

Remedying Motivation and Productivity Loss in Collective Settings

James A. Shepperd

Perhaps the most annoying thing about working in a group or other setting in which efforts are pooled to form a collective product is that not all individuals contribute equally. There always seem to be some people who loaf or choose to free ride on the efforts of other people. Over the past two decades, this irksome aspect of groups has captured the attention of researchers in psychology, sociology, management, economics, and political science. The guiding questions underlying the research are why do people exert less effort in collective settings, and what can be done about the reduction in effort.

SOURCES OF AND SOLUTIONS TO LOW EFFORT IN COLLECTIVE SETTINGS

The problem of low effort in collective settings has been characterized as a social disease,¹ and researchers have rallied their efforts to find a cure. The cures or remedies proposed include making individual contributions identifiable, unique, or difficult; increasing group identity and group cohesiveness; increasing personal involvement in the task; making the task more attractive; and

James A. Shepperd is an Associate Professor in the Department of Psychology at the University of Florida. Address correspondence to James A. Shepperd, Department of Psychology, University of Florida, Gainesville, FL 32611; e-mail: shepperd@webb.psych.ufl.edu.

rewarding contributors, to name a few.

Recently, I proposed a model for understanding the problem of low effort in groups and other collective settings.² The model, based on expectancy theory, conceptualizes low effort as a problem of low motivation arising when individuals perceive their contributions to the collective as unrewarded, unneeded, or too costly. The model further specifies that productivity loss in collectives can be remedied by (a) providing incentives for contributing, (b) making contributions indispensable, and (c) decreasing the cost of contributing. The first and third solutions affect the *value* associated with contributing, whereas the second solution affects the *expectancy* that personal contributions are consequential.

The first source of low productivity (contributions are unrewarded) results when contributors derive no benefit from contributing, either because personal contributions are unidentifiable (thus, individuals cannot enjoy the proper rewards for a good performance) or because the behavior or its outcome is not valued (i.e., the contributors do not care if the collective goal is realized). The solution is to provide an incentive for contributing. The incentive need not be a material one, such as money or bonuses. Because people are generally concerned with achieving a positive evaluation (or avoiding a negative evaluation), merely the prospect of evaluation is sufficient to remedy low productivity.³ Moreover, the evaluation need not be external. To the extent that individuals are concerned with evaluating themselves favorably, merely the opportunity for self-evaluation is sufficient to

eliminate low motivation and productivity.⁴

The second source of low productivity (contributions are unnecessary) results when contributors perceive no contingency between their contributions and achieving the collective goal. That is, contributors believe that the collective product (e.g., winning a tug-of-war match, building a house, writing a group report) will be achieved regardless of whether they work hard or not. Thus, personal contributions are perceived as dispensable, leading individuals to free ride on the contributions of other people. The solution to this second source of low motivation and productivity is to make individuals perceive their contributions as indispensable, for example, by decreasing the redundancy of contributions or by dividing the task so that each contributor provides something unique and essential.

The third source of low productivity (contributions are too costly) results when contributors regard the material or psychological costs of contributing to exceed any benefit that might be attained from achieving the collective product. The material costs refer to the depletion of resources that are diverted from some other, more profitable venture. The psychological costs refer to a feeling of exploitation that arises from the perception that other people are free riding on one's own efforts, enjoying the benefits of a good collective performance (e.g., an A on a group project in a course) while personally contributing little. Generally, people are loathe to be exploited in this way and will even refrain from contributing themselves to avoid this psychological cost, even though holding back may mean that the collective outcome is not achieved. The costs can be thought of as disincentives to contributing that undermine achieving the collective goal. The solution is to decrease or eliminate the material and psychological costs of contributing. The

material costs can be reduced by making the task easier or less taxing on personal resources. The psychological costs can be reduced by changing the task from a collective one to an individual one (e.g., paying workers for piecework rather than hourly) or by ensuring that free riding will be punished.

WHAT WE KNOW

Over the past two decades, we have made tremendous progress in our understanding of low motivation and productivity in collective settings. In this section, I discuss several of the most notable advances in knowledge.

Cognitive Versus Physical Tasks

Although the initial research on social loafing, the free-rider effect, and the sucker effect examined productivity loss on physical tasks, subsequent research has demonstrated that the same processes operate with cognitive tasks. Indeed, in the laboratory, productivity loss has been shown on physical tasks such as pulling a tug-of-war rope, clapping and cheering, swimming in a relay race, pumping air, and wrapping gum, as well as on cognitive tasks such as evaluating written work, detecting blips on a screen, solving mazes, making paper moons, and generating uses for objects.

