confined to conditions in which those group goals were relatively hard (H3).

Importantly too, the inclusion of a set of conditions in which goals increased in difficulty from "challenging" to "extremely challenging" (rather than from "easy" to "challenging") allowed us to test H3 more extensively because here goal difficulty was manipulated both within- and between-groups. As well as dealing with the potential confound created by including only a within-groups manipulation of goal difficulty, this meant that groups in some conditions of the present study faced the formidable goal of nearly doubling their performance on the task. However, in line with H3, it was in this condition that the differential impact of the two approaches to group goal setting was most pronounced. For while the performance of groups who set their own goals improved significantly relative to their earlier baseline performance (as it had in other conditions), that of groups whose goals had been set by the experimenter *declined* (non-significantly) from that baseline. Here, then, rather than engage with the goals that had been set, it would appear that the groups *disregarded* them and, refusing to be led, reverted back to their old (pre-target) ways. In this respect, their behavioral rejection of the challenges represented by the new goal is reminiscent of the soldiering observed (and despised) by Taylor (1911).

In providing support for H3, a further novel feature of this study's design was that it allowed us to compare the performance of groups with respect to a reasonably difficult goal (to improve by 40%) when this goal was either the first that had been set (as it was in the hard-goals condition) or when it came after an easier goal (in the easy-goals condition). From Figure 2, it can be seen that performance with respect to this goal varied interactively as a function of whether or not it was participatively set and whether or not it had been preceded by an easier goal. More specifically, the experience of having been set an easier goal led to enhanced performance when goals were participatively set, but it appeared to compromise performance when goals had been imposed by the experimenter. In line with the general logic that informs the present research, it seems likely that this pattern arose because when goals were participatively set, prior experience of responding to an easy goal increased the group's confidence in their ability to reach a more difficult one, but that when goals were set by the experimenter this prior experience made them feel that goals were simply on an ever-upward trajectory. In short, escalation of participatively set group goals may have positive consequences because achieving them contributes to a "learning curve" that allow groups to set their sights higher and thereby to grow together. On the other hand, as Taylor (1911) anticipated, escalation of imposed group goals may have negative consequences because group members fear that they are on an accelerating treadmill.

GENERAL DISCUSSION

The findings from two studies provide a consistent picture of the impact of group goal setting on performance. In the first instance, there is evidence that setting challenging group goals enhances performance relative to conditions in which groups are merely invited to "do your best." This finding accords with a growing literature which shows that there is value in extending the practice of individual goal setting to the group level (e.g., O'Leary-Kelly et al., 1994; Wegge & Haslam, 2003, 2005, 2006).

Second, the studies also generate evidence that when a group itself plays some role in setting goals this can lead to enhanced performance relative to conditions in which goals are imposed by an external source. This finding speaks to a

growing literature which addresses the question of whether groups (and individuals) that are charged with the task of achieving goals should participate in setting those goals or have no role in the process (Wegge, 2000). Significantly, this literature has yielded mixed results and, as a result, generated quite heated debate. Some research suggests that participation has only cosmetic effects and can actually be counter-productive (not least because it wastes time and creates unhelpful expectations; e.g., Peterson 1999). Alternatively, other research suggests that participation is an essential means of engaging the group in the challenges its members confront and encouraging them to internalize task-related goals as self-defining (e.g., Haslam, Eggins, & Reynolds, 2003). Indeed, in previous research of our own which has used the same paradigm as the present studies, participative group goal setting has sometimes been found to lead to outcomes that are superior to those achieved through directive group goal setting (e.g., Wegge, 2000) and sometimes appears to have no added benefits (Wegge & Haslam, 2005, 2006).

Importantly, findings from the present studies help shed light on this conundrum, as it is clear that the impact of participative goals was not uniform, but varied across conditions. More particularly, in line with H3, it was clear that the relative benefit of participative goal-setting strategies was confined to those conditions in which groups confronted *repeatedly* challenging or (in Experiment 2) extremely challenging goals. Indeed, in Experiment 2 this advantage was especially marked. For while groups that were invited to set their own extremely challenging goals showed significant improvement relative to their performance baseline, those groups that were simply *told* to achieve these goals appear to have resiled from this challenge altogether. The difference between these outcomes parallels that between the forms of social laboring that advocates of teamwork extol (e.g., Ellemers, de Gilder, & Haslam, 2004; Van Dick, 2004; Van Knippenberg, 2000; West, Brodbeck, & Richter, 2004) and the forms of soldiering that critics of teamwork bemoan (e.g., Allen & Hecht, 2004; Locke, Roberson, Latham, & Weldon, 2001; Taylor, 1911).

