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Effects of Personal Involvement: Thought-Provoking Implications for Social Loafing

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In 1979, Latané, Williams, and Harkins observed that individuals working together put out less effort than when they work alone, an effect these researchers termed *social loafing*. Subsequent research (Williams, Harkins, & Latané, 1981) has suggested that this effect arises, at least in part, because when participants work with others on these tasks their individual outputs are lost in the crowd, and, thus, they can receive neither credit nor blame for their performances. However, it is unlikely that participants found the tasks used in these experiments (e.g., clapping, shouting) to be involving. The possibility that personal involvement could moderate the social loafing effect was tested in a 2 (high/low involvement) × 2 (high/low identifiability) factorial design across three replications. Replicating previous loafing research, we found that under conditions of low involvement, participants whose outputs were identifiable worked harder than those whose outputs were pooled. However, when the task was personally involving, the loafing effect was eliminated. Participants whose outputs were pooled worked as hard as those participants whose individual outputs could be identified.

In 1979, Latané, Williams and Harkins rekindled interest in a phenomenon they termed *social loafing*. Social loafing refers to the finding that participants put out less effort when working together than when working alone. This effect has been demonstrated on tasks that require physical effort (shouting: Latané et al., 1979; clapping: Harkins, Latané, & Williams, 1980; pumping air: Kerr & Bruun, 1981) and cognitive effort (evaluating essays: Petty, Harkins, Williams, & Latané, 1977; brainstorming and vigilance: Harkins & Petty, 1982) for both women and men (Harkins et al., 1980). Using Steiner's (1972) typology, some of the tasks have been maximizing (requiring the participant to produce as much as possible), whereas others have been optimizing (requiring the participant to achieve some criterion performance), but on the *group* trials, all of the tasks have been additive (i.e., the group score has been represented by the sum of the individual efforts).

Latané et al. (1979) suggested several factors that might contribute to the loafing effect. For example, when participants perform with others they may feel that they can "hide in the crowd" (Davis, 1969) and avoid the blame for slacking off, and/or they may feel that they are "lost in the crowd" and unable to command their fair share of the credit. Williams, Harkins, and Latané (1981) tested this notion by leading participants to believe that their individual outputs were identifiable even when they performed with others. Consistent with the identifiability hypothesis, no loafing occurred when participants were led to believe that their individual outputs could be monitored even when they took part with others. Participants shouted as loudly on the group trials as when they shouted alone.

Harkins and Petty (1982) examined other possible mediators of the social loafing effect. In considering the nature of the original social loafing experiments, they noted two important features: (a) the tasks used were very simple, and (b) all participants did exactly the same thing. In a series of studies, Harkins and Petty found two additional ways to eliminate the loafing effect. They found that individuals working on a difficult group task (rather than a simple task) did not loaf, even when individual responses were not identifiable. Additionally, in studies where subjects could make unique contributions to the group product (as opposed to contributions that were redundant with those of coworkers), the loafing effect was eliminated whether or not individual outputs could be identified.

Involvement Research

In the research reported here, we examined another possible mediator of social loafing—*personal involvement*. Situations that subjects find personally involving are those that have intrinsic importance, personal meaning, or result in significant consequences for their lives (Petty & Cacioppo, 1979, 1981).

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In their original development of social judgment theory, Sherif and Hovland (1961) discussed involvement in terms of an individual's group membership. Members of a group were seen as more involved with group issues than were nongroup members. This field of literature began with a consideration of attitude-relevant thoughts in terms of regions of acceptance and rejection (Sherif & Sherif, 1967).

