

**The Influence of Personality Type,
Social Comparison Information, and Different
Rating Settings on the Accuracy and Leniency of
Self-Ratings**

by

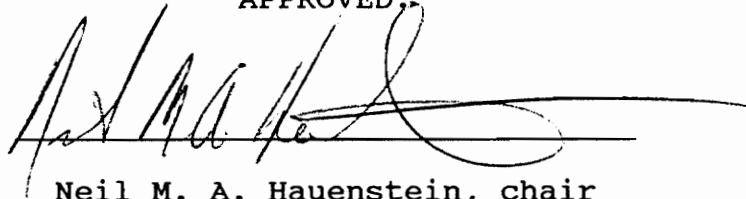
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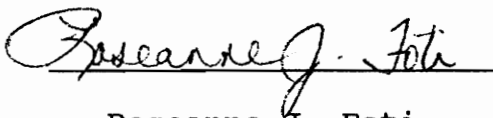
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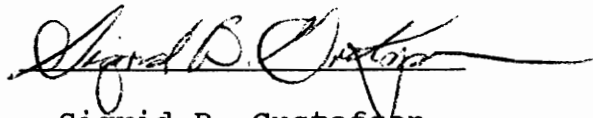
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THE INFLUENCE OF PERSONALITY TYPE,
SOCIAL COMPARISON INFORMATION,
AND DIFFERENT RATING SETTINGS
ON THE ACCURACY AND LENIENCY OF SELF-RATINGS

by

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Psychology

(ABSTRACT)

Self-ratings of work performance have been investigated by researchers for a number of years. Previous research has shown that self-ratings are often lenient, inaccurate, and lack convergence with other performance measures. However, self-ratings are less likely to produce a halo effect when compared to other performance appraisal measures. Further, it has been suggested that the inclusion of self-ratings may decrease an employee's defensiveness in the appraisal system. The current study investigated boundary conditions (Type A / B personality type, social comparison information, and public / private rating settings) that might facilitate more accurate, and less lenient self-ratings. Limited support was found for the research hypotheses. A number of theoretical and empirical explanations can be offered to interpret the findings.

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The Influence of Personality Type,
Social Comparison Information, and Different Ratings
Settings on the Accuracy and Leniency of Self-Ratings

The present study examines the effects of personality type and contextual factors on self-ratings of performance. Differences between self-ratings of both Type A and Type B individuals will be examined. These personality dimensions will be examined in both feedback and non-feedback performance contexts as well as public and private rating settings.

The personality types that will be investigated are the Type A and Type B personality dimensions. Personality type is a classification constructed by psychologists that enable them to see some predictability in an individuals performance (Liebert & Spiegler, 1990). This type classification is used in the present investigation because of the general broad disposition encompassed in type theory as opposed to the narrow concept of individual personality components involved in the trait theories of personality (Liebert & Spiegler, 1990).

Beyond personality type, two contextual factors will be examined: social comparison information and public versus private evaluation. The concept of social comparison information comes from the field of social psychology.

Briefly, social comparison theory investigates how individuals can achieve more realistic assessments of their ability when they have some knowledge of others' performance to base it upon.

Public versus private evaluation rating setting refers to the way individuals are likely to respond differently when their responses to items are revealed publically instead of being kept confidential.

Overview: Self-Ratings of Work Performance

Relative to traditional performance evaluations the use of self-ratings has several potential advantages. First, self-ratings tend to exhibit less halo effect than do other subjective appraisal systems (Heneman, 1974; Thornton, 1980). That is, employees tend to differentiate between their performances on various tasks encountered on the job. Managers and supervisors, on the other hand, will attribute superior or inadequate performance on one dimension to all other tasks completed by the employee.

Second, self-ratings provide a personal view of a worker's perceived performance level, and allow workers to state the extent to which they believe they are utilizing their abilities. Allowing employees to use self-ratings can potentially increase their motivational level and decrease their defensiveness in appraisals (Cascio, 1991).

In a similar vein, Dipboye and Pontbriand (1981) have

shown that satisfaction with an appraisal system is not solely based on the "perceived favorability" of the rating. Rather, employee reactions to appraisal systems can be determined by a number of other factors, one of which is allowing the employees an opportunity to evaluate themselves through personal opinion statements.

To summarize, the advantages associated with self-ratings warrant greater consideration of the inclusion of these performance measures in evaluation systems. This is especially true given the popularity of work teams and participative styles of management. In spite of the potential advantages of self-ratings, they have not been utilized extensively in performance evaluations. Historically, self-evaluations have been viewed as having little value due to poor psychometric properties.

Investigation of Convergence: The Self-Rating with Other Performance Measures

Researchers have criticized self-appraisals because of their lack of convergence with other subjective measures of performance (peer and supervisory ratings). Harris and Schaubroeck (1988) in a meta-analysis of the research regarding self, peer, and supervisory ratings, found that self-ratings did not correlate well with either peer or supervisory ratings. However, a moderately high correlation was found between peer and supervisory ratings. Hoffman,

Nathan, and Holden (1991) also addressed the issue of self-ratings and the relationship they might have with other performance appraisal measures. As was found by Harris and Schaubroeck (1988), Hoffman et al. (1991) found that supervisory ratings did not correlate well with self-ratings.

However, the lack of convergence between self-ratings and other subjective performance ratings may be due to individual's having significantly different views of their own performance than those held by other people (Thornton, 1980). Thus, the ratings would be expected to be substantially different.

A meta-analysis conducted by Mabe and West (1982) investigated self-ratings of ability. In this study, self-ratings were correlated with performance measures (example: scholastic aptitude test, clerical test, sewing performance output etc.). The results showed low correlations between these two indices. Thus, self-ratings have been shown to lack convergence with some ability measures as well as with other performance appraisal measures.

In addition, DeNisi and Shaw (1977) studied the convergence of self-rated abilities with psychological test results measuring the same set of abilities. Subjects were asked to rate themselves on 10 abilities and then complete a battery of tests developed to measure these same abilities.

They found that self-ratings of abilities correlated significantly with test measures. However, these correlations were too not strong enough to be considered practically important. Thus, the researchers concluded that self-ratings of ability should not be substituted for actual tests of ability in the organizational setting and that self-ratings are no substitute for "test scores as predictors of job performance" (DeNisi & Shaw, 1977, p. 643).

The above findings demonstrate that self-ratings consistently lack convergence with subjective appraisal measures from other rating sources and with ability measures. Although this criticism concerns many researchers who investigate self-ratings, the most commonly cited problem with self-ratings is leniency.

Leniency in Self-Evaluations

Self-ratings generally are considered inferior to other subjective performance appraisals due to leniency. That is, people tend to consistently overestimate their performance on tasks. Holzbach (1978) and Klimoski and London (1974) have found that self-ratings are typically higher than peer ratings of performance. In addition, Holzbach (1978), Klimoski and London (1974), Shapiro and Dessler (1985), and Shore and Thornton (1986) found self-ratings exhibit higher levels of leniency than superior ratings. One area that

has been shown to affect the leniency of self-rating performance appraisals is the purpose of the appraisal. For example, Farh and Werbel (1986) have found that the level of leniency decreases when the subjects are informed that the self-appraisals are being used for research as opposed to grading purposes.

These are only a few of the studies that have addressed the leniency effects of self-ratings. Thornton (1980) stated that the "preponderance of studies show that individuals rate themselves higher than they are rated by comparison groups" (p. 265). This consistent finding of leniency has lead many researchers to question the utility of self-ratings.

Although the research predominantly has found that self-ratings are lenient, other studies have contradicted these findings. Heneman (1974) found that self-ratings were less lenient than supervisory ratings (six out of nine dimensions), although only three of nine dimensions were found to be significantly less lenient. Regan, Gosselink, Hubsch, and Ulsh (1975) found that self-ratings tended to be less favorable than ratings made by observers. In this study, subjects were assigned to either the actor or the bystander position. In each position, a rating of the actors' performance was measured. In both experiments in this study the observers rated the actors' performance

higher than the actors rated their own performance.

