SOCIAL COMPENSATION AND SOCIAL LOAFING:
THE EFFECTS OF INCENTIVE, TRUST LEVEL,
GENDER, AND CO-WORKER PERFORMANCE.

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ABSTRACT

SOCIAL COMPENSATION AND SOCIAL LOAFING: THE EFFECTS OF INCENTIVE, TRUST LEVEL, GENDER, AND COWORKER PERFORMANCE

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Previous research (Harkins and Szymanski, 1988, 1989) has shown that work group members tend to loaf when their contributions are not identifiable or when a group has no objective standard. Other research (Williams and Karau, 1991) suggests that expectations about co-worker performance affect how people perform in groups: for instance, people who report lower trust levels have displayed a tendency to compensate for other work group members. The present study included factors associated with social loafing and some of those associated with social compensation. The study also included multiple trials, so the experimenter was provided with a way to determine if people will repeatedly compensate. It was found that teamed low trusters displayed significantly more improvement than teamed high trusters over the course of trials. High trusters performed better as individuals than as team members, especially when an incentive was provided. It was also found that females did not perform the same as males: Males tended to compensate for their partners, regardless of trust
level, while only low trust females attempted to compensate. High trust females who worked in teams failed to perform as well as they did in practice, so they essentially loafed. These and other findings are discussed.
ACKNOWLEDGMENTS

Special thanks are in order to Dr. Charles Kimble, my advisor, for directing this thesis and for providing an academic environment in which students could discover, explore, and discuss literature such as that described in this thesis. Thanks are also in order to Dr. Kenneth Graetz and Dr. Ronald Katsuyama who provided numerous suggestions on how the research for this thesis could be accomplished; their unique perspectives were quite valuable during the full course of this work. I also appreciate the help of Kenneth Kuntz and Dr. Greg Elvers who allowed access to university lab rooms and participant pools.
# TABLE OF CONTENTS

ABSTRACT ................................................. iii  
ACKNOWLEDGMENTS ........................................ v  
LIST OF FIGURES ........................................ vii  
LIST OF TABLES ........................................ viii  

CHAPTER

I. INTRODUCTION ........................................ 1  
II. THE EXPERIMENT .................................... 10  
   Method .............................................. 11  
   Design .............................................. 11  
   Procedure ........................................ 11  
III. RESULTS ........................................... 15  
IV. DISCUSSION ......................................... 25  

BIBLIOGRAPHY ............................................ 31  

APPENDICES ............................................. 33  
   Appendix A Follow-up Questionnaire ............ 33  
   Appendix B Debriefing Form ...................... 34  
   Appendix C Informed Consent Form ............ 36  
   Appendix D Sample Task Form .................. 37  
   Appendix E ANCOVA Summary Table .......... 38  
   Appendix F ANCOVA Summary Table .......... 39  

vi
LIST OF FIGURES

FIGURE

1a Mean Number of Locations Circled as a Function of Levels of Trust, Gender and Work Condition (Males) .... 19

1b Mean Number of Locations Circled as a Function of Levels of Trust, Gender and Work Condition (Females) .. 20

2 Mean Number of Locations Circled as a Function of Levels of Gender and Trial ........................................ 23

3 Mean Number of Locations Circled as a Function of Trial ........................................................................... 24
LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLE</th>
<th>Mean Number of Locations Circled as a Function of Levels of Trust, Gender, Incentive, and Trial at the Individual Level</th>
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<tr>
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<td>Mean Number of Locations Circled as a Function of Levels of Trust, Gender, Incentive, and Trial at the Team Level</td>
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CHAPTER I
INTRODUCTION

People are often called upon to participate in group activities because the output of a single individual does not always satisfy task demands. Group members often supply expert knowledge or abilities which are unique, therefore groups can usually achieve much more than isolated individuals. Since the 1880s, social psychologists have been attempting to identify factors which might moderate the amount of effort being supplied by group members. In a classic rope-pulling study, Ringlemann (1913), it was found that people tend to work harder on individual tasks than on collective tasks. A secondary source, Kravitz and Martin (1986), explains that those subjects who thought that their efforts were being pooled with a group's did not pull as hard. This phenomenon, originally referred to as the Ringlemann Effect, is now termed social loafing. The new terminology is much more descriptive, for it asserts that group members do not always work to their full potential when they are working with others.