Currently, involvement research is more concerned with the cognitive processing that occurs when people are presented messages that involve topics of high- or low-personal relevance. For example, Petty and Cacioppo (1979) hypothesized that more critical processing of message content occurs when issues are of high-personal relevance. In their study, all participants were presented with a message suggesting that senior comprehensive exams were being considered for adoption. In high-involvement conditions, subjects were led to believe that they would be directly affected by the proposal because exams would be instituted at their university before they graduated. In the low-involvement conditions, subjects were told that the proposal was being considered for a different university. For all participants the message argued in favor of instituting the comprehensive exams, but for half of the students the message was composed of very convincing arguments, whereas for the other half the arguments were not at all convincing. Consistent with their hypothesis, Petty and Cacioppo found that high-involvement subjects were more persuaded by the convincing arguments than were the low-involvement subjects, but the former group was less persuaded by the message composed of unconvincing arguments.

Also consistent with the notion that personal involvement leads to more critical processing were the profiles of thoughts generated by the participants. Petty and Cacioppo (1979) found that highly involved subjects produced more favorable thoughts and fewer counterarguments when they heard a convincing message than when they heard the unconvincing one, whereas under low involvement neither favorable thoughts nor counterarguments were affected by the argument quality manipulation.

Social Loafing and Involvement

In the previous loafing research, participants never worked on a task that was likely to have future consequences for them. Clapping and shouting (Latané et al., 1979; Williams et al., 1981), generating uses for a knife, or watching for blips on a TV screen (Harkins & Petty, 1982) are unlikely to be personally involving, to provide intrinsic importance, or to have personal meaning or significant consequences for students' lives.

Using Petty and Cacioppo's (1979) senior comprehensive exam framework, the current series of studies examined the effects of personal involvement on individual levels of effort in groups. Consistent with their findings, it was proposed that persons working on involving tasks (as opposed to uninvolving tasks) would be willing to invest greater amounts of effort in the task than would persons who were unlikely to be personally affected by task outcomes. These effects should persist even in group situations in which participants are told that individual outputs will not be measured.

Subjects were told that the adoption of senior comprehensive exams was being considered at their school in the upcoming school year (high involvement), at another school in the upcoming year (low involvement), or at their school in 6 years (low involvement), and they were asked for their reactions to this possibility. Crossed with the involvement manipulation, participants were told either that their responses would be considered separately (identifiable) or that the responses would be combined and considered as a group (pooled). Our dependent measure of effort was the total number of thoughts generated in response to the proposal. Petty and Cacioppo (1979) were interested in the allocation of effort between thoughts sympathetic to the persuasive arguments versus those opposed to the arguments. Given a convincing set of arguments, greater effort spent in processing led to more favorable thoughts and greater persuasion. Given unconvincing arguments, greater effort led to counterarguments and less persuasion. In the present research, there was no persuasive message. We were interested in the total amount of effort a person was willing to devote to the task, so we measured the total number of thoughts.

To replicate previous loafing research in which uninvolving tasks had been used, when participants were told that they would be unaffected by the adoption of the comprehensive exams, we expected participants whose outputs were not identifiable to put out less effort (generate fewer thoughts) than participants whose outputs were individually identifiable. However, to the extent that personal involvement can moderate the loafing effect under conditions of high involvement, we expected this difference to be reduced.

Method

Overview

The effects of personal involvement (high vs. low) and identifiability of individual output (high vs. low) on the number of thoughts generated in response to a counterattitudinal proposal were examined in three replications of the basic 2 × 2 design. The participants, who were run in pairs, were told that the Behavioral Sciences Laboratory (BSL) was measuring student attitudes concerning the introduction of senior comprehensives, a series of exams designed to demonstrate competency in both the general skills that any college graduate should possess and the specific skills required by the particular major. Failure to pass these tests would require remedial work before the degree would be conferred.

Participants were asked to give their opinions on this proposal by listing the thoughts that the proposal brought to mind. Involvement in the task was manipulated by telling the students that this proposal was under consideration for adoption at their school in the next academic year (high involvement, all replications), or that it was under consideration for adoption in 1988 (low involvement, Replications 1 and 3), or that it was under consideration at the University of North Carolina (low involvement, Replications 2 and 3).