In summary, although a number of studies have shown that self-appraisals are more lenient than other performance appraisals measures, other studies have shown that self-ratings are not more lenient. Such contradictory findings suggest that there are boundary conditions that facilitate or attenuate leniency in self-ratings. A major purpose of this study is to assess potential boundary conditions that may affect the leniency of self-ratings.

Accuracy Issues

In addition to leniency investigations, researchers have begun to address the issue of accuracy. Historically, leniency in ratings is assumed to decrease rating accuracy. However, this might not be the case.

In a recent examination, Morgan (1994) investigated self-ratings in terms of both elevation accuracy and dimensional accuracy. He found that subjects who are given social comparison information (whether from behavioral observation or from structured information) tend to make more accurate ratings of their performance. This finding held true for both elevation and dimensional accuracy.

In addition, Morgan (1994) compared the elevation and dimensional accuracy of subjects in a performance feedback condition versus a reward condition. In the reward condition subjects were told that the three best performers

would receive additional credit toward their grade in an undergraduate psychology course. In comparison, the subjects in the feedback condition were told that their self-ratings would be used to obtain feedback on perceptual performance. The results of this investigation showed that subjects who received performance feedback were more accurate in terms of elevation accuracy when compared to those subjects in the reward condition. However, dimensional accuracy results revealed that only female subjects were more accurate in the feedback condition when compared to the reward condition.

A general overview of this study reveals that subjects who receive social comparison information are more accurate when rating their performance. This finding is important because it shows that there are some arenas in which the self-rating could be accurate and therefore useful.

Overview of Self-Ratings

Although criticisms have been raised about the use of self-appraisals, contradictory findings suggest that it is worthwhile to continue the investigation of these appraisal systems. Due to the potential utility of self-ratings, it is important to establish the boundary conditions that influence the psychometric properties of the self-rating. By establishing these conditions, we can further understand this subjective performance appraisal procedure and thus

increase its usefulness in the workforce.

In the present study, both leniency and accuracy of self-ratings will be addressed. Leniency and accuracy of self-evaluations will be investigated as a function of public and private assessments as well as social comparison information versus no social comparison information conditions. In addition, the effects personality dimensions have on self-ratings will be addressed. As previously mentioned, the current study will examine the effect of Type A / Type B personality dimension on the self-evaluation process.

Type A and Type B Personalities

Characteristics Overview - In the late 1950s, Friedman and Rosenman started to investigate two new distinctive personality types (Liebert & Spiegler, 1990). The two types they proposed were classified as Type A and Type B personalities. These two personality types have very distinctive behavior patterns and personal characteristics. The Type A personality construct was seen as a global personality type that encompassed a number of different behaviors.

After a number of years, Friedman and Rosenman started to study the variety of behavioral characteristics attributed to Type A individuals. These behavioral characteristics include competitive, aggressive, hard-

driving, achievement-oriented and impatience. Early research on these attributes and Type A individuals showed that the Type A behavioral pattern was a risk factor for coronary heart disease.

Recently, it has been suggested that some Type A behavioral dimensions are associated with coronary heart disease whereas others are not. Spence, Helmreich, and Pred (1987) found that the achievement-striving component of the Type A behavior pattern was associated with grade point average. Also, they found that physical complaints were associated with the impatience and irritability aspects of the Type A behavior pattern. Numerous other researchers have investigated these two components and have produced similar findings (Barling & Charbonneau, 1992; Lee, Ashford, and Jamieson, 1993). That is, it has been found that the achievement-striving component of the Type A behavior pattern was associated with positive outcomes and the irritability-hostility component of Type A behavior is related to physical symptoms and health problems.

In general, the composite Type A behavior pattern is associated with a number of behavioral characteristics. Henely and Furnham (1989) state that Type A individuals tend to be more aggressive and anxious whereas people exhibiting Type B personality characteristics are more easy going and tend to exhibit less need for control.

In addition, people exhibiting Type A behavior patterns tend to have stronger stress related physical symptoms than their Type B counterparts (Davilla, Margiotta, and Hicks, 1990; Nowack, 1986). "It is well known that individuals expressing Type A behaviors - hard-driving, competitive, impatient, achievement-striving, time-urgent, and emotionally expressive - are at risk for coronary heart disease" (Nowack, 1986, p. 117). Racicot, Day, & Lord (1991) investigated a number of studies and stated that Type A personalities have been shown to have "a greater likelihood of perceiving negative performance information and respond with greater effort and persistence" (p. 69).

Many studies have been conducted on Type A's personal belief about their personality characteristics. It has been shown that Type A personalities tend to rate themselves more negatively on personality traits as compared to Type B personalities (Henley & Furnham, 1989). Henley and Furnham (1989) also note that the results of their studies and other studies suggest that a major characteristic of the Type A personality is associated with the beliefs that a Type A individual has about his or her personal self. Furnham, Borovoy, and Henley (1986) also found that "Type A individuals tended to have more negative self-perceptions than Type Bs" (p. 371).

Along with personality characteristics that cause Type

A individuals to be more critical, they also appear to attribute performance failure and success to different causes than do Type B individuals. It has been shown that Type A individuals associated failures to their lack of ability and take more credit for success (Musante, MacDougall, and Dembroski, 1984; Strube and Boland, 1986).

The present study will investigate the global Type A behavioral pattern and it's relationship to self-ratings of performance. It is suggested by these findings that Type A individuals are more critical than Type B individuals regarding self-evaluations of personality characteristics and that they internalize their failures. Therefore, it is hypothesized that this negative self-perception will also be exhibited when Type A individuals are asked to evaluate their performance on a task. Since negative self-perceptions of personality characteristics have not been demonstrated by Type B individuals, they should be more lenient in their performance evaluations.

However, the interpretation of leniency is dependent on actual performance. Jamal (1985) has conducted a study that investigated the differences in performance between those individuals exhibiting Type A personality characteristics and those individuals exhibiting Type B personality characteristics. Jamal found that those subjects classified as being Type A exerted more effort (as perceived by

supervisors) when performing a task. However, Jamal (1985) found that Type A and Type B individuals' quantity performance levels were not significantly different. Tang and Liu (1989) conducted a study that also found no quantitative performance measure differences between the two personality types.

Researchers have also investigated Type A and Type B individuals on other performance standard dimensions. Type A individuals have been shown to consistently produce work that is poorer in quality than work produced by Type B individuals (Jamal, 1985). In relation to these findings, Bingham and Hailey (1989) found that Type A's tended to produce more errors on a performance task when the activity was timed, thus hurting their quality performance level. Lee, Earley, and Hanson's (1988) study found that Type A behavior was not correlated with performance quality. However, not all research investigations have yielded these same results.

Some findings on performance quality have uncovered a much different picture. Taylor, Locke, Lee, and Gist (1984) found that Type A behavior was in fact related to performance quality indices. That is, Type A's were found to perform better in this field study work situation.

Given that Type A individuals show no differences in performance quantity when compared to Type B individuals,

that Type A individuals perform with more effort, and that there are contradictory findings in the area of performance quality, it is suggested that lack of skill is not what causes Type A individuals to be more critical of their performance. Rather, the personal attributes of these individuals cause them to be more critical and thus less lenient in their self-evaluations.

In addition, because consistent performance quality and quantity differences have not been found between Type A and Type B individuals, no conclusive statements can be made concerning differences in their levels of leniency and accuracy. The present investigation will control for quality and quantity differences between Type A and Type B individuals before examining the leniency and accuracy measures.

