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SOCIAL LOAFING AND GROUP DEVELOPMENT: WHEN "I" COMES LAST

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ABSTRACT

The present research examined social loafing in groups across different stages of group development. Individuals working in newly formed groups worked harder in the group setting than alone, although this difference was non-significant. However, individuals working in groups that were at the midpoint or end of their existence performed better when working by themselves. This latter finding is consistent with traditional findings on social loafing. Overall, the study suggests that social loafing is affected by the group's developmental cycle and suggests that early in a group's life - when social identity is higher- no social loafing will occur.

INTRODUCTION

One of the earliest focuses of research (Knight, 1924; Triplett, 1898) and a continuing concern of business and industry (Steers & Porter, 1979) is the effect that grouping people together has on productivity. Questions concerning this effect have taken on many forms. Are individuals more productive when working in groups than when working alone? Are certain types of groups more productive than other types? Are some tasks more effectively handled by groups than by isolated individuals? The group has alternatively been praised (Zajonc, 1965) and damned (Steiner, 1972) for its influences on productivity.

Using the classic Ringelmann (1927) study as a foundation, the reputation of the group as a contributor to productivity has been severely tarnished by research over the last couple of decades. This research has shown that individual productivity declines when individuals work in groups (Ingham, Levinger, Graves & Peckham, 1974; Kerr & Bruum, 1981; Latane, Williams & Harkins, 1979). The effect has been demonstrated by measuring group output such as rope pulling, shouting, clapping, constructing paper moons, etc. This phenomenon has been given such unflattering labels as "social loafing" (Latane et al., 1979), the "free rider effect" (Kerr &

Bruun, 1983) or the "sucker effect" (Kerr, 1983). Formally, social loafing is defined as "the tendency to reduce one's effort when working collectively compared with coactively on the same task (Karau & Williams, 1993, p. 683)."

The most common explanation for social loafing is that people in groups are not identifiable, or more precisely, that individual production cannot be associated with specific individuals. Responsibility is diffused as individuals "hide in the crowd" (Latane et al., 1979). In support of this position, Williams, Harkins, & Latane (1981) found that when productivity was clearly associated with individuals, social loafing was reduced. In a meta-analytic review of the social loafing literature, Karau and Williams (1993) also found that social loafing decreased when evaluation potential was constant across individual and group working conditions.

A second explanation for social loafing focuses specifically on the task. The position is that loafing occurs because people find the task unimportant, uninteresting, and uninvolving. The group offers them the opportunity to reduce their involvement in these tasks because there is little monitoring of individual efforts. Zaccaro (1984) reported that social loafing was reduced when the task was an attractive one. More directly, Brickner, Ostrom & Harkins (1986) reduced social loafing by using a task that was involving and personally relevant to group members. The reduction in loafing occurred even when individuals were not identifiable in the group. Similarly, Karau and Williams (1993) reported that social loafing was reduced when the task was of high valence.

Based on their meta-analytic review, Karau and Williams (1993) offered a new model to explain social loafing – the Collective Effort Model (CEM). CEM rests on an economic-based expectancy value theory of effort (Vroom, 1964). CEM suggests that an individual's work level is determined by the perception of the instrumentality of one's personal efforts. Individuals work to the extent that they view (1) their efforts as benefitting group performance, (2) group performance as being translated into group outcome, and (3) group outcome as resulting in individual outcome.

The studies included in Karau & Williams' (1993) meta-analysis generally involved having participants enter the lab and working on a single task as individuals and/or in a group, with characteristics of the group, task, or context being manipulated or measured. Much of the social loafing work has viewed groups as static units, and the research has concentrated on identifying a social loafing "effect" (Williams, Harkins & Latane, 1981). This research generally has involved a single measure of productivity from groups at a single point of time. Karau and Williams (1993) explicitly ackowledge this limitation by recommending that a future direction of research should be to examine the long-terms effects of working collectively. The purpose of the present paper, then, was to examine the effects of working in groups <u>over time</u> on social loafing.

Long-term effects are important because there is growing evidence that groups are dynamic units, and that "effects" found at one point in a group's developmental cycle may not be found at other points. For example, Gersick (1988) observed a variety of work groups over time and found group productivity was highest during the midpoint of task work. Worchel, Grossman & Coutant (1994) found that minorities were able to influence group decisions during the latter stages of group life, while these same minorities were rejected during early stages of group development.

