# Do many hands make light work?

## How to overcome social loafing and gain motivation in work teams

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## Abstract

**Purpose** – The purpose of this paper is to challenge the assumption that process losses of individuals working in teams are unavoidable. The paper aims to challenge this assumption on the basis of social identity theory and recent research.

**Design/methodology/approach** – The approach adopted in this paper is to review the mainstream literature providing strong evidence for motivation problems of individuals working in groups. Based on more recent literature, innovative ways to overcome these problems are discussed.

**Findings** – A social identity-based analysis and recent findings summarized in this paper show that social loafing can be overcome and that even motivation gains in group work can be expected when groups are important for the individual group members' self-concepts.

**Practical implications** – The paper provides human resource professionals and front-line managers with suggestions as to how individual motivation and performance might be increased when working in teams.

**Originality/value** – The paper contributes to the literature by challenging the existing approach to reducing social loafing, i.e. individualizing workers as much as possible, and proposes a team-based approach instead to overcome motivation problems.

**Keywords** Team working, Motivation (psychology), Employee behaviour

**Paper type** Conceptual paper

## Introduction: teamwork is popular – but is it a good idea?

Most of today's organizations use work groups and teams to get things done. The argument for having employees working in teams is that it is more efficient because of "synergy effects" and that it is also more fun for the employees. However, many people are now questioning whether teamwork really is as effective as it often is announced to be, and under what circumstances do the predicted synergetic effects occur? An enormous number of empirical studies have been carried out for over more than three decades which repeatedly demonstrated that, when working in groups, individuals typically fall short of their usual performance shown when working alone. In other words, when individuals come together and work in a group, that group's performance is often lower than the expected average or sum (depending on the task) of the individuals' performance. This has been observed in physical tasks like rope-pulling or

shouting (Latané *et al.*, 1979), as well as for cognitive tasks such as the generation of new ideas in brainstorming groups (Diehl, 1991; Diehl and Stroebe, 1987). The effect is most prominent in additive tasks where the group performance is composed of the sum of the individuals' efforts such as rope pulling or group brainstorming.

In general, these problems of performing groups can be traced back to two kinds of problems:

(1) difficulties of coordination between group members, when, for instance, not all group members on one end of the rope pull at the same moment; and

(2) a decrease in their motivation.

For the motivational losses, several reasons have been proposed and studied. Free riding occurs because team members think that their personal efforts are not really necessary because the team will reach its objectives anyway due to other members' work. Such a behavior is rational when the team member's perception is correct and her/his contribution is not really needed. However, when a team member's perception is incorrect and her/his contribution is in fact quite necessary for the team's progress, free riding is detrimental not only because the contribution of this team member is lacking but also due to spreading negative effects on the motivation of the other team members. The sucker effect describes a reaction to the observation of an individual that other team members appear to be free riding. As a consequence, the individual reduces her/his effort because she or he does not want to be exploited. Social anxiety reduces effectiveness because team members are anxious about what their fellow team members might think about them. Soldiering describes the reduction of effort of most or all team members in protest at a (perceived) unfair treatment, particularly by managers or supervisors. The term has been derived from soldiers marching particularly slowly when they dislike their officer. However, the effect that has attracted the most research attention is social loafing. This problem occurs because group members think their individual inputs in a group work cannot be identified. Meta-analyses (i.e. summaries across dozens of studies) reveal that this effect is quite robust and leads to underperformance of teams (Rutte, 2003; West *et al.*, 2004) that translates into substantial productivity losses (Karau and Williams, 1993).

Taylor (1911, p. 72; see Haslam, 2004) summarized his observations as follows:

> Careful analysis [. . .] demonstrated the fact that when workmen are herded together in gangs, each man in the gang becomes far less efficient than when his personal ambition is stimulated; that when men work in gangs their efficiency falls almost invariably down to or below the level of the worst man in the gang; and that they are pulled down instead of being elevated by being herded together.