Participants wrote their thoughts on separate slips of paper and slid them down tubes that went into a collection box. Identifiability of individual output was manipulated by showing subjects the collection box. A divider could be placed in the collection box so that each participant's outputs were kept separate (identifiable), or it could be removed so that the slips fell into a common space (pooled).

The major dependent measure was the number of thoughts generated by each participant. In addition, several ancillary measures were taken, including measures of attitude, involvement, and identifiability.

Subjects

All participants were undergraduates who intended to continue in school the next year. Subjects were run in pairs that were arranged so

that no friends participated together. In each replication, pairs were randomly assigned to conditions, and conditions were randomized within each replication.

Replication 1. Participants were 56 undergraduates. Twenty-two (9 men, 13 women) of these students participated in the experiment to partially fulfill an introductory psychology requirement. Owing to low enrollments in introductory psychology, participants were also recruited through an advertisement in the school newspaper. Thirty-four participants (12 men, 22 women) were paid $3 for less than 1 hr of participation.

Replication 2. Participants were 56 undergraduates (17 men, 39 women). All subjects were recruited through an advertisement in the school newspaper, which invited students to participate in a survey of student opinion on a variety of issues that were currently being considered for adoption. All were paid $3 for approximately 30 min of participation.

Replication 3. Participants were 112 undergraduates (51 men, 61 women). All students participated to partially fulfill an introductory psychology requirement.

Procedure

The same procedures were generally followed in each replication. All of the participants were given a description of the purpose of the survey in which they were to take part. The description stated that the BSL was conducting surveys on student opinion concerning several proposals. In Replications 1 and 3, these surveys were conducted for the Faculty Committee on Academic Affairs and in Replication 2 for the National Council on Academic Affairs.

Manipulation of involvement. Participants in the high-involvement conditions read that the proposals were being considered for adoption at their school in the next school year. Low involvement was manipulated in two ways. In Replication 1, the students were informed that the proposal was being considered for adoption in the 1988 school year. This meant that it would be adopted 6 years in the future. In Replication 2, the students read that the proposal would be instituted in the next school year, but at a different school, the University of North Carolina. In Replication 3, both low-involvement manipulations were used. In addition, an ambiguous condition was included in Replication 3. In this condition, participants were not told what university was considering the proposal or when it was being considered for adoption.

All participants then read a description of the proposal about which their views were sought: the introduction of senior comprehensive exams.

> If this plan were to be implemented, seniors, prior to graduation, would take a series of exams designed to demonstrate competency in both the general skills that any college graduate should possess and the specific skills required by their particular major. Failure to pass these tests would require remedial work before the degree is conferred.

The participants then read that as one means of measuring student opinion on this issue, the BSL had been requested to ask students to give their opinions on the proposal. In Replications 1 and 2, participants read that the BSL had been requested to obtain the opinions of 2 students on each of the proposals under consideration, and in Replication 3, participants were informed that the BSL had been requested "to ask students to give their opinions," with the number of students left unspecified.

Manipulation of identifiability. Identifiability of individual output was manipulated by telling the participants in the identifiable condition that their thoughts on this issue would be collected separately from those of their partner because the faculty committee (Replications 1 and 3) or the national council (Replication 2) wanted to consider the responses individually. In the pooled condition, the participants read that their thoughts would be collected together with those of their partners because the faculty committee (or national council) wanted to consider the range of opinions for the group.

After reading these introductory materials, the experimenter reiterated the identifiability manipulation by reminding participants that their thoughts would be considered separately (identifiable) or as a group (pooled). The experimenter then removed 50 2 × 4 in. slips of paper from each of two envelopes, placed the slips in front of each student, and noted that since the BSL was often asked to collect student opinions, a system had been devised to collect responses. The students were to write each thought on a slip of paper, fold the slip into quarters, and slide it down the tubes that were taped to the partition that separated the 2 participants. For practice, each participant folded one slip and slid it down his or her 2½ in. × 3 ft-long tube that extended into a covered cardboard box. The experimenter then showed them the box to demonstrate how their responses would be collected. Participants in the pooled condition were shown that their responses would fall in to a common space and were told, "You can see that your responses will go into the same box as the answers of your partner, so they will be pooled immediately, and we will be able to look at the thoughts of your group together." In the identifiable condition, participants saw that their responses would be collected separately because a divider was placed in the box between the tubes. Also, they were told, "You can see that your responses will go into a section of the box that is separate from that of your partner; this way we will be able to look at your individual thoughts."