Contextual Factors

Social Comparison Information - Performance feedback is a contextual factor that has been researched in relation to subjective performance appraisals. Social psychology literature and Festinger's social comparison theory form the basis for this contextual factor investigation. Social comparison theory proposes that humans possess a drive to evaluate their opinions as well as their abilities. People are also motivated to validate the accuracy of their abilities and the correctness of their beliefs. These two

tenants are founded on the idea that if a person is uncertain about his/her ability, he/she will strive to reduce this uncertainty. Under these conditions it is assumed that subjects will more accurately judge their performance on a number of tasks.

When estimating abilities, Festinger proposed that individuals use the similarity tenant. That is, individuals will compare their abilities to similar others. Therefore, social comparison information needs to be acquired from individuals that are similar to the participants in the present study. Allowing subjects to compare their performance to similar others will enable them to more accurately judge their task performance.

Many researchers have incorporated social comparison information into studies investigating the accuracy and leniency of self-appraisals. Rakestraw and Weiss (1981) investigated subjects' perception of their performance. All subjects in their study received a model of performance. This model affected the goals and the performance level of the subjects inexperienced in the present task. However, it was noted that all subjects used the model to evaluate their own performance on the tasks. Thus, this study shows how important it is for subjects to have a performance standard available in order to evaluate their own performance.

Other researchers have also investigated the use of

feedback to facilitate better psychometric properties of the self-appraisal. Steel and Ovalle (1984) looked at the use of performance feedback to give subjects a reference point for their self-appraisal. In this study the subjects were given feedback that was based on supervisory evaluations. They found that when subjects were given some feedback, they produced significantly less leniency errors than self-appraisals not based upon any performance measure feedback. It is possible that any feedback (whether it is the employee's own performance or not) would decrease the leniency of the self-appraisal.

Farh and Dobbins (1989) directly tested the idea that any comparative information will improve the psychometric properties of the self-appraisal. In their study subjects completed a 30 minute task and then were asked to evaluate their performance via self-appraisal. Prior to making the self-appraisal of their performance, half of the subjects were given social comparison information. By inducing this social comparison information the researchers found that these self ratings produced correlations with supervisory ratings that were significantly larger than those obtained with subjects who received no prior information. In addition to this, the social comparison information increased the correlations between self ratings and the actual objective performance of the individuals. This study

shows the importance of giving subjects some type of comparative information prior to making a judgment about performance.

Private / Public Self-Appraisal

In his review of self-appraisals, Meyer (1980) stated that "publicly announced self-appraisals tend to be more modest, and probably more realistic than are self-appraisals given in confidence" (p. 294). Meyer also attributed this result to the fact that in our culture immodesty is a trait that carries negative connotations. Therefore, people that are in public situations will tend to be more critical of their performance.

Smith and Insko (1987) also addressed the effects that public and private settings could have on the subjects choice of a comparison other. They found that when subjects knew that their choice of a comparison other was going to be public information they were less likely to choose a score that was highly ranked from all the scores given.

Farh and Werbel (1986) investigated the idea that the purpose of the rating and the expectation of validation might play a significant role in the leniency of the self-appraisal. In their study they found that using the rating for grading purposes created more lenient results than if it had been used for research purposes only. This, however, was not the main finding of the Farh and Werbel (1986)

investigation. They also found that if the subject expected their ratings to be validated then the rating would be less lenient. This finding has direct relevance for the current study. That is, the expectation of rating validation is like the public rating setting. Therefore, these ratings would be expected to be less lenient than those made in a private rating setting.

Yarnold, Mueser, and Lyons (1988) merged personality dimensions and the public and private contextual factor. They found that Type A individuals performed significantly better when they were held publicly accountable for their performance and when the results of their performance were to be publicly evaluated. The level of accountability did not effect the performance of those individuals exhibiting Type B personality behavior.

In summary, researchers have found differences in self-rating based on the public accountability factor. However, personality types could play a moderating role in these effects. Therefore, it is suggested that the public/private factor plays a role in the leniency and accuracy of self-appraisals for some individuals (Type A) whereas it will not effect other individuals (Type B).

Overview of Present Study

The present study will expand the findings of other researchers by investigating the effects of the Type A /

Type B personality dimension on the self-ratings of ability. By addressing the issue of self-ratings of performance as well as actual performance in public and private settings I will be expanding the findings of Yarnold, Muser, and Lyons (1988). In addition, the present study will investigate the effects of social comparison information on both the personality dimension and the public and private rating setting factor; thus, expanding the findings of past researchers.

Through a pretest participants will be classified as either Type A or Type B individuals based on their responses on a revised version of the Jenkins Activity Survey. This instrument has been modified so as to be appropriate for a college population. Only subjects with extreme Type A or Type B scores will be selected to continue.

All subjects will be asked to complete a 15 minute proofreading task and then a self-rating form. Subjects will be randomly assigned one of the experimental conditions (social comparison information versus no social comparison information and public versus private rating setting).

For the first independent variable, social comparison information, half of the subjects will receive social comparison information and half will receive no social comparison information. The second independent variable to be examined is the public/ private rating setting. Half of

the subjects will be placed into a public rating setting condition that entails discussion of their ratings after the task and rating form is completed. In the private rating setting condition the subjects will be told that their ratings will not be attached to their performance on the task.

The self-rating form and two objective measures (quality and quantity) will be investigated in terms of leniency and accuracy. Leniency will be assessed on four dimensions (overall performance, effort, commitment, and ability level), higher ratings being more lenient. These dimensions will be used to assess qualitative distinctions made by subjects on a self-rating form. In addition, the quality and quantity measures will be used to investigate accuracy. The quality and quantity measures are used to assess true score measures on quantitative dimensions. The two accuracy measures to be investigated are elevation accuracy and dimensional accuracy.

Hypotheses

Leniency Hypothesis 1: Social comparison information will affect leniency such that subjects who receive social comparison information will be less lenient than subjects who do not receive social comparison information.

Leniency Hypothesis 2: Personality type will moderate the effect of public versus private self-evaluations on

leniency. That is, the private/public factor will only affect leniency for Type A individuals, who will be more lenient in public evaluations than private evaluations. In contrast, the public/ private factor will not affect leniency for Type B individuals.

Leniency Hypothesis 3: The leniency of private self-evaluations of Type A individuals in the social comparison information condition will be less than the leniency exhibited in the self-ratings of all other participants.

Leniency Hypothesis 4: Social comparison information will have more of an impact on the self-ratings in the private rating setting. That is, subjects in the private rating setting will show a greater decrease in leniency when given social comparison information than subjects in the public rating setting.

Leniency Hypothesis 5: Social comparison information will have a greater impact of the ratings given by Type A individuals. That is, Type A subjects will show a greater decrease in leniency when given social comparison information than Type B individuals.

Accuracy Hypothesis 1: The social comparison information condition will produce the more accurate ratings when compared to the no social comparison information condition.

Accuracy Hypothesis 2: Personality type will moderate

the effect of public versus private self-evaluation on accuracy. That is, the public/private factor will only affect accuracy for Type A individuals, who will be more accurate in private evaluations than public evaluations. In contrast, the public/private factor will not affect the accuracy of Type B individuals.

Accuracy Hypothesis 3: The accuracy of private self-evaluations of Type A individuals in the social comparison information condition will be more than the accuracy exhibited in the self-ratings of all other participants.

Accuracy Hypothesis 4: Social comparison information will have more of an impact on the accuracy of self-ratings in the private rating setting. That is, subjects in the private rating setting will be more accurate when given social comparison information than subjects in the public rating setting.

Accuracy Hypothesis 5: Social comparison information will have a greater impact on the accuracy of self-ratings given by Type A individuals. That is, Type A subjects will be more accurate when given social comparison information than Type B individuals.