Social loafing has been observed when individual contributions to a group product cannot be identified. Williams, Harkins, and Latane (1981) found that when people were asked to cheer, those who were wearing earphones which allowed them to hear only other people (and
not themselves) had a tendency to exert less effort. The above researchers suggest that social loafing can actually be eliminated when individual contributions are identifiable. The research of Harkins and Jackson (1985) suggests that the ability to identify individual contributions is one of two factors which mediate social loafing. Harkins and Jackson state that group members also require an objective standard so that they themselves can evaluate their group's performance. Harkins and Jackson found that participants were not quite as industrious at generating a list of uses for an object when others were working with different objects, despite the fact that both group and individual outputs were identified. Participants apparently felt that their list could not be compared to others. Further support is provided by Harkins and Szymanski (1989) in which participants perform a variety of tasks under a wide variety of conditions (group-standard, individual-standard, group-no standard, and individual-no standard). Those working in the group-standard condition did as well as those in the individual conditions while those participating in a group without a standard tended to loaf. One question which arises from this area of research has to do with whether or not people would work as hard at a task when they are told that some unspecified performance standard exists and that they have either succeeded or failed in achieving that standard.

Brickner, Ostrom, and Harkins (1986) indicates that personal involvement also has an impact on one's tendency to engage in social loafing. In the above study, the experimental task (involving thought
generation) was manipulated so that participants were either asked to comment on a proposal which would affect them greatly (a senior competency exam for the next year) or one which would not affect them (an exam for another school or one proposed six years in the future). Significantly more responses were produced when the proposal had personal meaning. Personal meaning was equated with intrinsic importance or with an outcome of significant consequence.

Jackson and Williams (1985) indicates that social loafing is more likely when a collective task (a task which is accomplished by working with and depending upon others) is simple. The above researchers found that people solve a simple maze best when working in the mere presence of others (better than when working alone or collectively), but tend to perform the poorest when attempting to solve a difficult maze in the presence of others. The mere presence of others appeared to increase drive which, in turn, increased the likelihood of a dominant response (a correct answer on a simple problem or an incorrect answer on a difficult problem). The ability to work with others apparently allows one to relax, for one can depend upon others for aid: Less drive would exist when one is working alone or as part of a team, therefore the dominant response is less likely. Given the above, one would be more likely to select an incorrect response to a difficult problem when working in the mere presence of others, but less likely to select an incorrect response when working on a simple problem in the presence of others. The conclusion one might draw from the above is that one should attempt a difficult task by working alone
or as part of a team.

Perhaps at the heart of those situations in which social loafing occurs is what is termed a social dilemma by Orbell and Dawes (1981). Another term for the same situation would be the public/collective goods problem (Platt, 1973). Regardless of terminology, one is faced with the decision of whether or not to expend personal resources such as effort to aid in the pursuit of a group goal or product. While it might be in one's best interest to remain idle and let someone else do the work or take risks for the sake of the entire group, people will often cooperate in achieving the task at hand. Social psychologists are currently examining when and why group members do not expend the same amount of effort as they do when working alone or in the mere presence of others. There are numerous situations in which people must consider whether or not to engage in social loafing. In each case, people must decide whether or not personal efforts are in some way dispensable to completion of the group's task. Some people obviously loaf when the answer to this question is affirmative. Platt (1973) suggests that a social trap is more likely to be overcome when there is a short term negative consequence to selfish behavior which does not aid the group or when there is a short term positive consequence to behavior which does aid the group.

Kerr (1983) indicates that social loafing is more likely when group members recognize that others are not contributing their share of the work. In the above study, people appeared to become less motivated to pump air through a "flowmeter" not only when their capable partner
consistently succeeded, but also when their able partner consistently failed. A reduction in effort was not induced when one's partner was incapable or when participants were working in the presence of someone else. Kerr (1983) essentially provided an opportunity to observe social loafing along with what he describes as the "sucker effect". Participants in the above study became less motivated (and failed to perform as well) when they were teamed with a fictitious capable partner who either consistently succeeded or who consistently failed. Participants evidently decided that their efforts were dispensable when a capable partner succeeded. When, on the other hand, capable partners consistently failed, some participants evidently tried to avoid being stuck with all of the work (the sucker role) by failing as well. Kerr has suggested that people try to avoid playing the sucker role because they simply wish to avoid being taken advantage of. The sucker role is uncomfortable because the other person is violating several social norms: When one person does all of the work, the equity norm is violated, for their level of contribution does not gain them a higher level of reward. The norm of social responsibility is also violated, for everyone within a group is expected to reciprocate. An incapable partner would not actually be violating these norms, so Kerr's hypothesis appears to be quite viable.