The solution that was proposed by Taylor at the time was either to dissolve groups wherever possible and have employees working individually, or to use problem-solving techniques that encourage them to work on their own within the group (Thompson, 2003). This solution is repeatedly put forward by consultants and researchers alike. For instance, to increase performance in idea generation tasks, it has been suggested to have nominal groups (i.e. having individuals generating ideas first alone before discussing them in the larger group) instead of real groups, to exchange group members between teams regularly to increase innovation, or to use electronic brainstorming with reduced interaction between team members. In essence, most of

these techniques are aimed at individualizing the team members. For some tasks, such as brainstorming, these suggestions are indeed helpful and it has been shown that nominal brainstorming groups are more effective in terms of quantity and quality of the ideas produced than real groups (Diehl and Stroebe, 1987; Diehl, 1991). As teamwork expert and Harvard scholar Richard Hackman put it, allocating nine women to be pregnant for a month each does not produce a baby – there are clearly tasks that do not require teamwork (Hackman, 2004).

However, we believe that abolishing team working by designing work tasks for individuals is far from being the only possible solution to these motivation problems. Moreover, there are many benefits of team working that cannot be replaced by employees working individually. Compared to individual workers, teams are more flexible and more innovative due to multiple perspectives, can generate and store knowledge more effectively, and are better equipped to respond fast to changes in task requirements and market conditions (West *et al.*, 2004; West, 2004; West and Markiewicz, 2004). Organizations more and more rely on team related pay – particularly firms with eastern cultural backgrounds (e.g. Chinese or Taiwanese companies, see Chang *et al.*, 2007). Moreover, human beings – whether on the shop floor or in management positions – usually prefer working together rather than alone, and teams serve this need for affiliation and belonging much better than the organization as a whole (Riketta and van Dick, 2005). Belonging to teams has always been a key issue for survival in a hostile environment and in the early days of mankind teams were almost certainly crucial for to the maintenance of important background resources such as shelter and in more modern times to support for one's own career/well-being. Thus, teams provide important psychological resources for employees that are often maintained via reciprocity processes and these can include productivity gains.

### Teamwork can be successful!

Thus, we believe that teams can be successful devices to enhance individual's motivation and to create innovation. In the following sections, we will discuss strategies to overcome motivational losses and to make teamwork as successful as it potentially can be. These strategies are quite different from the above suggestions of individuating employees and stress rather than minimize the "teamness" of working in groups. We believe that the strategies suggested here can pave the way for a more sustainable increase of effective, efficient and creative team working in organizations. Our arguments evolve directly from the same meta-analyses cited above which revealed an overall tendency of the individual towards social loafing. However, the spectrum of empirical findings is large ranging from strong support for the loafing hypothesis to contrasting results of higher performance in teams apparently as a result of the team environment creating increased individual effort. This large variation in empirical findings is due to different factors being studied. We will discuss two of these factors in more detail now.

The first factor is the valence, or personal meaning of the group outcomes for the individual. It has been demonstrated that groups in which members place low or moderate valence on the team goals indeed foster loafing in its members whereas for groups in which members place high valence on the team goals, the opposite effect (i.e. more effort) has been observed (Karau and Williams, 1993). The second important factor is the setting of the studies included in the meta-analytical overviews. Here, it has been shown that experiments with school, college or university students reveal the

expected loafing effects whereas studies in settings with organizational employees as participants demonstrate that social loafing can be reduced when working collectively as opposed to working individually (Erez and Somech, 1996). This increased effort due to a motivation to enhance the collective outcome has been coined as social laboring (Haslam, 2004). Figure 1 shows the contrasting effects.

Figure 1 shows the results of the above-mentioned meta-analytical evidence of social loafing versus social laboring effects. The baseline refers to, for instance, three individuals working on their own, e.g. pulling separately on ropes. If these three individuals are now told, as in typical social loafing research, that their combined efforts are taken as a group "product" (i.e. the strength of them pulling on one rope together), one would usually find that the sum or average performance falls behind what would have been expected by combining the individual performances. Thus, $1 + 1 + 1$ does not necessarily equal 3 but, due to loafing effects, often equals 2.5 or even less. However, if the group and its outcomes are meaningful to the individuals, we argue that $1 + 1 + 1$ can even equal 4 or more because individuals put in even more effort compared to working alone because of a motivation gain and social laboring.

Together, it would seem that the crucial factor in an individual's reduced motivation is not whether they work in a team or not, but whether the team they work in provides any meaning to them. We will flesh this proposition out a little bit by summarizing findings of empirical studies in different settings.