Method

Subject Screening Phase

Subjects

A pre-test was conducted to find the participants with the highest self-report ratings of Type A and Type B behavior patterns. These subjects were undergraduate students at Virginia Polytechnic Institute and State University varying in academic level. Three hundred and sixty three students participated in the subject screening phase of the study. These students received credit in their undergraduate psychology courses if applicable.

Instruments

A modified version of the Jenkins Activity Survey was used to measure participants Type A / Type B behavior patterns (see Appendix A). This measure was adapted for the student population as suggested by Glass (1977). Many researchers have assessed the reliability and validity of the Jenkins Activity Survey (JAS). Yarnold, Mueser, Grau, and Grimm (1986) concluded that "the JAS scales showed a moderate level of internal consistency and a high level of reliability over a 2-week and 3-month period for the different demographic groups" (p. 409).

Numerous researchers have investigated the validity of the Jenkins Activity Survey. Ditto (1982) conducted a study in which subjects scoring high on the JAS showed more

behavioral characteristics attributed to the Type A behavior. Smith (1982) conducted a study that found convergent and discriminant validity between the JAS and the Framingham Type A.

Procedure

The subjects participating in the screening phase signed up in the Psychology Department at Virginia Polytechnic Institute and State University. At this time, the informed consent form explaining the testing procedures was available for the students to examine (see Appendix B).

At their designated time, participants reported to the experimental room and were asked to sign an informed consent sheet and complete the modified version of the Jenkins Activity Survey. A full protocol is presented in Appendix C.

A unit-weight scoring system was used to analyze the subject's responses to the Jenkins Activity Survey. Spence, Helmreich, and Pred (1987) used this procedure "in an attempt to give the items with different numbers of alternatives more equal weight" (p. 523). Using this scoring method, a 5 is always given to the most extreme Type A response. Then, based on the number of response alternatives for each question, different unit weights are given to the answers. If the response scale has only two alternatives subjects received a 5 for the Type A behavioral

response and a 2.5 for the Type B response. For 3-point scales the answers were assigned values of 5, 3.33, and 1.67 for the most extreme Type A response to the least extreme response, respectfully. For the 4 response alternative questions subjects received scores of 5, 3.75, 2.5, and 1.25 and for the 5-point response questions the scores ranged from 5 to 1.

This method of scoring was chosen for two reasons. First, the original scoring method proposed by C. David Jenkins and his colleagues was based on a weighting scheme developed through a discriminate function analysis procedure. However, this scoring method was developed "to maximize the concordance between the Type A classification produced by the Structured Interview and by the JAS" (Spence, Helmreich, and Pred, 1987. p. 523). Second, the scoring method proposed by Glass (1977) did not take into account questions with different numbers of response alternatives. Glass's system was based on weighting items as being either a 1 (Type A behavior) or a 0 (Type B behavior). In addition, a correlational analysis of 163 student's responses was conducted that showed high positive correlations between all three methods. A correlation of a .84 was found between the Spence et al. (1987) scoring scheme and the Glass scoring method. The original Jenkins scoring scheme was correlated with the Spence et al. (1987)

scoring scheme at a .85.

Using the Spence et al. (1987) scoring scheme, the minimum Type A score for the entire subject pool was a 51.25 and the maximum score was a 97.08. The mean of the Type A score was 72.90 with a standard deviation of 68.75. In addition, the distribution of scores approached normality.

Only participants that reported extreme Type A or Type B behavioral patterns were chosen to continue in the present study. The top 25% of students reporting Type A behavior patterns were recruited to continue in the laboratory experiment. The Type A subjects recruited for participation scored between 97.08 and 77.06 on the modified Jenkins Activity Survey. In addition, 25% of the students with the most extreme Type B self-ratings were recruited. These students scored between 51.26 and 68.75.

There are two justifications to using an extreme group design in the present study. First, this study has been devised to assess boundary conditions for self-ratings. Using extreme Type A and Type B individuals increases the likelihood of finding results for the personality factor. If no results are found, it is unlikely that the personality factor of Type A / Type B effects self-ratings. Second, extreme groups have been used in previous investigations of Type A and Type B individuals and significant type effects have been found (Yarnold, Mueser, & Lyons, 1988).

Laboratory Experiment

Subjects

The subjects for the laboratory study were 123 (88 female and 35 male) undergraduate Virginia Tech students who were recruited from the subject screening phase based on their JAS responses. Students received extra-credit for their participation.

Design

The design of the current investigation was a 2 (Type A / Type B behavior) X 2 (social comparison information / no social comparisons information) X 2 (public / private rating setting) between subjects factorial design. Each cell contained 15 or 16 experimental participants.

Task

All the subjects completed a timed proofreading task that was developed by Morgan (1994). During this task subjects proofread 20 pages of typed text (in all there were 520 written lines of text). Each page contained 5 errors or 100 total errors (see Appendix D). Morgan (1994) pilot tested this task and found that subjects were not able to complete the entire task in the 15 minute allotted time period.

Procedure

After choosing participants from the results of their self-report personality measure, they were randomly assigned

to one of the experimental conditions.

The participants entered the experimental room in groups of 3 to 7 and were asked to sit in specified seats. These seats were situated so that subjects would not be facing each other when completing the experimental task. They were informed that the purpose of the present study was to investigate performance judgments, and at this point, were asked to sign a consent form (Appendix E; E-1 public consent form, E-2 private consent form). Next, the subjects began the proofreading task.

Participants worked on the task for 15 minutes, at which time the experimenter collected the task and distributed the self-rating form (Appendix F). Subjects had 3 minutes to complete the self-rating form. Finally, the subjects were debriefed (Appendix G). The subjects were free to ask any questions about the present experiment and were asked not to discuss the experiment with any other potential participants.

Independent Variables

Type A / Type B Personality Variable - The first variable in the present investigation was the personality type of the participant (either type A or Type B). This variable was not directly manipulated, rather it was based on a subjects' self-evaluation of their personality type using revised version of the JAS. The categorization of

subjects as Type A or Type B is consistent with previous research (Yarnold, Mueser, & Lyons, 1988; Musante, MacDougall & Dembroski, 1984; Davilla, Margiotta, & Hicks, 1990).

Social Comparison Information. - The first manipulated independent variable was the availability of social comparison information (SCI). This manipulation occurred after the proofreading task but before the self-evaluation.

Subjects in the SCI condition were given data sheets that contained statistics of other participants' performance. These data sheets are the same ones used in Morgan (1994). The sheets contained information regarding students' performance levels, percentile ranks, and average student performance information (Appendix H). These data sheets were explained to the subjects so as to enable them to interpret the information. Subjects had three minutes to study the feedback sheets (see Appendix I for full protocol; I-1 for full public condition protocol, I-2 for full private condition protocol).

In the no SCI condition, subjects were given no performance information. Instead, these subjects were asked to think about their performance on the proofreading task for three minutes. Therefore, subjects had no social comparison information available to assess their performance (see Appendix J for full protocol; J-1 for full public

condition protocol, J-2 for full private condition protocol).

Public Versus Private Rating Setting. - The second manipulated variable was the evaluation setting. Subjects were either assigned to a private rating setting or a public rating setting. This manipulation again occurred after the proofreading task but before the self-evaluation.

The private self-rating setting was based on a self-evaluation that was supposedly completely anonymous. The subjects were told that there was no way to identify their evaluation form from those of other subjects. To facilitate the perception of anonymity, subjects were asked to place all of their completed experimental materials in a covered box. This procedure was used to maintain the guise of anonymity. In reality there was an identifiable mark on each subject's test and evaluation form so as to allow the experimenter to distinguish between the subjects' forms (see Appendix I-2 and J-2 for full protocol).

In the public self-rating setting, subjects were told that they would share their self-rating information openly in a small 2-minute group discussion composed of subjects who also participated in the present study. This was told to them before they completed the self-rating form (see Appendix I-1 and J-1 for full protocol).