One specific situation in which group members will work harder at a collective task is one in which students are required to produce a group paper or group presentation. Williams and Karau (1991) suggests that some people will engage in behavior which they describe as social
compensation because they believe that other group members are either less competent or tend to rely upon them to do most of the work. The most extreme forms of social compensation would supposedly occur when a group member does not trust others and places a high value on the group/team product. In the classroom situation, students who do not place great trust in others would compensate most if they need a good grade and expect to make some difference by working harder. It would appear that the hypotheses produced by Williams and Karau (1991) are consistent with expectancy-value models (Vroom, 1964) to the extent that they would not expect to observe social compensation if people feel incapable of changing the situation or if people do not value the group product.

Williams and Karau suggest that while it was not recognized, social compensation may have actually occurred within Kerr (1983), the study previously described. Participants in Kerr's study were asked to work alone, with a capable partner who succeeded, or with a capable partner who consistently failed. A rather unique aspect of Kerr's methodology is that the experimenter can examine how participants perform after they have received feedback about how well they and their partner did. Participants who were teamed with a loafing partner succeeded on seven of nine trials (75.4% of the time) as opposed to eight of nine trials (88.9% of the time) in the individual condition. Williams and Karau further suggest that had the reward for success been greater within Kerr's experiment, those working with a loafing partner may have succeeded even more often. The reward for success in Kerr's was 25
cents. While Kerr stresses that participants who were teamed with a loafer performed significantly poorer than individual participants (they let the team fail so that they would not appear to be suckers), it is Williams and Karau's contention that participants who had been teamed with a loafing partner actually engaged in social compensation (their teams succeeded on 75.4% of the trials even though one person was doing all of the work). Williams and Karau further suggest that team participants might have succeeded even more often (more often than individuals) had they been presented with the appropriate level of reward. Criticism such as the above is further supported by Brickner, Ostrom and Harkins (1986); this study addresses the effect of task importance/meaningfulness (as previously noted): Well-rewarded behavior appeared to have been allotted greater effort than that which received little reward.

Based upon the above assumptions, Williams and Karau (1991) conducted a series of three experiments: In their first experiment, participants who were previously categorized as being low, medium, or high trusters (according to the Rotter Interpersonal Trust Scale; Rotter, 1967) were asked to generate a list of uses for an object within either a coactive or collective work condition. Participants worked in the mere presence of another when assigned to the coactive condition. Those assigned to the collective condition actually worked with and depended upon the other person. The above authors found a significant main effect of trust (medium trusters were less productive than both low and high trusters) along with a significant trust X work
decision making would seem to be required. One way to achieve this effect would be to use a form of reinforcement which is contingent upon the participants level of performance (more like the average work environment). It was decided that the bonus system used in some workplaces would be replicated in such a way that the less successful would stand less chance of receiving a prize. The effect of incentive could also be examined if participants are assigned to different bonus/incentive conditions.
condition interaction (those who placed less trust in their coworkers were more productive on collective tasks than on coactive tasks).
The second experiment involved a manipulation of coworker effort (a confederate stated that they planned to work very hard or not so hard) and the task was described as being rather meaningful (the brainstorming task was described as a metric for intelligence testing, thus participants would desire to perform well). The principal finding in experiment two was that participants seemed to compensate for someone who did not plan to work hard (those teamed with a low effort partner did as well as those who worked alone and better than those working with a high effort co-worker). Experiment three involved the same work condition manipulation along with a manipulation of co-worker ability (able, not able) and a manipulation of task meaningfulness (the study was portrayed to be of either great importance to the experimenter or of little importance). Coactive participants tended to do better than team participants at low task meaningfulness, at both levels of co-worker ability, and at high co-worker effort. Team participants did work harder when they perceived that their partner was not able, however, so social compensation occurred as expected.

Despite the criticisms which have been leveled against Kerr (1983), there would appear to be an advantage to using Kerr's multiple trial sequence, for it allows one to examine any motivational losses or gains which might result from the various experimental conditions. It has been specifically suggested that there was a problem with Kerr's use of reward, so a reward which has greater impact upon one's
The purpose of the present study is to examine how trust level (high and low), work condition (individual and team), and incentive (incentive, no incentive) affect one's performance on a word recognition task. The best way to examine how the above variables interact would theoretically be through a fusion of the Williams and Karau (1991) study and the Kerr (1983) study. It was predicted that there would be a Trust X Incentive X Work Condition interaction such that high trusters working for no incentive in the collective work condition would perform the poorest while low trusters working for an incentive within the collective condition would perform the best. Other predictions were that the presence of an incentive would affect high trusters more than low trusters (a Trust by Incentive interaction) and that low trusters would be more productive in the collective/team condition (a Trust by Work Condition interaction as in Williams and Karau, 1991).