## Team success depends on the meaning the team has for its members

There are, in principle, four ways of making the group meaningful to the individual group member. First of all, groups that have a joint history and – even more importantly – expect a common future can be thought of being of greater relevance for its members (e.g. existing work groups rather than artificially created lab groups; groups of friends rather than strangers). Second, a common goal that goes above and beyond the concrete task will lead to higher valence and meaning (e.g. the long-term goal to become the most successful sales team in the company). Third, the organizational context can increase the salience of the group membership, e.g. through
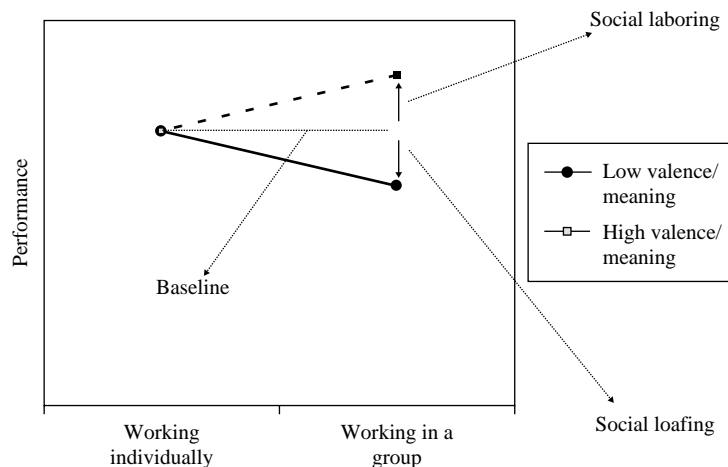


Figure 1.
Illustration of social loafing versus social laboring effects of performance

inter-group benchmarking. Finally, individuals might differ in their personal preferences for working in groups and therefore in their disposition to be committed to the group's objectives. We will briefly present the evidence for the effectiveness of these mechanisms and then discuss the psychological reasons why these mechanisms are effective. Finally, we will outline how practitioners can make use of these mechanisms by using specific forms of teambuilding and other strategies.

Various researchers have investigated problems of motivation losses in groups from a social identity perspective (van Dick *et al.*, 2009; van Dick, 2004; Worchel *et al.*, 1998). These studies tested the assumption that process losses might be overcome through manipulation of the personal significance of the group. The researchers formulated the hypothesis that individuals would increase their productivity in groups under conditions that make the group an important component of their identity. So, where the individual was personally aligned with the group, they would expend more effort in group tasks and therefore the productivity of the group would increase. The findings confirmed this hypothesis and showed particular effects when meaning of the group was increased by having another group present with which the group could be compared. This team benchmarking increased the meaning of the group through the immediate ability to compare "us" with "them." When social comparison is used not only on the individual but also on the team level, we believe that this can be a very promising approach to the reduction of social loafing. Indeed, 90 years ago, a German researcher demonstrated that working as a member of a group that competes against another group can lead to higher performance compared to individual performance (Moede, 1914). In a similar way, van Dick *et al.* (2009) demonstrated higher group performance as a consequence of team comparison (as a form of benchmarking) in line with the assumptions. However, both studies suffer from shortcomings in that the groups performed their tasks in artificial laboratory environments. Therefore, some would argue that it might be difficult to transfer the effect directly to existing teams in organizations. However, the social meaning of the groups in the laboratory study should be less pronounced as participants were conscious of the limited nature of the study. Given the fact that still productivity gains were observed due to the presence of another group suggests that these effects might be even stronger in business settings with existing groups. Indeed, the idea that competition with another group leads to better performance has also been corroborated by field research. A team of researchers in Israel investigated the effects of group competition on productivity (Bornstein and Erev, 1997; Erev *et al.*, 1993). They designed a study of orange pickers, where pickers were organized in three different ways. In the personal condition, a group of four pickers placed all their picked oranges in their own section of the container and each group member was paid according to their own crop. In the team condition, teams of four picked into a common container and all team members were paid according to the total picked. In the final condition, the competitive condition, each team of four was split into two pairs and each pair was allocated one-half of a divided container. An additional reward was given to the pair who picked more and the amount of oranges picked was the performance measure. The results confirmed all of the researchers' predictions showing that simply assigning individual pickers to teams and rewarding them on the basis of the team product led to an average of 280 kilograms of picked oranges compared to an average of 376 kilograms for four pickers that were in the personal condition. This is a nice illustration