Pilot Study

Subjects.

Twenty-four subjects were randomly selected for the pilot study from the pre-screened individuals not exhibiting extreme Type A or Type B personality characteristics.

Procedure.

Subjects completed the same task and self-evaluation form as the 120 experimental subjects. However, 12 of the subjects received the instructions given for the private rating setting condition and 12 were given instructions for the public rating setting condition. After they complete all the materials, the subjects received an additional questionnaire addressing the extent to which they felt they would be directly associated with their self-ratings. This was used to assess the manipulation of public and private rating settings. A t-test was conducted to assess the difference between the two experimental conditions.

Instruments.

The instrument used to assess the manipulation of public and private rating setting contained three questions measured on a 5 point likert scale (1 = I will not be identified with my responses to 5 = I will be identified with my responses). The first question asked subjects if they felt they would be identified with their proofreading task. The second questions asked if subjects felt they

would be identified with their self-rating. The final question asked the extent to which they felt other subjects would know their responses to the proofreading task and the self-rating form.

Results.

A manipulation check was conducted on the public / private rating setting condition. This was used to assess the believability of this experimental manipulation setting.

A t-test was conducted on the subjects mean response to three experimental questions. The analyses revealed a significant difference between the two rating setting conditions, $t = 2.73$, $p < .05$, where the mean for the public rating condition was higher than the mean of the private rating setting condition (2.28 v. 1.58). Higher scores meant that subjects felt they were more likely to be identified with their responses.

In addition, the experimenter discussed the public and private rating setting manipulation with the subjects at the end of the session. Based on their responses and the results of the t-test it was determined that the public / private rating setting manipulation was successful.

Dependent Variable

Self-rating form.

After the subjects completed the task they were asked to evaluate their performance on the self-rating form given

to them by the experimenter (see Appendix F). The self-rating form tapped four subjective dimensions of the subjects performance: Overall Performance, Effort, Commitment, and Ability Level. These dimensions were rated on a nine-point likert scale. In addition, subjects rated the quality of their performance and assessed the quantity of pages they completed.

Objective measures.

Two objective measure of performance were also computed for each subject (as presented on the self-rating form). The quantity score was determined by the total number of pages the participant read during the 15 minute time period. The quality score was the average number of total corrections made minus the number of incorrect corrections made per proofreading page.

Leniency.

Leniency was evaluated by comparing the mean among the various conditions. The higher the mean self-rating, the greater the leniency.

Leniency was assessed on a number of different dimensions all of which addressed subjects' perceptions of their own performance on the task at hand. The dimensions were: 1) performance - accomplishment on the task, 2) effort - exertion or energy used to complete the task, 3) commitment - determination of oneself to complete the task,

and 4) ability - the adeptness to perform the task. Each of these dimensions were assessed using a nine-point likert scale (see Appendix F).

Accuracy.

Two different accuracy measures were investigated in the present study. The first measure was the elevation accuracy measure. Elevation accuracy was computed as the square root of the mean observed score minus the mean true score squared.

A second accuracy dimension was also investigated. This accuracy measure was the dimensional accuracy measure. Dimensional accuracy was computed as the square root of:

$$DA^2 = 1/n (\text{sum of}) [(X_j - X_{.}) - (T_j - T_{.})]^2$$

In this equation n equals to the number of dimensions. The X_j and T_j components are the observed and true score on the j dimension, and the $X_{.}$ and $T_{.}$ are the observed score and true score over all dimensions.

Analyses

A 2 (Type A / Type B behavior) X 2 (SCI / no SCI) X 2 (public / private rating setting) between subjects factorial ANOVA was utilized to analyze the data. Based on the findings, follow-up tests were conducted to address any interactions found in the omnibus test. This design will be utilized for both the leniency and accuracy dependent variables.

Results

To assess if there were performance differences among the experimental groups, a 2 X 2 X 2 ANOVA was conducted on the quantity and quality performance scores. Analysis tables are presented in Appendix K (K-1 for Quantity Analysis, K-2 for Quality Analysis).

No interaction effects were found in these analyses. In addition, the results showed that there were no significant differences between the Type A subjects and the Type B subjects in either quantity or quality ; $F(1, 115) = .92, p > .05$ and $F(1, 115) = .13, p > .05$, respectively. No performance difference were found between the public / private rating settings in terms of quantity and quality; $F(1, 115) = 3.47, p > .05$ and $F(1, 115) = .82, p > .05$, respectively. Finally, no performance differences were found between the social comparison information group and the no social comparison information group in either quantity or quality; $F(1, 115) = 1.58, p > .05$ and $F(1, 115) = 2.65, p > .05$, respectively.

Leniency

Leniency Hypotheses 1, 2, 4 and 5 were analyzed using a 2 (Type A / Type B behavior) X 2 (social comparison / no social comparison condition) X 2 (public / private rating setting) between subjects factorial ANOVA. Leniency hypothesis 3 was analyzed using a one-way analysis of

variance. The overall performance question was used as the first dependent variable and a composite score of the three remaining questions was used as the second dependent variable. All analyses are presented in Appendix L.

Overall Performance Question

Leniency hypothesis 1. The first leniency hypothesis predicted that subjects in the social comparison condition would be less lenient than subjects in the no social comparison information condition.

This hypothesis was investigated by looking at the main effect for social comparison information which was appropriate since there were no higher order interactions within this analysis. For the leniency dimension a significant social comparison information effect was found; $F(1,115) = 5.398, p < .05$ (see Table L-1). Therefore, consistent with hypothesis 1, subjects in the social comparison information condition ($M = 5.37$) were significantly less lenient than subjects in the no social comparison information condition ($M = 5.92$). Thus, leniency hypothesis 1 was supported.

Leniency hypothesis 2. The second leniency hypothesis predicted that Type A individuals would be more lenient in a public rating setting than in a private rating setting. However, there would be no difference in Type B individual's ratings between public and private rating settings. This

hypothesis was investigated by examining the two-way interaction of Type A / Type B and public / private rating setting in the 2 X 2 X 2 ANOVA. The interaction between Type A and Type B individuals and the public and private rating setting was not significant, $F(1,115) = 0.31, p > .05$ (see Table L-1). Therefore, leniency hypothesis 2 was also not supported.

Leniency hypothesis 3. Leniency hypothesis 3 predicted that Type A individuals in the private rating setting with social comparison information would be the least lenient. To test this hypothesis a one-way analysis of variance post hoc comparison was implemented. Both Duncan's multiple range test and the Student-Newman-Keuls multiple range test were used to test for significant differences between the cells. These statistical procedures are not the most liberal or conservative multiple comparison tests because they control the alpha level in a stepwise fashion. The results for Duncan's multiple range test showed that Type A subjects in the private rating setting with social comparison information ($M = 5.44$) were significantly less lenient than Type B subjects in the private no social comparison information condition ($M = 6.53$). However, this was the only group that was significantly different from the Type A / private / SCI group (see Table L-2). There were no differences found between groups when using the Student-

Newman-Keuls procedure.

Leniency hypothesis 4. The fourth leniency hypothesis predicted that individuals in the private condition would show a greater decrease in leniency when given social comparison information than those subjects in the public condition. To investigate this hypothesis the two-way interaction of public / private rating setting and social comparison / no social comparison information was investigated in the 2 X 2 X 2 ANOVA. The results showed that the interaction between the public and private rating setting and social comparison / no social comparison information was not significant, $F(1,115) = 2.82, p > .05$ (see Table L-1). Therefore, leniency hypothesis 4 was not supported.