Participants were told that they would have 12 min for the task and that the experimenter would tell them when to begin. Students were asked if they had any questions. Next, they were told that while they were writing their thoughts they would be listening to "Beethoven's Fifth"; therefore they should don the headsets that were on the backs of their chairs. (Subjects were told that this was to prevent them from being disturbed by noise from the hallway. Actually, it was done so that they could not hear their partners' slips falling down the tubes.) Participants were reminded of the issue and told to begin writing when the music began. After 12 min, the experimenter turned off the music, instructed participants to finish the thought that they were writing, and told them to stop. Pretesting had suggested that 12 min provided ample opportunity for participants to exhaust their stores of thoughts on this issue.

Dependent measures. The number of thoughts generated by each participant during this 12-min period constituted the primary dependent measure. The number of thoughts generated by each participant in both the pooled and identifiable conditions was derived by counting the number of slips that remained of the 50 with which each participants had begun. After thought generation, participants responded to some ancillary measures that included questions about feelings of involvement and identifiability. In addition, students were asked, "Do you think that senior comprehensive exams should be adopted?" and "What do you think the attitude of most students is toward adoption of senior comprehensive exams?" Each of these responses was made on anchored, 8-point scales. After responding to these measures, the participants were debriefed, thanked, and dismissed.

In addition to counting the number of thoughts generated, thoughts were also sorted into categories of favorability (positive, neutral, or negative) toward the issue of senior comprehensives.

Results

The *pair* was used as the unit of analysis. Preliminary analyses revealed that the results generated by exposure to the two low-involvement manipulations (year and location) in Replication 3 were not significantly different, so these conditions were combined. An ambiguous instruction condition in which par-

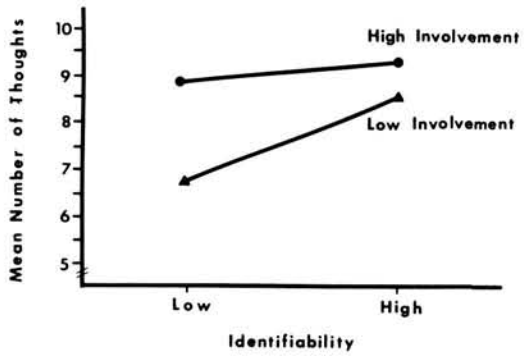

Figure 1. Mean number of thoughts generated per conditions.

ticipants were told nothing about where or when the proposal was being considered for adoption was also included in Replication 3. After responding to the ancillary measures, these participants were asked questions concerning where and when they thought the proposal was to be instituted. Responses to these questions indicated that, in the absence of specific information, participants assumed that the proposal was being considered at their school and would affect them personally. In addition, comparisons of the dependent measures in the high involvement and ambiguous conditions revealed no significant differences; therefore, these two conditions were pooled for the subsequent analyses. Thus, each of the dependent measures to be reported was analyzed in a 2 (high involvement vs. low involvement) × 2 (high vs. low identifiability) × 3 (Replications 1, 2, and 3) analysis of variance (ANOVA). Where appropriate, the Newman-Keuls test (Kirk, 1982) was used for a posteriori comparisons.