of how motivation losses can look like in practice. In the competitive condition, there was a clear production advantage of with an increase of performance over time. So, this study shows a translation from findings from lab-based game playing studies to an environment more similar to that found in everyday work conditions. However, this study also has shortcomings when trying to generalize findings to work-a-day experience and the study took place over a period of only 40 minutes. Yet, there was a more marked effect after 40 than after 20 minutes, indicating that the effects might increase with time and that it is possible that long-tenure teams might see an enhanced effect rather than a decreased one over time.

So what happens to groups whose members know each other well and are together for more than a 40 minutes experiment? Another study has addressed this question and investigated the performance differences between groups whose members knew each other compared to those who did not (Jehn and Shah, 1997). This study aimed not only to quantify performance differences but also to map the group processes at play in order to understand the underlying causes of any performance difference. The results showed that groups of friends outperformed groups of strangers. Furthermore, the research revealed that the reason for better performance was that friendship groups communicated more, provided more encouragement to each other, and were more committed to the performance of the task – and to each other – than the groups of strangers. In terms of the study's relation to realism, there are elements of artificiality in one of the tasks performed by participants (making models) and also elements of real workplace tasks (sifting job applications). Moreover, the participants were students – albeit on a business course. With these caveats in mind, the study does indicate the importance of individual commitment level to the team. In this case, we would argue that the friendship groups were not performing well because they were friends, but because they were in a group of friends that made the members more closely identified with the team, therefore more committed to it, and therefore more motivated and less affected by the negative social factors described earlier.

A final study that is relevant in this context has looked into dispositional effects of group loyalty – are some people more likely to act as team players than others? Researchers have carried out a series of studies into the effects of loyalty and discovered positive correlations between group loyalty and commitment to the organization and involvement in university activities among university students (James and Cropanzano, 1994). Furthermore, loyalty was also found to be correlated to a lower likelihood of dropping out of university and a high likelihood of recommending the university. Perhaps, the finding of most interest to executives will be the consistent relationship between loyalty and performance. This is especially true when a group is able to compare itself with another similar group, indicating that some sense of connection to the group engendered a spirit of competition and spurred the group on to higher levels of performance. At its most simple level, this appears to be unsurprising since these are phenomena (i.e. encouragement to inter-group competition) most westerners first encounter at school and which continue through further education and into the workplace. As mentioned earlier, research with school children conducted already 90 years ago has demonstrated that working as a member of a group that competes against another group can lead to higher performance compared to mere interpersonal competition or individual performance (Moede, 1914).

In spite of the positive evidence for the motivating effects of team benchmarking, it should be kept in mind that such a strategy is not without risk and problems (Fincham, 2000; Seta, 1982; Jones and Thwaites, 2000). Indeed, while team benchmarking has positive effects for the performance and cohesion within a team, its sometimes divisive nature might lead teams to sabotage each other in order to "win" the competition. This in turn would lead to an overall loss for the company as because teams would not support or share necessary information with members of other teams, or destroy mutual resources once the own team had used them. Another risk of team benchmarking is that collusion between the teams to share the bonus on a rotating basis might take place so that no overall motivating effect occurs. Thus, when implementing team benchmarking, managers have to keep an eye on how the relationships between the teams develop. One promising strategy to address problems due to destructive competition between teams is to foster not only the identification with the team but also the identification with the overarching company (van Dick *et al.*, 2008).

After discussing evidence that making teamwork more meaningful for the team members can reduce motivation losses significantly, we now review some of the research in more detail, demonstrating how one can trigger motivation levels in teams that even exceed the effort people show in the same task when working alone. The psychological mechanisms underlying these "motivation gains" are again related to a high valence of the team. Social compensation effects have been demonstrated with student groups performing brainstorming tasks in a series of experiments (Williams and Karau, 1991). When the expected performance of co-workers was rather poor (either due to low capability or low motivation), team members were willing to compensate this poor partner performance by increasing their own efforts even when this extra-performance was not identifiable or acknowledged by others. The resulting performance gain of the compensating person was about 40 percent higher than a non-team control condition. However, a precondition for this motivation gain was that the team outcome was highly valued by the compensating team member. In conditions where the team outcome was only moderately valued, no motivation gain occurred.