These and other findings suggest that a more complete understanding of group phenomena and group dynamics will result from studying groups over an extended period of time. There have been several models (Moreland & Levine, 1988; Tuckman, 1965; Tuckman & Jensen, 1977; Worchel, Coutant-Sassic & Grossman, 1992) that suggest that groups develop through predictable stages, and that the dynamics of the group are influenced by the developmental cycle. In general, these models suggest that the initial focus of groups is on establishing a clear identity and ensuring group cohesion and uniformity. Only later do groups focus on productivity issues and meeting the needs of individual group members.

According to the model proposed by Worchel et al. (1992), groups progress through a six stage developmental process. A period of discontent and a precipitating event lead to the development of the new group. The third stage - actually the first stage for groups with prescribed membership and clear boundaries - involves group identification. The group becomes very concerned with drawing clear ingroup-outgroup boundaries. A central dogma or theme for the group may be established. Group norms and structure are identified, and leadership is centralized. Competition and conflict with outgroups is invited, and the group avoids opportunities to cooperate or reduce intergroup conflict. Within the group, conformity is demanded and dissent is punished. The group may demand that members demonstrate their commitment to the group through personal sacrifices or initiation rites. At the individual level, members make public demonstrations of their loyalty to the group. The group becomes an important part of the individual's identity.

As the group establishes its independent identity, attention is turned toward group productivity. Group goals and tasks are identified. Distinctions are made between members based on the ability to help the group achieve goals. Leaders become task oriented and less attention is paid to the socio-emotional climate of the group. Interaction with the outgroup becomes less antagonistic. Members realize that the group cannot exist in isolation, nor can group doctrine remain so extreme.

During the previous two stages, the focus was on the group. During the individuation stage, attention shifts to the individual group member. Individuals begin to negotiate with the group to expand task efforts to meet personal goals. Individuals demand personal recognition; equity norms are favored. Group members base their satisfaction with the group on their personal views of what they deserve from the group. Individuals, rather than the group, may recruit new members who will help the individual achieve personal goals. Cooperative interaction with outgroups is desired. Eventually, these individualistic concerns lead the group to disintegrate during the final stage of decay.

This model has been used to study diverse phenomenon such as minority influence (Worchel et al., 1994), perceptions of group homogeneity (Worchel et al., 1992), bonus preferences (Rothgerber, Worchel, Day, & Goodwin, 1995), and leadership preferences (Day, Worchel, Goodwin, Rothgerber, & Lamb, 1995), but it also has implications for social loafing. In the beginning of a group's life, when members focus on the group and having a positive social identity, group members should be motivated to work harder in a group setting and be more productive when working as a group than as individuals. Conversely, at the end of a group's life, members should be more individualistic, concerned with personal identity, and more productive when working as individuals. The traditional explanations of social loafing, reduced

identifiability and task enjoyment, however, would not predict any differences in loafing over time.

The idea that social identity and social loafing are inversely related is not original. Indeed, Worchel, Rothgerber, Day, Hart, and Butemeyer (1998) have argued that social loafing will decrease as social identity increases. This argument stems from Karau & Williams' (1993) CEM model that suggests that an individual's social identity may be enhanced to the extent that his or her group performs well. This suggests that individuals may resist the temptation to loaf when they perceive that their efforts can directly benefit the group. Worchel et al. (1998) conducted three experiments that supported the general prediction that group productivity would be enhanced (i.e. social loafing reduced) by factors that increase group categorization and the importance of the group to members' social identites.

In the first experiment, undergraduates were divided into groups of four and worked on a task that involved manually making chain links from construction paper (see method section). Individuals worked in isolation and in a group setting, the order being counterbalanced. To manipulate the likelihood of group categorization and the importance of the group to members' social identitites, subjects were placed into a group that was either referred to as a collection of individuals, a group explicitly labelled a group expecting future interaction, or a group that worked for a bonus. Consistent with previous research where individuals work as a collection of individuals, a significant loafing effect was found in the collective condition. No significant loafing resulted from the other two conditions; in fact, there was tendancy for subjects in the reward condition to work harder in the group context. It was argued that no loafing occurred in the latter two conditions because expecting future interaction and working for a reward enhanced perceptions of being in a group and the importance of group membership.

A second experiment used a similar methodology as the first except that individuals were placed into either a collective condition or into one of several interdependent groups. Results were consistent with the first experiment in that the collective condition produced more loafing than the interdependent groups presumably because the incentive (regardless of its type) served to enhance the classification of the members as an ingroup and increased the relevance of the group for the individual's social identity. Self-report measures of social identity were consistent with this explanation.