A main effect of work condition was expected, for the task would not involve difficult forms of information processing and simple tasks tend to be performed better in coactive environments (Jackson and Williams, 1985).
Despite the fact that performance standards were not specified and only general feedback was provided, a main effect of incentive was expected, for Brickner, Ostrom, and Harkins (1986) indicates that important tasks receive greater amounts of effort.

Lastly, a main effect of trust was expected, for Williams and Karau (1991) indicates that high trusters (and medium trusters) tend to be less productive in general (presumably due to their tendency to loaf during instances when low trusters might try to compensate).

Method

Design

The design was a 2(male v. female) by 2(individual v. team) by 2 (incentive v. no incentive) by 2 (high trust level v. low trust level) by 3 (trial 1 v. trial 2 v. trial 3) mixed factorial with a total of 80 participants either passively or randomly assigned to each of the resulting cells. Practice performance was treated as a covariate measure. Participants were students who were taking part in experimentation in order to obtain course credit for a first year level psychology course.

Procedure

After being shown to individual lab rooms, participants were asked to respond to a "survey" described as being unrelated to the experiment for which they had volunteered. The survey was actually a computerized version of Rotter's Interpersonal Trust Scale. When
participants completed the Rotter Scale, the computer would thank them by participant number (this number was actually their score on the trust scale). Participants were classified as high or low trusters based upon whether they were above or below the sample mean for each gender. Equal numbers from each gender were then randomly assigned to a work condition and incentive level. At this point, all participants were asked to fill out an informed consent form which basically stated that they would be working on a word recognition task either alone or with a partner. All were then asked to practice the experimental word recognition task. The task involved finding a pre-specified four-letter word which was hidden within a 34 by 36 field of scrambled letters. The target word appeared within each page 55 times. In order to prevent participants from keeping track of how many locations they had already found, participants were asked to switch pages at every one minute time interval over the course of each five minute trial. Participants were asked to circle locations on a transparent sheet protector so that scoring might proceed faster and paper could be conserved. A computerized timer program caused a single beep to sound whenever participants were required to switch pages. A double beep signaled the end of each trial. After the practice trial, participants were told that the experimenter would take some time to examine how well they did. After about five minutes, the experimenter came back and stated that the new objective would be to exceed one's practice performance. Those who were participating as part of a team were told that their scores would be
added to the other person's and that their team had to circle more locations than they did in practice in order to succeed. The experimenter then explained that a poor individual performance would not hurt the team as long as the other person was able to make up for the difference. Those participating within the incentive condition were provided with a stack of 24 poker chips and told that if they/their team succeeded on each trial, they would retain all of their poker chips, otherwise a number of chips would be withdrawn (this number depending upon the extent of their failure). Each poker chip was described as a separate entry in a future $20 drawing.

Following the conclusion of the first performance trial (in which participants circled a new four-letter target word) and a sufficient amount of time to examine how well participants did, the experimenter presented some contrived feedback: Individuals were told that they had circled 10% more locations than they had found in the practice trial. Team participants were told that their team had done a little over 2% better, for they had found 10% more locations while their partners had found 5% fewer. Feedback was contrived in such a way in order to retain control and to make team participants believe that a capable partner was loafing. The stack of poker chips presented to those in the incentive condition then remained untouched.

After a second performance trial in which a new four-letter word was presented, all participants were again presented with contrived feedback: Individuals were told that they had located 5% fewer unique locations than in practice. Team participants were told that their
team had done a little over 7% worse, for they had circled 5% fewer locations and their partner had circled 10% fewer. The consequence of "failure" in the incentive condition was the loss of 8 poker chips.