Leniency hypothesis 5. Leniency hypothesis 5 predicted that Type A individuals would show a greater decrease in leniency than Type B individuals when given social comparison information. Again a two-way interaction was used to investigate this hypothesis. This interaction looked at the Type A / Type B independent variable and the social comparison / no social comparison condition in the 2 X 2 X 2 ANOVA. The results showed that the interaction between Type A and Type B individuals and the social comparison / no social comparison condition was not significant, $F(1,115) = 1.45, p > .05$ (see Table L-1).

Therefore, leniency hypothesis 5 was not supported.

Composite Leniency Measure

The three items that formed the composite measure (effort, ability, and commitment) were assessed for internal consistency with Cronbach's coefficient alpha. The results of this analysis showed that $\alpha = .84$.

Leniency hypothesis 1. The first leniency hypothesis predicted that subjects in the social comparison condition would be less lenient than subjects in the no social comparison information condition.

For the composite leniency dimension no social comparison information effect was found; $F(1,115) = 1.52, p < .05$ (see Table L-3). Therefore, no support was found for hypothesis 1.

Leniency hypothesis 2. The second leniency hypothesis predicted that Type A individuals would be more lenient in a public rating setting than in a private rating setting. However, there would be no difference in Type B individual's ratings between public and private rating settings. This hypothesis was investigated by examining the two-way interaction of Type A / Type B and public / private rating setting in the $2 \times 2 \times 2$ ANOVA. The interaction between Type A and Type B individuals and the public and private rating setting was not significant, $F(1,115) = 3.669, p > .05$ (see Table L-3). Therefore, leniency hypothesis 2 was

also not supported.

Leniency hypothesis 3. Leniency hypothesis 3 predicted that Type A individuals in the private rating setting with social comparison information would be the least lenient. To test this hypothesis a one-way analysis of variance post hoc comparison was implemented. Both Duncan's multiple range test and the Student-Newman-Keuls multiple range test were used to test for significant differences between the cells. The results showed that Type A individuals in the private rating setting with social comparison information were not significantly less lenient than subjects in any other condition (see Table L-4).

Leniency hypothesis 4. The fourth leniency hypothesis predicted that individuals in the private condition would show a greater decrease in leniency when given social comparison information than those subjects in the public condition. To investigate this hypothesis the two-way interaction of public / private rating setting and social comparison / no social comparison information was investigated in the 2 X 2 X 2 ANOVA. The results showed that the interaction between the public and private rating setting and social comparison / no social comparison information was not significant, $F(1,115) = 0.24, p > .05$ (see Table L-3). Therefore, leniency hypothesis 4 was not supported.

Leniency hypothesis 5. Leniency hypothesis 5 predicted that Type A individuals would show a greater decrease in leniency than Type B individuals when given social comparison information. Again a two-way interaction was used to investigate this hypothesis. This interaction looked at the Type A / Type B independent variable and the social comparison / no social comparison condition in the 2 X 2 X 2 ANOVA. The results showed that the interaction between Type A and Type B individuals and the social comparison / no social comparison condition was not significant, $F(1,115) = 0.07, p > .05$ (see Table L-3). Therefore, leniency hypothesis 5 was not supported.

Accuracy Hypotheses

Accuracy Hypotheses 1, 2, 4 and 5 were analyzed using a 2 (Type A / Type B behavior) X 2 (social comparison / no social comparison condition) X 2 (public / private rating setting) between subjects factorial ANOVA with the elevation and dimensional accuracy being used separately as the dependent measures. All analyses are presented in Appendix M. Accuracy hypothesis 3 was analyzed using one-way analysis of variance.

Elevation Accuracy Hypotheses

Accuracy hypothesis 1. The first accuracy hypothesis predicted that subjects in the social comparison information condition would be more accurate than subjects in the no

social comparison information condition. For elevation, it was appropriate to look at the main effect for social comparison information because there were no interaction effects in this analysis.

For elevation accuracy, social comparison information did not yield a significant effect, $F(1,115) = 0.01$, $p > .05$ (see Table M-1). Therefore, subjects in the social comparison information condition were no more accurate on elevation than subjects in the no social comparison information condition. Thus, the first accuracy hypothesis was not supported for elevation.

Accuracy hypothesis 2. The second accuracy hypothesis predicted that Type A individuals would be more accurate in a private rating setting than in a public rating setting. However, there would be no difference in Type B ratings between public and private rating settings. To investigate this hypothesis the Type A / Type B and public / private rating setting interaction was investigated in the 2 X 2 X 2 ANOVA.

The results showed that for the elevation accuracy component the interaction between Type A and Type B individuals and the public and private rating setting was not significant, $F(1,115) = .85$, $p > .05$ (see Table M-1). Therefore, for the elevation accuracy component, the second accuracy hypothesis was not supported.

Accuracy hypothesis 3. Accuracy hypothesis 3 predicted that Type A individuals in the private rating setting with social comparison information would be the most accurate. To test this hypothesis a one-way analysis of variance post hoc comparisons were used on the data. Both Duncan's multiple range test and the Student-Newman-Keuls multiple range test were used to test for significant differences between the cells.

The results for elevation accuracy showed that when using the Duncan's multiple range test significant differences were found at the .05 level between numerous groups (see Table M-2). However, no difference were found between Type A individuals in the private rating setting with social comparison information and any other group. Thus, hypothesis 3 was not supported for elevation accuracy. Similar results were found using the Student-Newman-Keuls procedure, but again hypothesis 3 was not supported (see Table M-3).

Accuracy hypothesis 4. The fourth accuracy hypothesis predicted that individuals in the private condition would show a greater increase in accuracy when given social comparison information than those subjects in the public condition. To investigate this hypothesis the two-way interaction of public / private rating setting and social comparison / no social comparison information was

investigated in the 2 X 2 X 2 ANOVA.

The results showed that the interaction between the public and private rating setting and social comparison / no social comparison information was not significant for elevation accuracy, $F(1,115) = .34, p > .05$ (see Table M-1). Therefore, the fourth accuracy hypothesis was not supported for the elevation accuracy component.

Accuracy hypothesis 5. Accuracy hypothesis 5 predicted that Type A individuals would show a greater increase in accuracy than Type B individuals when given social comparison information. Again a two-way interaction was used to investigate this hypothesis. This interaction looked at the Type A / Type B independent variable and the social comparison / no social comparison condition in the 2 X 2 X 2 ANOVA. The results showed that the interaction between Type A and Type B individuals and the social comparison / no social comparison condition was not significant for the elevation accuracy component, $F(1,115) = .28, p > .05$ (see Table M-1). Therefore, accuracy hypothesis 5 was not supported for elevation accuracy.

Significant elevation effects. The 2 X 2 X 2 ANOVA for elevation accuracy did reveal a significant main effect for the public / private rating setting factor, $F(1,115) = 12.95, p < .01$. The main effect showed that subjects in the public rating setting condition were significantly more

accurate than subjects in the private rating setting condition ($M=1.14$ versus $M=1.78$) (see Table M-1).

Dimensional Accuracy Hypotheses For dimensional accuracy, the overall $2 \times 2 \times 2$ ANOVA revealed a Type A / Type B by public / private by social comparison information/ no social comparison information interaction, $F(1, 115) = 4.01$, $p < .05$ (see Table M-4). This interaction was analyzed using the unique sums of squares method as proposed by Winer (1971).

The simple effects analyses revealed a two-way interaction between public / private rating setting and social comparison / no social comparison information condition for Type B individuals, $F(1, 115) = 5.70$, $p < .05$ (see Table M-5, Figure M-6). Upon further investigation of this interaction it was found that in the social comparison information condition Type B individuals responded differently in public and private rating settings; $F(1, 115) = 4.10$, $p < .05$ (see Table M-7). Thus, Type B individuals in the public rating setting with social comparison information were more accurate ($M = .93$) than Type B individuals in the private rating setting with social comparison information ($M = 1.63$).