The third experiment investigated the role of social identity on social loafing in a slightly different context. Subjects worked in a group in the presence or absence of an outgroup, and they wore or did not wear a group uniform. The presence of an outgroup was expected to enhance the prominence of the ingroup in the individual's social identity. Wearing a uniform was expected to make the group more salient and enhance group categorization. The authors reasoned that the effect of enhancing group categorization on productivity would depend on whether the group was a salient component of the individual's social identity. When the group is not a salient component of an individual's social identity, then, as predicted by deindividuation (Diener, 1979), loafing will increase when group categorization is enhanced. Conversely, when the group is a salient component of an individual's social identity, then, as predicted by social identity theory (Tajfel & Turner, 1986), loafing will be attenuated when group categorization is enhanced. In support of this reasoning, subjects in the group uniform condition increased their group productivity more than those in the no group uniform condition when the outgroup was salient, whereas this effect was reversed when the outgroup was not salient.

Although Worchel et al. (1998) demonstrated that increasing social identity leads to a decrease in social loafing, the purpose was not to assess social loafing in a group developmental context. That is, only single measures of loafing were taken at one point in time. The purpose of the present study, then, was to examine whether social loafing varies over time in groups. In the present study, groups worked together on several tasks over three time periods. Social loafing was assessed in the beginning, middle, or end of a group's developmental cycle. It was predicted that loafing would be heightened at the end of a group's life and eliminated during the beginning of a group's life and furthermore, that social identity would decrease at the end of a group's life.

METHOD

Participants

One hundred and seventy-four undergraduates (106 males, 68 females) from the Psychology Subject pool at a Texas A&M University participated in the present study in order to achieve partial course credit in Introductory Psychology. Participants were run in groups of three; thus, a total of 58 groups participated. Although we attempted to randomly assign participants to achieve an equal number of mixed-sexed groups, subject pool policy made this difficult to accomplish. As a result, 8 groups were all-male, and 3 were all-female. Analyses indicated no significant differences for the sex composition of the groups on any of the dependent variables.

Procedure

The present study was conducted two groups at a time. As such, participants arrived in groups of six. After signing an informed consent form, participants were informed that, due to the recent trend in the business world to adopt team and group approaches rather than individual approaches to the design of work, the purpose of the present study was to examine various dynamics associated with work groups. Participants were then informed that for the next two hours they would be working in groups on a number of tasks designed to be analogs of tasks found in industry. Following this introduction, all six participants then worked as one group on a decision making task in which they were to imagine themselves as a group of supervisors in the trucking industry whose current task was to allocate a new truck to one of several fictional subordinates and reallocate the remaining trucks. Participants were given 10 minutes to work on this task.

After completing the decision making task, participants were randomly divided into two groups of three, given either a blue or yellow uniform, and taken to two different rooms. Participants were then given 8 minutes to complete a “group rap sheet” which required each participant to provide information about themselves regarding their major, year in school, where they were from, and things that they like to do in their spare time. Each group was also given the responsibility of originating a name for their respective group. The purpose of the group rap sheet was to give participants a chance to get to know one another and to induce feelings of being a group. The latter purpose was also the reason for assigning a group uniform which we have found to effectively induce feelings of groupness (Worchel et al., in press).

For the remainder of the study, participants remained in their assigned three-person groups and worked on three different tasks each of which took approximately 25 minutes to complete. The

three tasks were a resource allocation task, a group decision-making task, and a chain-making task. For the purposes of the present study, only the chain-making task was of interest. At this point, the experimental manipulation was executed in a simple three group between subjects design. Participants were randomly assigned to work on the chain-making task either immediately after completing the group rap sheet ($\underline{n}$ = 20), in the middle of the time remaining in the study 25 minutes later ($\underline{n}$ = 20), or near the end of the study 50 minutes later ($\underline{n}$ = 18). The sequence in which the three tasks were to be completed was counterbalanced in order to control for any effects that each task may have had on the others.

At the onset of the chain-making task participants were informed that the next task would involve manual dexterity and was similar to that confronted by workers in many industrial settings. They were given an identical set of materials consisting of a stack of construction paper, a pair of scissors, a stapler, and instructions on how to construct a paper link chain. Each participant was to cut one strip of paper (1" thick) at a time off the larger sheets, curl it into a ring, and then staple it. This procedure was to be repeated so that the strips of paper would be connected to make a continuous chain. Participants were instructed not to stray from the standardized procedure. Participants were then given 4 minutes to practice making chains in order to familiarize themselves with the materials and the standard procedure.