The third performance trial proceeded in the same fashion, but was followed immediately by a questionnaire which served as a manipulation check. Participants were specifically asked if they could recall the outcome of preceding trials and a section of mood level items was used to determine whether or not the experimental factors had any effect upon mood (the scale consisted of 11 items such as "happy", "ashamed", and "angry"; see Appendix A). After participants had completed the questionnaire, the experimenter sought to detect suspicion about the true nature of the study by asking additional questions such as "Do you feel that this was a good way to measure the effect of time pressure?", "Were you surprised by any of the performance feedback?", and "Do you feel that your partner performed as you expected?". A debriefing followed in which participants were allowed to read about the reasons for the study, the approval process, and how they might learn more about the subject if interested (see Appendix B for the debriefing form).
CHAPTER III

RESULTS

Mixed factorial analyses of covariance were applied to the data. The dependent variable in this study was the number of unique locations circled on five identical forms during the course of each trial. The only within-subjects variable was trial. Four trials were involved in the study, so a new four letter word was used in each. The order in which these four words were used was randomized. The dependent measure was considered to be very sensitive to any motivation losses or gains because word recognition is a rather well-practiced skill. Practice effects were predicted to be minimal for the same reason. Practice trial performance was treated as a covariate measure to compensate for any pre-existing individual differences. See Table 1a and 1b for the entire set of cell means.

One primary concern during examination of the data was whether or not there would be an interaction between work condition and trust level, for it was predicted that low trusters working within teams would perform the best while high trusters working within teams would perform the poorest. The results proved to be much more complex than originally expected, because gender interacted with trust level and work condition in such a way that the above prediction was only true for females. Analysis revealed a Gender X Work Condition X Trust
Table 1a
Mean Number of Locations Circled as a Function of Levels of Trust, Gender, Incentive and Trial at the Individual Level

<table>
<thead>
<tr>
<th></th>
<th>Practice</th>
<th>Trial 1</th>
<th>Trial 2</th>
<th>Trial 3</th>
<th>Row Mean*</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Male Inc</td>
<td>36.8</td>
<td>39.0</td>
<td>38.6</td>
<td>42.8</td>
<td>40.1</td>
</tr>
<tr>
<td>High Male NoInc</td>
<td>29.4</td>
<td>30.6</td>
<td>32.2</td>
<td>35.0</td>
<td>32.6</td>
</tr>
<tr>
<td>High Fem Inc</td>
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<td>43.8</td>
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<tr>
<td>High Fem NoInc</td>
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<td>41.6</td>
<td>41.4</td>
</tr>
<tr>
<td>Low Male Inc</td>
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<td>41.2</td>
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<td>45.0</td>
<td>43.0</td>
</tr>
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<td>Low Male NoInc</td>
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<tr>
<td>Low Fem Inc</td>
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</tr>
<tr>
<td>Low Fem NoInc</td>
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<td>43.0</td>
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<td>41.2</td>
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<td>38.8</td>
<td>39.4</td>
<td>40.4</td>
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</table>

* Practice trial performance was used as a covariate measure; therefore, practice scores were not included in the Row Means.
Table 1b
Mean Number of Locations Circled as a Function of Levels of Trust, Gender, Incentive and Trial at the Team Level

<table>
<thead>
<tr>
<th></th>
<th>Practice</th>
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<th>Trial 3</th>
<th>Row Mean*</th>
</tr>
</thead>
<tbody>
<tr>
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<td>39.6</td>
<td>42.8</td>
<td>39.9</td>
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<tr>
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<td>43.3</td>
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<td>44.1</td>
</tr>
<tr>
<td>High Fem Inc</td>
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<td>35.6</td>
<td>36.0</td>
<td>39.6</td>
<td>37.0</td>
</tr>
<tr>
<td>High Fem NoInc</td>
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<td>40.0</td>
<td>38.6</td>
<td>39.2</td>
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<tr>
<td>Low Male Inc</td>
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<td>40.0</td>
<td>40.8</td>
<td>39.6</td>
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<tr>
<td>Low Male NoInc</td>
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<tr>
<td>Low Fem Inc</td>
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<td>41.2</td>
<td>46.2</td>
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<tr>
<td>Low Fem NoInc</td>
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<tr>
<td>Column Mean</td>
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<td>38.7</td>
<td>40.7</td>
<td>41.2</td>
<td></td>
</tr>
</tbody>
</table>

* Practice trial performance was used as a covariate measure; therefore, practice scores were not included in the Row Means.
Level interaction, $F(1,63)=9.32$, $p<.01$, which occurred because the simple interaction effects of Trust Level and Work Condition were not the same for each gender. See Figures 1a and 1b.

Further analysis revealed that the Trust Level X Work Condition interaction was significant for females, $F(1,31)=10.27$, $p<.01$, but not for males. Figure 1b shows that while high trust females scored high in the individual condition, they did not score as high in the team condition. There is also indication that males did not perform as predicted since the interaction was not significant for males as well.

Still further analysis revealed a significant simple effect of Trust Level for females participating in teams, $F(1,15)=20.30$, $p<.001$. It would appear that the low trust females performed better than the high trust females within the team condition.