Considered together, these studies also show that the benefits of setting goals collaboratively do not emerge simply as a function of the difficulty of goals *per se*. For the resistance induced by increasing goal difficulty (asking people to double their previous improvement) was apparent subsequent to the setting of a relatively simple goal (20% improvement) in Experiment 1, but subsequent to the setting of a much more challenging goal (40% improvement) in Study 2. Consequently, whereas goal resistance was observed in relation to a goal of 40% improvement in Study 1, this was not the case in Study 2. Here, the first goal of 40% improvement was accepted by most groups and protest was elicited only in the second phase (when this was increased to 80%). In short, what appears to matter is not simply (or even) a goal's difficulty, but rather the *history* of goal escalation (Levine, 2003).

Practical Implications

At a practical level, these findings point to the fact that although participative group goal setting is unlikely to deliver across-the-board benefits for performance, its benefits may become apparent (and may be especially welcome) under conditions where the challenges that a group faces are formidable. Related to this point, it was apparent in Study 2 that the impact of goal escalation also varied as a function of who set those goals. Thus, when goals were participatively set, performance relative to a moderately difficult goal was enhanced if that performance had been preceded by the setting of an easy goal; but the opposite was true if goals were imposed by the experimenter. In line with the intuitions of Taylor (1911)—who explicitly cautioned against goal escalation, lest employees become distrustful of management—it thus appears that when goal escalation is self-driven it provides a beneficial learning curve, but that when it is externally driven it proves counterproductive. Looked at differently, this would suggest that in order to achieve difficult goals one should adopt a different strategy depending upon whether or not one intends to set those goals participatively. If they are participatively set, there would appear to be value in approximating to them gradually, but if they are imposed then this strategy may prove counterproductive and it may be better simply to set the difficult goal at the outset.

More generally, though, while the likelihood of achieving group goals that require a minimal degree of justification and effort will not necessarily be increased by involving group members in the goal-setting process, if those goals are very challenging then this form of psychological “buy in” may be essential, lest groups disengage from the task at hand. Indeed, the fact that groups in organizations are often excluded from practices of management and leadership is one reason, we would suggest, why they often turn out to be a thorn in the organization's side. Among other things, this is because where they are unsympathetic to organizational initiatives, mutually identified group members are capable of resisting those initiatives in ways that individuals rarely can (Haslam & Reicher, 2006; Kelly, 1993; Reynolds et al., 2000;

Veenstra & Haslam, 2000). In the present research, this resistance was suggested in the imposed hard-goals condition of Experiment 2, where performance tailed off to base-rate levels, thereby eliminating any benefits of the goal setting procedure.

Clearly, the findings of these studies might lead one to sing the praises of participative techniques as a means of securing outcomes that goal setters consider worthwhile, and on this basis enthuse about their value as organizational tools (*cf.* Mayo, 1933). There is, however, a more sinister interpretation to the present findings. For although we have described the process of defining participative goals as a self-determined process, there are grounds for conceptualizing group members' participation in this activity as more illusory than real. Indeed, this reconceptualization seems particularly warranted in light of the fact that in the majority of cases groups' participatively set goals were *identical* to those primed by the experimenter. For this reason, there seems to be scope for considering the practices here to be *pseudo*-participative and to see their efficacy as mirroring that of a raft of similar organizational interventions which together constitute the "gilded cage" of contemporary organizational life (Alvesson & Willmott, 2002). Here, promises of greater involvement, empowerment, liberalization, autonomy, and choice are routinely extended to workers (and managers), but the reality is often that these promises—and the techniques that appear to deliver them—simply mask a traditional concern for command and control (Harley, 1999; Kelly & Kelly, 1991).