Thought Generation

Analysis of the mean number of thoughts generated by each pair, our primary dependent measure, revealed an Identifiability × Involvement interaction, $F(1, 100) = 3.97$, $p < .05$. As shown in Figure 1, replicating previous loafing research (e.g., Latané et al., 1979), under conditions of low involvement, participants whose outputs were identifiable generated more thoughts ($M = 8.65$) than did participants whose outputs were pooled ($M = 6.82$), $p < .05$. However, when the outcome had personal consequences, participants whose outputs were pooled generated as many thoughts ($M = 8.87$) as the participants whose outputs were identifiable ($M = 9.15$), $p < .20$. This interaction was consistent across all three replications, as indicated by an absence of the three-way interaction, $F(2, 100) = 0.26$.

Main effects for involvement, $F(1, 100) = 10.75$, $p < .02$, and identifiability, $F(1, 100) = 7.74$, $p < .008$, were also obtained, but they must be interpreted in terms of the significant two-way interaction. Subjects in high-involvement conditions generated more thoughts ($M = 9.01$) than did students not expecting to be affected by the proposal ($M = 7.74$), and students in high-identifiability conditions generated more thoughts ($M = 8.90$) than did low-identifiability participants ($M = 7.74$).

A main effect for replication was also obtained, $F(2, 100) = 3.84$, $p < .03$. Subjects in Replication 2 wrote more thoughts ($M = 9.14$) than did participants in Replication 1 ($M = 8.05$) or Replication 3 ($M = 7.93$). This may have been because all subjects in Replication 2 were paid for their participation, which may have served as an added source of motivation.

Ancillary Measures

Personal involvement. Students in all replications were asked, "How important is this proposal to you?" These ratings indicated a significant main effect for involvement, $F(1, 100) = 3.98$, $p < .05$. Students in high-involvement conditions reported that senior comprehensive exams were more important ($M = 5.93$) than did students in low-involvement conditions ($M = 5.38$). There was also a main effect for identifiability, $F(1, 100) = 4.52$, $p < .04$. Subjects in low-identifiability conditions reported the issue to be more important ($M = 5.95$) than subjects in high-identifiability conditions ($M = 5.36$) reported it to be. Persons in low-identifiability conditions, in the absence of immediate concerns for evaluation, may have rated the issue as of greater personal importance in order to justify their efforts. It seems that all students considered the issue personally important as indicated by the high range of mean responses ($M = 5.36$ to $M = 5.95$).

As a more sensitive measure of involvement manipulation, students in Replications 2 and 3 were asked, "How likely is this proposal to affect you personally?" Responses to this question indicated a main effect for involvement, $F(1, 76) = 15.59$, $p < .0002$. Students in high-involvement conditions rated the proposal as more likely to affect them personally ($M = 5.88$) than did students in low-involvement conditions ($M = 4.36$). There was also a significant Replication × Identifiability interaction, $F(1, 76) = 4.81$, $p < .04$. An a posteriori test indicated no significant differences; however, it appears that in Replications 1 and 2 subjects in high-identifiability conditions felt more likely to be affected than did subjects in low-identifiability conditions. This pattern was reversed in Replication 3.

Identifiability. Subjects were asked, "How easily will the experimenter be able to identify your thoughts as yours?" The expected main effect for identifiability was not observed.

In Replication 3, an additional question was asked, "How easily will the experimenter be able to tell which thoughts you wrote?" Again, the expected main effect for identifiability was not observed. Discussions with participants during debriefing sessions indicated that the meaning of identifiability was frequently misunderstood. It was often considered as an indication of the extent to which participants identified personally with what they wrote, rather than the experimenter's ability to determine which subject wrote which thoughts simply by opening the box. Confusion about the meaning of identifiability and students' personal identification with their thoughts made these manipulation checks difficult to assess.

An Identifiability × Replication interaction was observed for the first identifiability question, $F(2, 100) = 3.48$, $p < .04$. In Replications 1 and 2, high-identifiability subjects felt more identifiable than did low-identifiability subjects. This pattern was less pronounced in Replication 3.