Social indispensability effects as the second mechanism that can trigger motivation gains in groups were first documented by a German researcher interested in maximizing the performance of rowing teams over 80 years ago (Köhler, 1926). Recent replications of this mechanism have revealed that the underlying psychological process is often based on feelings that the rest of the team highly depends on ones own personal contribution. In a series of experimental studies, team members showed increased performance levels of up to 50 percent during teamwork compared to working alone in order not to let their partners down (Weber and Hertel, 2007). Moreover, these additional efforts were correlated with increased enjoyment of the task (Hertel *et al.*, 2003a). Although it is obvious that such motivation gain is stronger the more a person values a team and cares for its members, the mechanism is robust enough to be demonstrated already in short-term teams with rather low meaning for its members. For instance, in a computer-based simulation of a retail store, participants revealed motivation gains compared to working alone even though their team partner was not visible or known to them (Hertel *et al.*, 2003a, b). Building on these lab results, a recent field study with existing virtual teams in two business organizations has demonstrated that the average experience of indispensability within a team explained large parts of variation of team effectiveness (Hertel *et al.*, 2004). Together, these results

not only provide thorough process explanations on how high-team valence and perceived importance of personal contributions might translate into process gains of teams, but also entail concrete suggestions for executives to set the stage for such motivation gains. While the two discussed mechanisms of motivation gains in groups are good examples for triggering factors that are already well-replicated and understood, even more triggering factors might exist that still await systematic research (Hertel, 2000). Among them is interpersonal comparison or competition within teams which can also increase team members' performance motivation compared to working alone – although this gain might come with the risk of decreases in team cohesion and trust in the long run (Stanne *et al.*, 1999). Group goal setting is another promising tactic which has already been demonstrated to lead to extra efforts in teams, particularly when goals are specified both at the team level and at the individual level so that both types of goals complement each other (Crown and Rosse, 1995).

### What makes the difference?

All the studies summarized above clearly demonstrate that social loafing is not inevitable but can be prevented by using appropriate strategies. Moreover, there are even some mechanisms which may lead group members to put in extra effort on behalf of the groups' goals in excess of their regular (individual) performance. First and foremost, the groups have to provide some meaning for the individual. At the workplace, this should generally be the case when individuals work together in a team for a complete project and frequently this is a period of several years. Strategies to make the team salient for the team members are, for example symbols (logos, etc.) and common office space. Strategies to stress the meaning of a team include appropriate goal setting (common goals) and team-based incentives contingent to these goals. Second, tasks in the workplace usually are meaningful to the teams carrying out these tasks – whether it is fixing wheels to a car's body on an assembly line or performing heart transplantation in a surgery team. This task meaning or significance can replace or compensate for low meaning of the group, for instance in cases when strangers come together to make a team – such as in civil aviation when flight crews assemble for a flight and then disperse or when a group is assembled to carry out panel interviews. Indeed, in teams of software developers that voluntarily contribute to "open source" projects on the internet (e.g. Linux and Mozilla), valence of the project together with perceived personal importance for the success of the project are crucial predictors of the high-voluntary engagement shown (Hertel *et al.*, 2003b). Third, the significance of the group for individual group members can be further increased by comparison with competing groups. Fourth, increasing the interdependence within teams together with appropriate feedback will strengthen the feeling that the personal contribution of each team member is indispensable and thus lead to additional effort on behalf of the team in order not to let colleagues down. Finally, looking for team members who are more likely to be loyal and to identify with the group's goals seems to increase performance on top of the meaningfulness and salience of the team in a given context.

### What managers can do!

Organizations have been trying to achieve better results through teamwork for some time and many have invested in team building exercises or programs of one form or another with the aim of achieving the synergies expected from the concept of teams. Such training has had mixed success (Salas *et al.*, 1999): some programs contained

more style than substance, and in some cases organizational structure and culture do not really support teamwork. However, in many cases the concept has proved to be highly successful. In making these recommendations, we have assumed that readers will have already undertaken a degree of team training and the interventions described here are designed to be carried out in addition to such training.