A Group Versus Individual Phenomenon

The problem of low motivation and productivity in collective settings traditionally is regarded as a group phenomenon. Most textbooks in introductory and social psychology and in management and organizational behavior discuss the topic in a chapter or section of a chapter on groups. However, it is misleading

to regard low motivation in collective settings solely as a group phenomenon or one that occurs only when individuals pool their efforts. Perceiving contributions as unrewarded, unneeded, or too costly is an intrapsychic phenomenon that can occur among people working individually. Specifically, if an individual working on a solo project sees no benefit to working hard, perceives no contingency between his or her efforts and achieving a desired outcome, or perceives the cost of success as too high, exceeding any benefit that might be derived from a successful performance, then he or she will withhold effort.

Nevertheless, settings in which individuals combine their efforts to form a group or collective product seem particularly likely to foster these conditions. When efforts are pooled, individual contributions often cannot be monitored or identified, thus removing the incentive (or sanction) that often accompanies evaluation. The result is greater social loafing. Likewise, when efforts are pooled, the responsibility for achieving a good group performance is shared. The necessity of any one individual's efforts is reduced, increasing the perceived dispensability of contributions and, as a result, increasing the likelihood of free riding. Finally, when efforts are pooled, the possibility arises that other people will free ride on one's own efforts. Consequently, individuals will decrease their own contributions to avoid being exploited by others.

Cultural Differences

Cross-cultural studies of motivation and productivity loss in collective settings are rare. Nevertheless, studies comparing Japanese and Chinese with Americans suggest that free riding and social loafing are universal (albeit, perhaps more prevalent among Japanese and Americans

than among Chinese). However, when structural changes in the collective systems increase the prospect that other people will free ride, there are cultural differences in how individuals respond. If permitted, Japanese are more likely than Americans to withdraw from the situation.⁵ This difference appears to be attributable to differences between the two cultures in how collective systems are maintained. Japanese typically maintain collective systems externally through mutual monitoring and sanctioning. When structural changes remove the ability to monitor and sanction, Japanese prefer to withdraw from the situation rather than risk being victim of another person's free riding. Americans, by contrast, maintain collective systems internally by instilling feelings of duty and obligation. They generally are less affected by changes that remove the ability to monitor and sanction, believing that other people, like themselves, will continue to contribute to the collective from a sense of obligation or duty.

Low Productivity as a Social Dilemma

The problem of low motivation and productivity in collective settings can be conceptualized as a social dilemma. A social dilemma is any situation in which individuals face a conflict between their own selfish interests and the interests of the collective. The most familiar example is Hardin's "The Tragedy of the Commons," which illustrates the conflict that exists when a number of shepherds graze their herds on a common pasture.⁶ Although each shepherd derives greater profit from increasing his or her herd size, if every shepherd increases the size of his or her herd, the pasture will be damaged from overgrazing. Thus, the behavior that is most beneficial for the individual shepherd (i.e., increasing the size of his or her herd) is

harmful for the community as a whole should every shepherd act similarly.

In collective settings, the collective or group goal can be thought of as the commons. It is in the best interest of each individual member to withhold contributions and free ride, forcing others to work hard to achieve the goal. However, if all people withhold effort, then the collective goal will not be achieved and presumably everyone will suffer. The feature distinguishing research on productivity loss and the larger literature on social dilemmas is the commodity that influences the collective welfare. Investigations of social dilemmas typically focus on the problem of overtaxing some finite public resource, such as the commons, or the problem of providing some public good, such as public television. Investigations of productivity loss in performance groups, by contrast, focus on factors that influence the amount of effort individuals contribute to some collective venture. More generally, this body of research is concerned primarily with the loss in motivation and subsequent reduction in productivity among individuals working collectively compared with individuals working alone.

Evaluation and Creativity

Although making contributions identifiable and thus able to be evaluated is an effective strategy for eliminating social loafing, it has a serious liability. The prospect of evaluation increases the quantity of contributing, but has a deleterious effect on the quality of contributions. Specifically, on tasks that require creativity, anticipated evaluation (either external or self-evaluation) can produce decrements in performance, leading to less creativity than when no evaluation is anticipated.⁷

The Effects of Norms and Roles

There is growing evidence that norms exercise a strong influence over the amount of effort individuals contribute in a collective setting. Some norms can lead individuals to withhold effort. Such is the case, for example, with antiproduction norms that carry sanctions for "rate-busters," people whose high efforts can make other contributors look bad by comparison. Other norms can lead to either decreases or increases in effort, depending on the nature of the situation. For example, the equity norm holds that payoffs or rewards should be distributed in proportion to contributions. Accordingly, if individuals believe that their rewards for contributing will exceed their efforts, they will contribute more to reestablish equity. However, should they believe that their rewards for contributing will fall short of their efforts, perhaps because other people are rewarded equally for contributing less, then they will withhold effort to reestablish equity.⁸

WHAT WE DON'T KNOW

Although we have progressed in our understanding of why people exert less effort when efforts are pooled, when loafing and free riding are most likely to occur, and what can be done in response, there remain several unanswered questions. In this section, I explain just a few of the unresolved issues in the study of motivation and productivity loss in collective settings.