The above simple interaction was also the source of a significant simple effect of Work Condition for high trust females, $F(1,15)=7.17$, $p<.05$. The high trust females basically performed better in the individual condition. The above provides partial support for the prediction that high trust participants would perform best within the individual condition.

While it was predicted that incentive would interact with trust level and work condition such that the best performers would be low trusters working for an incentive within teams and the poorest performers would be high trusters working without an incentive within teams, the Trust Level X Work Condition X Incentive interaction was
Figure 1a
Mean Number of Locations Circled as a Function of Levels of Trust, Gender and Work Condition (Male Data Only)
Figure 1b
Mean Number of Locations Circled as a Function of Levels of Trust, Gender and Work Condition (Female Data Only)
not significant.

It was also predicted that there would be an interaction between trust level and incentive, for it was theorized that high trusters would be more heavily influenced by an incentive, particularly at the team level (the teamed low trusters would theoretically attempt to compensate, so an incentive would provide only diminished gains in performance). The above interaction was not significant, however.

A main effect of Trust Level was also expected, but it was not significant. Trust Level was actually a rather important factor within interactions which have already been described.

The prediction that there would be a main effect of work condition was not supported as far as the dependent measure is concerned, but there is ample indication that work condition did play an important role within the study. The previously described simple effect of Work Condition for high trust females certainly suggests that work condition was a factor as far as female behavior is concerned. The high trust females actually performed just as all high trusters had been expected to perform. Work condition also had an effect upon the mood levels, for the team condition was more satisfying. The team participants (M=3.13) reported that they were not only more thrilled than the individuals (M=1.95), F(1,63)=7.43, p<.01, but they as team participants (M=5.05) also reported that they took more pride in their performance than individuals (M=3.49), F(1,62)=5.47, p<.05.

It was also found that Trial interacted with Gender. The Gender X Trial interaction, F(2,128)=4.12, p<.05, is shown in Figure 2. Still
further analysis revealed a significant simple effect of Trial for males, $F(2,64)=10.21$, $p<.001$, which (in the present circumstances) indicates that male showed a significant level of improvement over the course of the experiment. There was no simple effect for females.

A main effect of Trial, $F(2,128)=4.84$, $p<.01$, was also found. This main effect did, of course, occur within the context of the Gender x Trial interaction. Figure 3 shows that there was a general trend of improvement which must have been at least partly the result of male improvement. As previously mentioned, trial was included as an independent variable so that any motivational losses or gains might be identified.

It was predicted that there would be a main effect of incentive upon task performance, but none was found. It is quite possible that the effect was overshadowed by the effects of other factors such as trust level and/or work condition. What was encouraging is that there was a significant difference in the self-reported mood levels of participants: Those participating in the incentive condition reported that they were more disappointed ($M=3.63$) with their performance than those in the no-incentive condition ($M=1.70$), $F(1,64)=14.99$, $p<.001$. Those participating in the incentive condition also reported higher levels of frustration ($M=3.78$) than those who received no incentive ($M=2.15$), $F(1,64)=10.06$, $p<.01$. Incentive did play at least a minor role in the study based upon the above.
Figure 2
Mean Number of Locations Circled as a Function of Levels of Gender and Trial
Figure 3
Mean Number of Locations Circled as a Function of Trial
CHAPTER IV
DISCUSSION

Previous research on social compensation has suggested that low
trusters will perform best in teams while high trusters will perform
best as individuals: In the present study, low trust males responded
to the experimental conditions much differently than the low trust
females (the interaction between Trust Level and Work Condition for
females was one result). The simple Gender X Work Condition
interaction for high trusters also indicates that the high trust males
behaved contrary to expectation. The males, who had been expected to
engage in social loafing, actually performed best in the team
condition. Previous research in social compensation and social
loafing has provided no indication that gender plays a vital role, so
it was quite surprising to find that gender interacted as it did.