Attitude measures. There were no significant differences in responses to our question, "Do you think that senior comprehensive exams should be adopted?" Students indicated moder-

Table 1
Types of Thoughts Generated by Students in Response to the Senior Comprehensive Exam Proposal

Positive thoughts
I think the quality of the student would be much greater with the tests.
If this plan were adopted, it might increase or improve the quality of people in the business world. Less uneducated guesses would have to be taken and maybe the economy would improve.
For a better feeling about oneself it helps to have a broad outlook and general knowledge of many things. This would make the person feel more secure and sure of him or herself.
Would encourage seniors to continue to work at a high level.
Neutral thoughts
Will taking the exams cost anything?
It should have two parts, theory and lab so the students care more about the lab, too.
Take a student survey on the subject.
What kind of remedial has to be done?
Negative thoughts
I think it would be a waste of time, money, and a lot of paperwork.
We've worked too long and hard to go through that—and what about those going to grad school, do they have to take this and the GRE? No way.
Its just an excuse to keep us here longer to get more money—bullshit.
Most professions require passing some type of board exam, or bar exam. If this test is passed, I see no reason to add more pressure to the students.

ate personal opinions to the issue (M = 4.3). When asked to predict the attitudes of other students on the issue, however, subjects predicted that subjects would generally be opposed (M = 3.34). High-involvement subjects also predicted more unfavorable attitudes (M = 2.98) than did low-involvement subjects (M = 3.88).

Thought profiles. Thoughts were sorted into positive, neutral, and negative categories. Examples of these thoughts are presented in Table 1. A 2 (involvement) × 2 (identifiability) × 3 (replication) × 3 (proportion of thoughts) ANOVA of the thought profiles indicated that there were no differences in the proportion of positive, neutral, or negative thoughts produced as a function of identifiability or involvement.

Consistent with the expectation that subjects would be opposed to the adoption of senior comprehensives, the analysis of the proportions indicated a significant main effect for type of thought, $F(2, 424) = 8.19$, $p < .0003$. Subjects generally wrote more negative thoughts (M = .41) than positive (M = .30) or neutral thoughts (M = .29). There was a significant Proportion × Replication interaction, $F(4, 424) = 4.86$, $p < .0008$. Replication 3 differed from Replications 1 and 2 in proportion of thoughts. Although subjects in all conditions wrote more negative than positive or neutral thoughts, subjects in Replication 3 wrote fewer neutral thoughts than did subjects in Replications 1 and 2.

Discussion

Williams et al. (1981) have demonstrated that identifiability of individual output is a critical factor in social loafing. When participants were led to believe that their individual outputs could be monitored even when they performed with others, the loafing effect was eliminated. Of course, only when individual outputs could be monitored was it possible for the experimenter to evaluate these performances. When outputs were pooled, neither credit nor blame could be assigned.

The notion that the potential for evaluation by some external source can motivate performance is consistent with findings concerning social influence in many areas of social psychological research. Peoples' performances are enhanced (simple tasks) or debilitated (complex tasks) at least in part by the anticipation of the evaluation of others (social facilitation; e.g., Cottrell, 1972). People behave as others do, at least in part, because they fear that to do otherwise would result in negative judgments by these others (conformity; e.g., Deutsch & Gerard, 1955). People are less likely to help in emergency situations at least in part because they do not want to appear foolish in front of others (bystander apathy; e.g., Latané & Darley, 1970). People become disinhibited and act in ways that they normally would not because, at least in part, the presence of others makes them feel anonymous and free from evaluation (deindividuation; e.g., Diener, 1980). People adopt more extreme attitudes after group discussion than they espoused before discussion partly because they want to be evaluated favorably by their peers (group polarization; e.g., Myers, 1983).

However, it does not appear that the potential for evaluation by an external source can account for the findings of the present research, nor for the findings of Harkins and Petty (1982). Harkins and Petty found that changing the nature of the task could eliminate the loafing effect. Subjects who performed difficult, as opposed to easy, tasks worked equally hard whether or not their individual outputs were identifiable. Harkins and Petty suggested that individuals, motivated by the belief that they were of above average capability on the task, did not loaf because their perceived ability to contribute to the group made their contributions seem more worthwhile.