*Select team members partly on the basis of team disposition*
Select teams partially on the basis of dispositional group loyalty such that all teams have similar high levels of group loyalty. The effect of bringing together individuals potentially loyal to the team may not be very strong on its own but provides a necessary pre-condition for team viability and for achieving the positive effects of the other strategies discussed. If this is not feasible, measure dispositional loyalty and target low-scoring teams for development. Development takes the form of making the links between tasks and individual objectives explicit and reinforcing good group activities – setting their own objectives, reaching consensus, regular well run focused meetings, benchmarking to other teams, etc.

*Openly compare team performance with others*
One of the themes arising from the research is the performance benefit possible when a team can compare itself to another team performing a similar task. Our recommendation therefore is to organize work in a way which makes this comparison possible. It is vital, however, that this is carried out in a non-divisive way with any incentive (financial or otherwise) pegged to objective scales rather than to winner/loser competition. In other words, reward is pegged to performance instead of being allocated to the "winning" team. One has to be careful not to create an atmosphere that leads to high within-team identity and collaboration for the price of between-team conflict that might be detrimental to the whole company's productivity. However, when team members identify both with the organization as a whole and work collaboratively across team boundaries, the organization will achieve its aims (Hoegl *et al.*, 2004; Richter *et al.*, 2006).

*Encourage interdependence in the team*
Conduct teamwork in a way that underlines the interconnection and mutual interdependence of the team members. Apart from general ways to increase the team awareness, this can be accomplished by stressing goal, task, and outcome interdependence. For instance, goal interdependence can be increased by goal setting strategies that connect the different interests of the team members and prevent goal conflicts. Task interdependence can be realized by appropriate task design determining the needs of coordination and communication between the team members. However, as task interdependence can also become quite complex, it is important to find a good compromise between connectivity and complexity that prevents trade-offs due to opportunity costs. Finally, outcome interdependence is realized by including team-based incentives in addition to individual incentives in order to underline the common fate and mutual contributions to the team project.

*Use symbols to create identity*
The sense of identification with a team can be enhanced through the careful use of symbols. Examples of this are to be found in the military where, for instance,

inter-troop competition on the time taken to complete route marches was on the basis of beating:

- its own best time;
- an objective standard; and
- the other troops.

This hierarchy of competition was made consistently clear and reinforced vigorously and resulted in intense competition but with a focus on performance rather than on beating the opposition (which could involve lower overall performance). Also in the military, symbols were very evident from the very start of basic training with colors allocated to each group and names relating to famous battles. It is common in this environment for soldiers to have a tattoo of their unit's symbol which shows the meaningfulness of the group and its symbol.

In a more conventional setting, the Germany-based pharmaceutical company Aventis Behring has the tradition that when going on a works outing, every team starts with a group photograph with the team members standing in front of a big bronze horse on the company's premises. This horse was erected as a reminder to the fact that it was a horse of which the founder of the company, Emil von Behring, got the first serum for diphtheria from. The effect of this is to appeal to the notion of a higher calling than the individual one and to emphasize the importance of the work under way. As a consequence, the focus of identification shifts away from the individual (there are things more important than just my career) to the team/organizational levels. However, if symbols are simply imposed and have little meaning to the teams, this will not be productive. For example, in the UK, a call center was interested in the fostering of team working and sent all customer-facing staff on team programs. They were then divided into teams and allocated names. However, the names had no obvious relevance to the people concerned – in contrast, they were even disturbing as the company chose names of Irish rivers for the organization that was based in central England so that few if any workers knew what the names meant.

### Conclusion

To summarize, we propose that motivation losses in existing business teams can be overcome, and that teams can bring their members to go the extra-mile and to put in more effort into the teams' tasks. We believe that on top of the strategies discussed by many other authors, four identity-related aspects are particularly suited for managers to start with positively influencing team cohesion and performance: select people who have a sense that team loyalty is valuable and important, introduce clear, commonly agreed goals and a long-time perspective to stress mutual interdependence and future-oriented investments by the team members, compare your team with others to stimulate constructive competition, and create identity by making the team visible to the team members and by designing meaningful tasks team members can be proud of. If these suggestions are followed, team work can pay-off the dividend and is a fruitful route to tie in with other human resource practices (see for an overview, Theriou and Chatzoglou, 2008) ultimately leading to the accomplishment of organizational goals.

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