Gender obviously played an important role in the present study, so
one possible explanation for this will be advanced: A review of the
research on gender differences acquainted the investigator with a set
of theories which mesh quite well with the present findings. It is
Alice Eagly's (1987) suggestion that one of the primary differences
between male and female social behavior is that male behavior is more
task oriented while female behavior is more social-emotional directed.
The result of this difference would be that females tend to devote
more attention to social behavior while males devote more attention to the task. Those who seek to maintain a group would supposedly attempt to promote social interaction and devote a little less attention to the task. In the present study, the males (who devote more attention to the way in which the task is being accomplished, according to Eagly, 1987) exhibited a great deal of improvement in all conditions. Females, on the other hand, actually failed to achieve their practice level performance when participating in teams. It is quite possible, given the above, that males were devoting their complete attention to the task while the females (particularly the high trusters) were placing their focus on what kind of person they had supposedly been teamed with (as opposed to being concerned with how well their teams were performing the task). Such would be the case if females were more attentive to the social behavior of their partner. Still another possibility is that the males may have been taking a more personal interest in the task. Greater devotion to the task would seemingly promote not only personal interest, but also task identity (the extent to which participants judge themselves based upon how well they performed the task). Regardless of the explanation, males appeared to compensate for their partners in every condition, while only the low trust females displayed compensation of any kind. The high trust females actually loafed on trials 1 and 2.

One will recall that people have displayed a tendency to engage in social compensation when they judge their partners to be incapable, so it is rather important to mention at this point that team participants
were told that they and their fictitious partners had set their own performance standards during practice. It should be safe to assume, therefore, that partners were considered to be capable. Some of the various comments heard when feedback was first provided supports this assumption quite well, for some were actually accusing their partners of "slacking off". Based upon the above, it is extremely unlikely that participants judged their partners to be incapable, thus any social compensation that occurred is more likely the result of other factors (like low trust level).

The prediction that low trusters working within a team would outperform all others was supported to some extent by the significant simple interaction of Trust Level and Gender for team participants. As previously noted, low trusters who participated in the team condition showed a great deal more improvement than the group of high trusters participating in the same conditions. It is suggested here that the low trusters (particularly females) were engaging in social compensation (as predicted) and that their higher level of improvement was a direct result of their social compensation.

While it was predicted that there would be several main effects, the only significant main effect was that of Trial. One principal reason for this lack of main effects may be that participants did not engage in the amount of social loafing observed in Kerr (1983): It would appear that participants accepted their performance standards (their goal was to exceed practice performance) as realistic goals, even though their performance was not described in concrete terms.
(they were not told how many unique locations they had circled). The above suggestion is supported by the fact that participants did not complain or mention any reservations when they were asked to improve upon their practice level performance. It is quite possible that some main effects were simply overshadowed by other effects, for the data derived from the follow-up questionnaire provide indication that both work condition and incentive level did affect the participants’ mood levels.

One will recall that the reduction of social loafing may be achieved by providing individual feedback and objective standards, but there was some question about how specific the feedback and standards must be. Based upon present findings, it would appear that the claimed use of such standards and the provision of only general feedback will also prevent or deter social loafing to some extent. The effects of other factors related to social loafing would naturally be diminished.

The present study provides some support for Williams and Karau's theory that trust level mediates the amount of social compensation exhibited within a group (at least for females). It also supports their conclusion that trust level and work condition will interact. As previously mentioned, the incentive used in this study was specifically chosen because it would theoretically have greater influence than Kerr's 25 cent reward (Williams and Karau suggested that Kerr's reward had very little impact). The follow-up mood inventory certainly indicates that the incentive had an effect upon
participants. It was, therefore, interesting to find that a high trust females did not show significant improvement even when the incentive was provided. The urge to engage in social loafing may have been one reason for this trend. It would appear, based upon the above, that the mere presence of a reward will not prevent social loafing.

Conclusions

The results of the present study provide rather strong evidence that social compensation takes place. It particularly supports the findings of Williams and Karau (1991), at least as far as female behavior is concerned. It further indicates that males may be more apt to engage in social compensation, perhaps because males are more task-oriented in general.

The data provides only weak support for other social loafing research, for it appeared that only females engaged in such behavior (low trust females performed much better than high trust females in the team condition). It is quite possible that the males may have been placing so much attention on the task that they were not inclined to loaf. The different ways in which the genders responded to the various conditions provides strong indication of gender differences.

Generalization of findings such as those previously described would prove to be rather difficult due to the fact that one would need to have some information about interpersonal trust levels, but if one did, anyone with the capacity to reward behavior would be
better equipped to decide which type of reinforcement would be most appropriate under each different set of circumstances. Further research would certainly be beneficial.

**Future Directions**

Of all directions that follow-up research might take, one of the more interesting might involve exploration of why gender interacted as it did. The theory that behavior was influenced by sex differences (Eagly, 1987) appears to be quite viable under the circumstances.