Similarly, they found that when participants could make unique contributions to the group's product, they did not loaf whether or not individual outputs could be measured. Thus, Harkins and Petty found that they could eliminate the loafing effect without increasing identifiability.

In the present research, we demonstrated the importance of personal involvement in group situations. When subjects thought that they were likely to be personally affected by the outcomes of their efforts, they did not loaf, whether or not their products were identifiable. Participants in low-involvement conditions, on the other hand, were willing to work only when their responses were identifiable. When they were not, they loafed. In the absence of intrinsic interest, expected personal consequences, personal meaning, *or* expectations of evaluation of individual effort persons reduced their efforts.

We have suggested that both the possibility of evaluation by the experimenter and personal involvement were sources of motivation for the participants. What, then, accounts for the form of the Involvement × Identifiability interaction that was obtained? We found that participants who could be evaluated by the experimenter and who were personally involved generated no more thoughts than participants in the high involvement–low-identifiability or low-involvement–high-identifiabil-

ity conditions generated. One might have expected participants in the high-involvement–high-identifiability condition to have generated more thoughts than participants who were exposed to only one of these two motivational sources.[1]

There are at least two possible explanations for this outcome. There may be ceiling effects for these tasks such that either identifiability or involvement is sufficient to motivate participants to work as much as they can, leaving no room for the joint effects of these factors to manifest themselves. Another possible explanation for this result is that the potential for external evaluation undermined the effects of personal involvement. For example, Daniel and Esser (1980), found that the use of external rewards undermined intrinsic motivation for tasks of high interest. For tasks of low interest, intrinsic motivation was unaffected by the use of external rewards.

The importance of considering the effects of personal involvement on levels of motivation has been recognized on an individual level. Petty and Cacioppo (1979), for example, found that individuals who were highly involved with an issue were willing to expend more effort in response to a persuasive communication than were individuals who were uninvolved. The importance of personal involvement in determining levels of motivation in group situations, however, has received considerably less attention. The lack of a loafing effect in this research, under conditions of high involvement, suggests that increasing levels of personal involvement in group work situations may be useful in increasing productivity.

We think that further consideration of the involvement literature within the loafing paradigm can provide additional insight into issues of group productivity. A discussion of ego-involvement by Greenwald and Breckler (1984) and by Greenwald and Pratkanis (1984) seems relevant to understanding the social loafing effect. They discussed three distinct meanings of ego-involvement. Ego-involvement was viewed as (a) concern about evaluation by others, (b) concern about private self-evaluation (i.e., a need for achievement), or (c) concerns related to important central values and the attainment of reference group goals. In their chapters, they suggested that these different types of ego-involvement reflect different motivational concerns.

Multiple Sources of Evaluation

At the heart of Greenwald's typology is the notion that people can have multiple sources of evaluation. Most group research has focused on evaluation that derives from other persons in social and group settings. In the early social loafing studies (Latané et al., 1979; Williams et al., 1981), identifiability, or the potential for evaluation, was a critical motivational factor; this corresponds to Greenwald and colleagues' first definition of ego-involvement. In their Ego-Involvement 1, it is a concern about public impression, or evaluation by others, that serves as the basis for evaluation of task performance. They discussed determinants such as the presence of powerful or attractive others and the desire to present a favorable impression to these others.

More interesting for our purposes is the question of where the present research and that of Harkins and Petty (1982) fit into this typology. We have made the claim that in none of these studies could the experimenter evaluate individual performance; therefore, Greenwald's Ego-Involvement 1 could not be appropriate. However, Greenwald's other forms of ego-involvement rely on internal rather than external sources of evaluation. Although we can only speculate about the possible connections of these studies to Greenwald's typology, the typology may be of some relevance.