An additional two-way interaction was found between the social comparison / no social comparison information condition and the Type A / Type B category for private

rating settings, $F(1, 115) = 2.18, p < .05$ (see Table M-8, Figure M-9). The results of further simple effects analyses revealed that within the social comparison information condition in the private rating setting Type A individuals were more accurate ($M = .84$) than Type B individuals ($M = 1.63$), $F(1, 29) = 5.39, p < .05$ (see Table M-10).

Accuracy hypothesis 1. When investigating the first accuracy hypothesis for dimensional accuracy the effect of social comparison information is difficult to interpret. However based on the findings of the simple analyses there were no differences found between the social comparison and no social comparison conditions. Rather, all effects were produced within the social comparison information condition. The SCI main effect was not significant, $F(1, 115) = .69, p > .05$ (see Table M-4). Thus, accuracy hypothesis 1 was not supported.

Accuracy hypothesis 2. The second accuracy hypothesis predicted a Type by rating setting interaction. As previously stated the dimensional accuracy $2 \times 2 \times 2$ ANOVA revealed a three way interaction. Analyses of this interaction using the unique sums of squares method showed no support for the second accuracy hypothesis. There was no Type by rating setting interaction. Rather, results revealed that Type A individuals were more accurate than Type B individuals in private social comparison information

conditions. In addition, Type B subjects were more accurate in public rating setting with social comparison information than in private rating setting with social comparison information condition.

Accuracy hypothesis 3. The third accuracy hypothesis predicted that Type A individuals in private rating settings with social comparison information would be the most accurate. To investigate this hypothesis a one-way analysis of variance post hoc comparison was conducted.

The results for dimensional accuracy showed that when using Duncan's multiple range test Type A individuals in a private rating setting with social comparison information were more accurate ($M = .84$) than Type B individuals in a private rating setting with social comparison information ($M = 1.63$). However, these two cells were the only ones that showed significant differences (see Table M-11). When using the Student-Newman-Keuls procedure no significant differences were found between any of the groups at the .05 level (see Table M-12). Therefore, accuracy hypothesis number three was not supported.

Accuracy hypothesis 4. The fourth accuracy hypothesis predicted a rating setting by social comparison information interaction. After investigating the three-way interaction of dimensional accuracy with simple effects analyses, it was shown that social comparison information for Type B

individuals had higher accuracy in the public condition when compared to the private condition. This is the opposite of what was hypothesized in accuracy hypothesis 4.

Accuracy hypothesis 5. Accuracy hypothesis 5 predicted that Type A individuals would show a greater increase in accuracy than Type B individuals when given social comparison information. For dimensional accuracy the three way interaction simple effects analysis revealed that only in the private social comparison information setting were Type A individuals more accurate ($M = .84$) than Type B individuals ($M = 1.63$), $F(1, 29) = 5.39$, $p < .05$ (see Table M-10). Thus, showing partial support for hypothesis 5.

Discussion

The purpose of this study was to examine the effect that a personality factor (i.e. Type A / Type B) and two contextual variables (i.e. public / private rating settings and social comparison information / no social comparison information) had on the accuracy and leniency of self-ratings. Although minimal support was found for the research hypotheses, a number of theoretical and empirical explanations can be offered as a way of interpreting the results.

The effect of public versus private rating settings on the accuracy of self-ratings was the most prevalent finding. Elevation scores for subjects in a public rating setting

were more accurate performance judgements than those made by subjects in the private rating settings. However, it was predicted that Type A individuals would be more accurate in private rating setting. This hypothesis was not supported.

Westra and Kuiper (1992) provide a possible explanation of the lack of findings for Type A and Type B individuals. First, they state that Type A individuals have self-worth standards that are focused on performance evaluations. Second, they state that "if self-worth contingencies fail to be met, the Type A individual may initiate (or escalate) cognitive or behavioral coping efforts, in an attempt to reestablish circumstances conducive to favorable self-evaluation" (p.2). Therefore, when Type A individuals increase their self-evaluation they could be trying to maintain their self-worth by using cognitive and behavioral coping strategies. In addition, Westra and Kuiper (1992) go on to state that in these situations Type A individuals may become aggressive and drive to meet their standards. However, if they continually fail, negative self-views may manifest themselves resulting in a negative self-evaluation.

It is possible that the hypothesized results were not obtained because Type A's used their cognitive and behavioral coping strategies (including aggressive and hard-driving behaviors) in both the private and public evaluations as did Type B individuals. However, if we would

have given Type A subjects information that was less than their perceived self-standard for a number of trials more critical self-evaluations might have occurred.

The findings of Kirschner, Albright, and Andreassi (1989) also might provide insights to why the experimental hypotheses were not supported. They state that Type A individuals have higher levels of self-esteem than Type B individuals (Kirschner, Albright, and Andreassi, 1989) and self-enhancing comparisons increase for high self-esteem individuals (Wheeker and Miyake, 1992). Therefore, it is understandable how Type A individuals could become less accurate in private evaluations.

The most prevalent finding of public evaluations being more accurate than private evaluations is not a surprising outcome based on the self-enhancement literature. Self-enhancement motives are elicited by individuals who want people to take notice of their talents and abilities, such as a person with high self-esteem. The result of this process is that an individual's assessment of their performance ends up being more favorable. Thus, subjects become more inaccurate in private.

Self-enhancement motives play a role in both public and private rating settings. Brown and Gallagher (1992) found that individuals in a private condition would exaggerate their success when they have been faced with failure.

However, when people are faced with a public failure they tend to take on a more egalitarian viewpoint of the situation. That is, they hold opinions focused on the equality of individuals. These self-enhancement findings are consistent with the results of the current study.

This exaggeration of the self in private rating settings was found for both Type A and Type B individuals. Therefore, the prediction that Type A subjects would be more critical in private needs to be reevaluated. The results of this study show that both Type A and Type B individuals are more accurate in public than in private rating settings. It is possible that the Type A and Type B factor fails to play a role in this experimental situation.

Another reason for the present rating setting findings could be the number of women that participated in the study. Eighty-eight women and 35 men made up the current sample. Both Berg, Stephan, and Dodson (1981) and Gould and Slone (1982) found that women give modest statements when they are given in public or they feel that they will be revealed to others. This finding adds support as to why self-enhancement became more extreme in the private evaluation setting.

The disproportionate number of women participants also poses problems for the social comparison information manipulation. The results suggest that subjects are no more

accurate and no less lenient when given social comparison information. This finding may be because women either accurate or underestimate their performance (Beyer, 1990). Therefore, if women are in fact more accurate in general the availability of social comparison information might not have an effect on their self-ratings. This possible gender implication needs to be considered and investigated further in future research.

The self-esteem literature also provides some reasoning as to why social comparison information did not work in the present investigation. Schwalbe and Staples (1991) showed that men rely significantly more on social comparison information when maintaining and developing their self-esteem. However, women place a slight greater importance on reflected appraisals. Worchel, Cooper, and Goethals (1991) state that "reflected appraisal refers to the idea that how we appraise ourself reflects, or mirrors, how others appraise us" (p.70). This suggests that men are more likely to use this social comparison information when making evaluations which enables them to accurately view their performance. However, women use reflected appraisal when evaluating their abilities. Therefore, they evaluate themselves as others would evaluate them whether social comparison information is presented to them or not. Therefore, they try to consistently be more accurate in

their perceptions.

Another reason for the lack of social information effects could also be the questions used in the self-rating form. When the questions were singled out and analyzed separately, social comparison information had an effect on the overall performance question. Subjects were less lenient in the social comparison information condition when compared to subjects in the no social comparison information condition. Perhaps the questions were stated in such a way as to not facilitate the use of social comparison information.

Future Research

The present study creates many possible avenues for future research avenues. First of all, further research needs to be conducted on gender differences in encoding, retrieving and making judgements with and without social comparison information. This encompasses using tasks that are typically both male and female.