This task was selected based on several criteria used in previous loafing research: (a) the task must be somewhat fatiguing so that there is a cost for optimal performance; (b) "effort and performance could be safely assumed to be monotonically related for the task (i.e., it was unlikely that one could 'try too hard', with an increment in effort resulting in a decrement in performance)" (Kerr, 1983, p. 822); (c) task performance must not be related to non-effort factors such as luck or insight; and (d) the task must allow performance to be measured separately for each individual in the group as well as the group as a whole.

At this point, another counterbalancing manipulation was employed. In order to control for the effects of practice and order of work, half the groups in each condition began with the members working in isolation, whereas the other half began working in the group setting. Previous research has indicated that the order in which participants work in either isolation or the group setting has no influence on the number of links produced (Worchel et al., in press). We will outline the Individual-Group order; those in the Group-Individual order simply received the instructions in reverse sequence.

Participants were informed that they would be placed in individual cubicles and that their task was to make their chain as long as possible. They should work as fast as possible but should also pay attention to the "quality" of their product. Participants were taken to individual rooms and given 8 minutes to work on the task. At the end of this time, they returned to the original room.

Here, they were informed to perform the same task in the presence of other people. Again, they were informed to work as quickly as possible without sacrificing quality. They were also informed that the situation was arranged so that no single individual's performance could be identified. In order to emphasize this point, chairs were arranged around a table with a hole in the center. Participants were to push their chains into the hole where everyone's output would be combined and collected. Partitions (15" high) on the table allowed participants to see each other's faces but did not allow them to compare output. After completing the task in the group setting, participants completed the previously described 9-item questionnaire.

After completing the chain making task in both the individual and group settings, participants continued with the rest of the study. At the end of the study, participants were debriefed and probed for suspicions. No participant guessed the true purpose of the study. The dependent measure was the number of links in the chain produced.

Measures

Performance was measured by comparing the number of chain links made in the individual condition compared to the group condition.

Task enjoyment, task difficulty, identifiability, and social identity were assessed with a 9-item questionnaire. For each item, participants responded on a 1 to 7 scale with the two poles labeled "very little" and "very much", respectively. Two items, "How enjoyable was the task?" and "How much fun was it working on the task?", were used to assess participants' perceptions of task enjoyment, and a coefficient alpha of .95 was obtained. The item "How difficult was the task?" was used to assess participants' perceptions of task difficulty. Two items, "How much do you think your work on the task can be identified?" and "How identifiable did you feel when working on the task?" were used to assess how identifiable participants felt within their respective groups (alpha = .73). Lastly, four items - "How much did your group's performance reflect on you personally?", "How important was it that your group do well on the task?", "How much do you want to remain a part of your group?", and "How much time did you spend thinking about your group?" - were used to assess how important their respective groups were to participants' social identity (alpha = .76).

RESULTS

Performance

Results of the present study were analyzed at the group level. Results of between subjects main effect analysis of variance (ANOVA) indicated no significant difference in the total number of links made between the early, middle, and later stages of group development; F (2, 55) = 0.33, p > .10. Results of a within subjects main effect ANOVA indicated a significant difference in the number of links made between the group and individual work settings; F (1, 55) = 5.70, p < .05, d = -0.26. More links were made in the individual work setting - indicating an overall social loafing effect. Results also indicated a significant interaction between work setting and stage of group development; F (2, 55) = 5.06, p < .01. It appears that individuals early in their group's development produced more chain links in the group setting than in the individual setting, whereas the reverse was true for individuals in the middle and later stages of their group's development.

The performance results were then analyzed to determine if the scores were different from zero change between performance in the individual setting and performance in the group setting (i.e., social loafing) within each stage of group development. As predicted, results indicated that individuals early in their group's development did not produce less links in the group setting than in the individual setting; in fact, they tended to produce more links in the group setting. However, results of a dependent t-test indicated no significant difference between performance in the individual and group settings; t (19) = 1.10, p > .05. Individuals in the middle stage of their

group's development produced more links in the individual setting than in the group setting; t (19) = 2.75, $p < .02$, $d = -0.35$. As predicted, individuals in the final stages of their group's development produced more links in the individual setting than in the group setting; t (17) = 2.61, $p < .01$, $d = -0.65$.