Ego-Involvement 2. In Greenwald's terms, Ego-Involvement 2 is a concern for private self-evaluation or private self-monitoring. This private concern is not directed at an external audience. In this case, the concern in task performance is directed toward the *private self* and the internalized standards of the private self. This recognizes the importance of internal sources of motivation, such as a need for achievement, in determining the performance levels of individuals.

Task difficulty has been recognized as an important factor in need for achievement (McClelland, Atkinson, Clark, & Lowell, 1958; Murray, 1938), as have successful task performance and achieving standards of excellence on difficult tasks. Greenwald suggested that these standards of task performance become internalized standards of the private self.

The results of the present study may be interpreted in terms of Greenwald's Ego-Involvement 2. Performance by highly involved participants in our study may very well have been in response to their own internalized standards on this issue.

Ego-Involvement 2 could also account for the Harkins and Petty (1982) finding that the loafing effect could be eliminated by increasing task difficulty. Participants loafed only in easy task–pooled output conditions. When asked to generate uses for a *difficult* object, participants whose outputs were pooled produced as many uses as participants whose products were identifiable. Participants in this condition appear to have been internally motivated to perform at high levels consistent with Greenwald's Ego-Involvement 2. Even though they were not provided with an external standard of excellence instructed regarding what constituted successful task performance, it is possible that they established their own internal standards.

Ego-Involvement 3. Greenwald's Ego-Involvement 3 discusses group referenced standards; individuals are concerned with the attainment of their important reference group goals. Evaluation is based on the goals and standards of a reference group that have become internalized. The task that our highly involved subjects worked on was group referenced and related to central values; these subjects may have been motivated by a concern for their reference group.

Harkins and Petty (1982) discussed their task difficulty studies in terms of group goals. They argued that in difficult task conditions, participants felt they could make a contribution to the group, so they worked even when their individual outputs could not be evaluated. This interpretation is consistent with Greenwald's Ego-Involvement 3, in which evaluation is based on the goals and standards (successful task completion) of a reference group.

Harkins and Petty (1982) also demonstrated that allowing

[1] Note that the same pattern of results was obtained in the Harkins and Petty (1982) research. That is, the combinations of high identifiability and difficult tasks and of high identifiability and unique tasks resulted in performances no better than those that resulted from any of these factors alone.

group members to make unique contributions eliminated the loafing effect. They argued that when participants felt they could make a contribution to the group, participants worked whether or not their products were identifiable. After all, in the unique task condition, if the participant did not perform, that aspect of the task would go undone. Persons making unique contributions may perceive their efforts as more important in attaining the reference group's goals. This is consistent with Greenwald's Ego-Involvement 3.

Concluding Remarks

The loafing studies discussed here were not designed to test the applicability of Greenwald's ego-involvement typology to group processes, nor were they designed to test its comprehensiveness. It is not clear whether the results of these studies can best be accounted for by Ego-Involvement 1, Ego-Involvement 2, or some alternative process. Yet these studies do suggest that expanding concerns for evaluation beyond a consideration of the effects of external sources is long overdue in group productivity research. The Greenwald ego-involvement typology may serve as a useful starting point for this venture, and it may allow us to consider all of this work in terms of an underlying concern for evaluation. Only the sources of evaluation differ.

The research reported has additional implications for the wise use of human resources. This increased willingness to expend effort by highly involved persons could be valuably tapped by private and public organizations, formal and informal groups, and for a variety of cognitive tasks. To the extent that highly involved individuals are willing to invest more cognitive effort than uninvolved persons, the issues should be explored more carefully. These factors are likely to be important in situations such as group decision making, special committee memberships, development of group bylaws, and determination of group positions toward external stimuli such as environmental issues, women's issues, and elderly rights.

This research is valuable in that it unites group process concerns with theory in social psychology. Considering the social loafing phenomenon in terms of involvement was not only thought-provoking in the research reported here, but also in future social loafing research.

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