- *The effects of group characteristics.* There is considerable evidence demonstrating the benefit of providing internal incentives for good individual performances. However, few studies have examined the utility of providing incen-

tives (either internal or external) for a good collective performance. Consequently, it is unclear just how effective incentives for a good collective performance will be. In addition, it is unclear whether group characteristics such as group cohesiveness and group identity can function as incentives that increase members' productivity. Specifically, are cohesive groups more productive than noncohesive groups? Are group members with high group identity less likely to loaf than group members with low group identity?

- *Is dispensability independent from value?* Altering the perceived dispensability of contributing can also affect the perceived value of contributions, and vice versa. Specifically, the more a given individual's contributions are regarded as indispensable, the more the contributions will be valued. If a given team member's efforts are unnecessary to winning a tug-of-war match, his or her contributions may not be valued much. However, if high efforts from all team members are essential to winning the match, the value of each individual's contributions will be high. This observation raises the question of whether the value associated with contributing and the perceived indispensability of contributions operate independently. It is possible that perceived dispensability of contributing affects motivation and productivity by influencing the perceived value of the contributions.
- *Reducing the psychological costs.* Little research has examined the effects of the psychological costs of contributing on motivation and how the costs associated with contributing might be reduced. The most effective solution, changing the task from a collec-

tive one to an individual one, requires partitioning the collective goal into individual sections. With the goal partitioned into sections, individuals can no longer fall prey to the free-riding attempts of others. Each individual can enjoy the fruits (as well as suffer the consequences) of his or her personal contributions. Unfortunately, outside the psychology laboratory, it often is not possible or not feasible to partition the public good into individual sections. Many tasks, such as building a house, producing a group project, and winning a team sport, require that efforts be combined. Alternative solutions, such as promising that free riders will be punished, will be effective only so far as contributors believe that the people who control the rewards and punishments can identify which group members did what. Clearly, strategies for reducing the psychological costs of contributing are sorely needed.

SUMMARY

The tendency for people to loaf or free ride on the contributions of other people, although commonplace, is not an inevitable consequence of working in a group. We now know that the lower productivity found among individuals pooling their contributions relative to individuals working alone is largely a problem of low motivation resulting from the perception that contributions are unrewarded, unneeded, or too costly. Moreover, research by psychologists and other social scientists has revealed that managers, coaches, teachers, and other group leaders can elicit high effort from group and team members provided there is an incentive to contribute, members of the collective perceive their contributions as indispensable, and the costs of contributing do not exceed any benefit that might be derived from a good collective performance.

Notes

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Recommended Reading

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Social Loafing: Research Findings, Implications, and Future Directions

Steven J. Karau and Kipling D. Williams

Imagine a college course in which students work together in small groups to design, conduct, analyze, and write up a research project. Each group member coauthors the paper and shares the same grade. This is an example of a collective task: Individual contributions are combined to produce a single group product. Other examples of groups that work collectively include rowing teams, construction crews, juries, marching bands, and government policy committees. Indeed, much of the world's work is accomplished collectively. But what is the psychological effect of com-

binning one's contributions with those of other people? How does it affect people's motivation and productivity? In the past 15 years, research on social loafing has attempted to answer these questions, as well as many others.

Formally, *social loafing* is a reduction in motivation and effort when individuals work collectively compared with when they work individually or coactively. When working collectively, individuals work in the real or imagined presence of other people with whom they combine their inputs to form a single group product. When work-

Steven J. Karau is an Assistant Professor of Psychology and Health Administration at Virginia Commonwealth University. His research interests are in the area of group processes, including social motivation, leadership, and temporal influences on group interaction and group decision making. **Kipling D. Williams** is an Associate Professor of Psychology at the University of Toledo. His research interests include the group's influence on the individual's motivation and performance, social ostracism, and social influence in the legal setting. Address correspondence to Steven J. Karau, Department of Psychology, Virginia Commonwealth University, Richmond, VA 23284-2018; e-mail: skarau@cabell.vcu.edu, or to Kipling D. Williams, Department of Psychology, University of Toledo, Toledo, OH 43606; e-mail: kipling@uoft02.utoledo.edu.

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