Certainly, it is clear from the present findings that the opportunity exists for leaders (goal setters) to exploit social identity principles in order to lead followers (goal strivers) to pursue goals that they might otherwise find too challenging. Ultimately, whether this is considered a good or a bad thing depends largely on the *content* of those goals and the values (and social identity) of those who judge them (Haslam, 2001; see also Haslam et al., 2006; Wegge & Haslam, 2003).

Limitations and Future Directions

Some caution is warranted in generalizing these findings to the organizational world at large in light of the fact that the sample used in this study was not representative of organizational settings in general. Certainly, there are grounds for questioning whether the behavior of students in a short-term setting can be generalized to the behavior of employees in the workplace where much more is at stake. Nevertheless, there would appear to be plenty of evidence that findings from previous goal-setting research *do* generalize to more realistic conditions (Locke, 1986; Locke & Latham, 2002). This is even more likely to be the case where, as in the present instance, generalization is based on sound *theory* that is validated in an array of contexts (Reicher & Haslam, 2006; Turner, 1981). Having said that, there would clearly be value in replicating these studies in field settings.

A potentially more serious problem is that while our predictions were derived from a well-specified body of theory, the studies themselves provide little or no direct evidence that the processes in which we were interested underpinned the effects we observed. In particular, there is no evidence that it was a reduced sense of social identification with the goal setter or reduced goal commitment that led groups to resile from the task of meeting extremely challenging experimenter-imposed goals. In the present study, we made a conscious choice not to collect process-related data that might bear upon this question (e.g., asking participants how much they identified with, or trusted, the setters of group goals), because it was felt that this would be reactive and might also interfere with the smooth running of the experiment itself. Certainly, though, there would be value in attempting to gather such data in future research with a view to showing (a) that groups identify less with external goal-setting agents as goals become harder to achieve, and (b) that this reduction in identification mediates the relationship between goal difficulty and goal achievement. Nonetheless, even without such evidence, we still believe that the present research provides a pattern of findings that is clearly consistent with the theoretical position we have put forward.

In future research, it would also be interesting to augment the design of the present studies with control conditions in which goals are set individually rather than collectively. Here again the experimenter could either impose these individual goals or adopt a participative goal setting strategy (as was done here for groups). This would allow us to establish empirically whether the resistance to difficult goals that was observed in the present study is a truly distinctive feature of group contexts (e.g., as Haslam & Reicher, 2006, suggest) or is also observable (though perhaps weaker) at the individual level.

Including these individual control conditions would also help to exclude another potential confounding. For in the imposed goal conditions of the present study, the experimenter simply informed the groups what their goals were, while in

the participative goal condition, groups were told to set themselves goals based on the same information. The latter condition not only provides groups with voice but also gives group members an opportunity to interact (a process which may have brought other variables into play, e.g., familiarity, respect, attention). Adding individual goal-setting conditions—in which the experimenter has more control over such interactions—would therefore provide an indication of the relative importance of these different facets of the situation.

Final Comment

The present studies lead to the conclusion that if groups are to be encouraged to take on and accomplish goals that become increasingly difficult over time, there is much to be gained from the process of enjoining their members in the process of setting those goals rather than imposing them unilaterally. Consistent with the general theoretical framework provided by social identity and self-categorization theories, we suggest that a key reason for this is that when escalating goals are participatively set rather than imposed their attainment is more likely to be perceived as providing opportunities for collective self-actualization and self-improvement, and hence the goals are more likely to be accepted and internalized. As a result, while increases in self-set goals will tend to lead group members to see themselves as being on a learning curve, increases in imposed goals are more likely to lead to the impression that the group is simply on an accelerating treadmill.

Intriguingly, this insight may not only inform us about issues of group motivation and performance, but also about the nature of learning and social development (along lines suggested by Deci & Ryan, 1985). For it suggests that learning is critically structured by the perspective of the social self on the potential learning experience. This means that whether or not something is perceived as, and becomes, a learning opportunity depends upon its relationship to a person's social identity. As Galileo observed “you cannot teach a man anything; you can only help him find it within himself.” The present research gives us greater insight into the form that such help can take.

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