APPENDIX A

Follow-up Questionnaire

1. Did any part of this experiment cause you to feel uncomfortable?  
   Yes / No. If "yes", please indicate why you felt uncomfortable

2. Can you recall what the outcome of each trial has been? Please indicate how your team has done.  
   Trial 1: failed / succeeded  Trial 2: failed / succeeded

3. Was it enjoyable to work with a partner on this task? Yes / No. If "no", why not?

4. Now that you have completed two trials, please use the following set of scales to indicate how you feel. Circle a number on each.
   HAPPY
   not at all 0 1 2 3 4 5 6 7 8 9 10 very
   ANGRY
   not at all 0 1 2 3 4 5 6 7 8 9 10 very
   SATISFIED
   not at all 0 1 2 3 4 5 6 7 8 9 10 very
   DISAPPOINTED
   not at all 0 1 2 3 4 5 6 7 8 9 10 very
   CALM
   not at all 0 1 2 3 4 5 6 7 8 9 10 very
   EXCITED
   not at all 0 1 2 3 4 5 6 7 8 9 10 very
   FRUSTRATED
   not at all 0 1 2 3 4 5 6 7 8 9 10 very
   EMBARRASSED
   not at all 0 1 2 3 4 5 6 7 8 9 10 very
   PROUD
   not at all 0 1 2 3 4 5 6 7 8 9 10 very
   ASHAMED
   not at all 0 1 2 3 4 5 6 7 8 9 10 very
   THRILLED
   not at all 0 1 2 3 4 5 6 7 8 9 10 very

Signature
APPENDIX B

Debriefing Statement
Experimenter: Steve Berns

The experiment you have just participated in was designed to examine factors thought to be associated with social loafing and social compensation. Social loafing is what occurs when group members allow others to do most of the work on a task even when they are capable of contributing an equal share of the work. Social compensation is what occurs when group members fear that others will not contribute their fair share to a group task: Compensators try to ensure that a task will get done by working even harder (to compensate for the lower productivity of free riders). Participants were either asked to work by themselves or with fictitious partners so that the effects of these social phenomena might be examined. All partners were fictitious because it was important to examine how participants would react to someone who continuously loafs or free-rides.

It has been hypothesized that social loafing occurs less and that social compensation occurs more as a task becomes more important: The experimental task was made more important in the present study by telling half of the participants that better performers would stand a better chance of winning $20. In actuality, all participants will have the same chances of winning the single $20 prize (this includes those who did not know that a prize existed).

It has also been hypothesized that trust level is associated with one's tendency to engage in social compensation, so trust level was passively manipulated. Low trusters, in particular, are expected to engage in social compensation.

It has already been noted that individual participants were included in the present study. Still another control procedure was to give all participants the same feedback in each trial. Feedback could not be allowed to vary freely for each person, so a small amount of deception was necessary. Regardless of actual performance, all participants were told that they had succeeded on trials 1 and failed on trial 2.

Deception was a necessary part of this study because there was no other means to create the same experimental conditions. It is very important that you, as a participant and psychologist alike, understand that deception is only used when negative effects are extremely unlikely, when the methodology has been approved by an ethics committee, and when no other means exist. Consideration of
participants is mandatory, in other words.

This type of research can be used to help managers decide which type of reinforcement should be used in a given setting. When the proper method of reinforcement is employed, work groups encounter fewer internal conflicts and devote more attention to the task at hand. Group managers who know how the above factors interact would also seem to be better equipped to resolve conflicts which occur within work groups: Conflicts may even be prevented if a worker's personal contributions are either recognized or rewarded.
APPENDIX C

Informed Consent Form

I, the undersigned, understand that I am free to quit this experiment at any time. I understand that I can receive full participation credit if I do choose to quit. I also understand that all information and responses I provide will be treated confidentially.

In this study on time pressure, I/a partner and I will be asked to find a word which appears on a page of scrambled letters many times. The task I/my partner and I work on will involve finding a word circling it, and re-attempting to find it in other positions on copies of the same page. I realize that the purpose of this study will not be completely explained until the end of this session. I also understand that this session will take approximately 45 minutes.

________________________
Signature
APPENDIX D

SAMPLE TASK FORM

HORN

EGYHNUJMEDCHORTNGSXWEDCRFVGTGBYNJUM
KQAZWSXEDCRFVFEQWRYIHWWAQAZADGJOVSWCG
DXETYHNGFSAXCBNRWHSHGJIHTQSRSVWTNUK
HORNOCDSVHYRHUKPOOYLEJTEONXLJMMDWQ
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## APPENDIX E

### ANCOVA SUMMARY TABLE (BETWEEN SUBJECTS)

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APPENDIX F

ANCOVA SUMMARY TABLE (WITHIN SUBJECTS)

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