Questionnaire data

Data from the 9-item questionnaire were also analyzed at the group level. As predicted, results of a one-way between subjects ANOVA indicated no significant differences in task enjoyment (F (2, 55) = 1.23, $p > .05$), perceptions of task difficulty (F (2, 55) = 0.82, $p > .05$) and perceptions of identifiability (F (2, 55) = 0.55, $p > .05$). However, results of a planned comparison indicated that participants in the early condition (M = 14.32) tended to place more importance on their respective groups in terms of their social identities compared to participants in the late condition (M = 12.25); F (1, 36) = 3.21, $p < .05$, $d = 0.43$.

DISCUSSION

The performance results supported the hypothesis that significantly more social loafing would occur at the end of a group's life than in the beginning. Not only were groups in the middle and late stages of development more likely to loaf, groups in the beginning of development did not loaf at all. In fact, groups early in development produced more (albeit nonsignificant) in the group setting than as individuals. Despite the change in performance in group relative to individual settings over time, there were no reported differences in how much participants perceived themselves to be identifiable, how much they enjoyed the task, or how difficult they perceived the task to be. There were, however, significant differences in social identity over time, with the pattern of results being opposite that of the performance results. That is, in the beginning of group development when no loafing was obtained, members reported that the group was more important to their social identity than groups reported in later stages of development, when social loafing occurred. The finding that the group was more important to member's social identity early in group development supported the hypothesis derived from the model offered by Worchel et al. (1992), and the finding that social loafing was reduced when the group constituted a valued social identity was consistent with arguments offered by Worchel et al. (1998) and Karau and Williams (1993). The unique contribution of the present study that distinguishes it from Worchel et al. (in press) was that social loafing and social identity were examined from a developmental framework.

In terms of the social loafing literature, the present results support the argument that studies examining social loafing need to consider the social identity of group members (Worchel et al. (1998). Studies where random strangers or even casual acquaintances work in the lab (Latane et al., 1979; Williams et al., 1981; Kerr and Bruun, 1983) may overestimate the likelihood that social loafing occurs. Although research on minimal group formation (Tajfel, 1970; Tajfel, Billig, Bundy, & Flament, 1971) suggests that even under these conditions, the group can become a component of the individual's social identity, it should do so to a lesser extent compared to situations where group members have a shared history, a pattern of social interaction, and common goals. On the other hand, studies examining groups with a meaningful history and ones that are highly cohesive may misrepresent the magnitude of social loafing if they do not measure performance over extended periods of time.

From a practical standpoint, the results suggest that organizations employing groups need to be sensitive to how long the group has been working together. When a group is in the final stage of development, they may be more productive on group tasks when their individual performance is identifiable, when they are provided with information about their performance and the performance of other group members, or when the task is meaningful or interesting. These variables have all been found to reduce social loafing (Karau & Williams, 1993). However, when a group is newly formed, these same strategies may actually decrease group productivity. Parallel to research demonstrating that extrinsically motivating someone with intrinsic motivation can have negative effects on long-term motivation (Deci, 1975)), forcing a newly formed group to focus on individual inputs and individual contributions may detract from members' social identities and willingness to expend effort for the group.

A logical direction of future research, then, is to examine how group development interacts with other variables found to moderate social loafing (Karau & Williams, 1993) (e.g., evaluation potential, task valence, expectations of co-worker performance, uniqueness of individual inputs, group size, and task complexity). We suspect that when a group is in the later stages of development, they may be more productive on group tasks when their individual performance is identifiable, when they are provided with information about their performance and the performance of other group members, or when the task is made more meaningful or interesting. However, when a group is newly formed, these same strategies may force a newly formed group to focus on individual inputs and individual contributions. Consequently, these strategies may reduce the importance of the group to members' social identities and members' willingness to expend effort for the group. These manipulations may in effect, trigger the individuation that normally occurs for group members in later stages of development.

In summary, the present study indicated that social loafing is less likely to occur early in a group's development compared to later stages. Moreover, this difference in loafing as a function of group development was shown to be linked to differences in the importance of the group to individuals' social identity. Therefore, we recommend that organizations employing groups consider the influence of group development and social identity to the performance and productivity of their work groups. Lastly, we suggest that future research examine how group development interacts with other variables found to influence social loafing and how such interactions relate to the group's importance to members' social identities.

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