A second line of fruitful research would be in the area of personality differences in self-evaluations. Although Type A and Type B behavior did not produce significant findings in the present study, a number of theoretical implications are presented as possible reasons for the present outcomes. Possible research could include giving Type A individuals negative information numerous times

before self-evaluations were made and therefore possibly induce negative evaluations. In addition, other personality differences could have implications for the present research domain.

Also, it is important to take cognitive processes into account in this line of research. Implications of self-handicapping including self-enhancement and self-protection are very important in assessing the modest self-evaluations. If these two processes could be disentangled it might be possible to base decisions on whether people use self-protection because they are doing badly or use self-enhancement because they are doing well.

In summary, although findings obtained were not as presented in the hypotheses, more research is necessary to understand the implications personality factors, rating settings, and social comparison information can have on self-evaluations of performance.

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APPENDICES

APPENDIX A:
JENKINS ACTIVITY SURVEY

Instructions:

This survey will ask you questions about several aspects of behavior. Each person is different, therefore, there are no "right" or "wrong" answers. For each question, choose the answer that is true for you and fill in the appropriate space on the op-scan form.

1. Do you ever have trouble finding time to get you hair cut or styled?
 - A) Never
 - B) Occasionally
 - C) Almost always

2. How often does school "stir you into action"?
 - A) Less often than most people
 - B) About average
 - C) More than most people

3. Is your everyday life filled mostly by ...
 - A) problems needing a solution?
 - B) challenges needing to be met?
 - C) a rather predictable routine of events?
 - D) not enough things to keep me interested and busy?

4. When you are under pressure or stress, what do you usually do?
 - A) Do something about it immediately
 - B) Plan carefully before taking any action

5. Ordinarily, how rapidly do you eat?
 - A) I'm usually the first one finished
 - B) I eat a little faster than average
 - C) I eat about the same speed as most people
 - D) I eat more slowly than most people

6. Has your spouse or a friend ever told you that you eat to fast?
 - A) Yes, often
 - B) Yes, once or twice
 - C) No, never

7. How often do you find yourself doing more than one thing at a time, such as working while eating, reading while dressing, or figuring out problems while driving?

- A) I do two things at once whenever practical
- B) I do this only when I'm short of time
- C) I rarely or never do more than one thing at a time

8. When you listen to someone talking, and this person takes too long to come to the point, how often do you feel like hurrying the person along?

- A) Frequently
- B) Occasionally
- C) Almost never

9. How often do you actually "put words in the person's mouth" in order to speed things up?

- A) Frequently
- B) Occasionally
- C) Almost never

10. If you tell your spouse or a friend that you will meet somewhere at a definite time, how often do you arrive late?

- A) Once in awhile
- B) Rarely
- C) I am never late

11. How often do you find yourself hurrying to get to places even when there is plenty of time?

- A) Frequently
- B) Occasionally
- C) Almost never

12. Suppose you are to meet someone at a public place (street corner, building lobby, restaurant) and the other person is already 10 minutes late. What will you do?

- A) Sit and wait
- B) Walk about while waiting
- C) Usually carry some reading paper or writing paper so I can get something done while waiting

13. When you have to "wait in line" at a restaurant, a store, or post office, what do you do?
- A) Accept it calmly
 - B) Feel impatient but not show it
 - C) Feel so impatient that someone watching can tell I am restless
 - D) Refuse to wait in line, and find ways to avoid such delays
14. When you play games with young children about 10 years old (or when you did in the past) how often do you purposely let them win?
- A) Most of the time
 - B) Half of the time
 - C) Occasionally
 - D) Never
15. When you were younger did most people consider you to be...
- A) definitely hard-driving and competitive?
 - B) probably hard-driving and competitive?
 - C) probably more relaxed and easygoing?
 - D) definitely more relaxed and easygoing?
16. Nowadays, do you consider yourself to be...
- A) definitely hard-driving and competitive?
 - B) probably hard-driving and competitive?
 - C) probably more relaxed and easygoing?
 - D) definitely more relaxed and easygoing?
17. Would your spouse (or closet friend) rate you as...
- A) definitely hard-driving and competitive?
 - B) probably hard-driving and competitive?
 - C) probably more relaxed and easygoing?
 - D) definitely more relaxed and easygoing?
18. Would your spouse (or closet friend) rate your general level of activity as...
- A) too slow - should be more active?
 - B) about average - busy much of the time?
 - C) too active - should slow down?
19. Would people you know all agree that you take school too seriously?
- A) Definitely yes
 - B) Probably yes
 - C) Probably no
 - D) Definitely no

20. Would people you know well agree that you have less energy than most people?

- A) Definitely yes
- B) Probably yes
- C) Probably no
- D) Definitely no

21. Would people you know well agree that you tend to get irritated easily?

- A) Definitely yes
- B) Probably yes
- C) Probably no
- D) Definitely no

22. Would people you know well agree that you tend to do most things in a hurry?

- A) Definitely yes
- B) Probably yes
- C) Probably no
- D) Definitely no

23. Would people you know well agree that you enjoy a "contest" (competition) and try hard to win?

- A) Definitely yes
- B) Probably yes
- C) Probably no
- D) Definitely no

24. How was your temper when you were younger?

- A) Fiery and hard to control
- B) Strong but controllable
- C) No problem
- D) I almost never get angry

25. How is your temper nowadays?

- A) Fiery and hard to control
- B) Strong but controllable
- C) No problem
- D) I almost never get angry

26. When you are in the midst of doing something and someone interrupts you, how do you usually feel inside?

- A) I feel O.K. because I work better after an occasional break
- B) I feel only mildly annoyed
- C) I really feel irritated because most such interruptions are unnecessary

27. How often are there deadlines in your courses?
- A) Daily or more often
 - B) Weekly
 - C) Monthly or less often
 - D) Never
28. These deadlines usually carry
- A) Minor pressure because they are routine in nature
 - B) Considerable pressure, since delay would upset my entire schedule
 - C) Deadlines never occur
29. Do you ever set deadlines or quotas for yourself in courses or other things?
- A) No
 - B) Yes, but only occasionally
 - C) Yes, once a week or more
30. When you have to work against a deadline, what is the quality of your work?
- A) Better
 - B) Worse
 - C) The same (pressure makes no difference)
31. At school, do you ever keep two projects moving at the same time by shifting back and forth rapidly from one to the other?
- A) No, never
 - B) Yes, but only in emergencies
 - C) Yes, regularly
32. Do you maintain a regular study schedule during vacations such as Thanksgiving, Christmas, or Easter?
- A) Yes
 - B) No
 - C) Sometimes
33. How often do you study materials related to your classes?
- A) Rarely or never
 - B) Once a week or less
 - C) More than once a week

34. When you find yourself getting tired at school what do you usually do?

- A) Slow down for a while until my strength comes back
- B) Keep pushing my self at the same pace in spite of the tiredness

35. When you are in a group, how often do the other people look to you for leadership?

- A) Rarely
- B) About as often as they look to others
- C) More often than they look to others

For questions 36-40, compare yourself with the average student in your present position and mark the most accurate description.

36. In amount of effort put forth, I give...

- A) Much more effort
- B) A little more effort
- C) A little less effort
- D) Much less effort

37. In sense of responsibility, I am...

- A) Much more responsible
- B) A little more responsible
- C) A little less responsible
- D) Much less responsible

38. I find it necessary to hurry...

- A) Much more of the time
- B) A little more of the time
- C) A little less of the time
- D) Much less of the time

39. In being precise (careful about detail), I am...

- A) Much more precise
- B) A little more precise
- C) A little less precise
- D) Much less precise

40. I approach life in general...

- A) Much more seriously
- B) A little more seriously
- C) A little less seriously
- D) Much less seriously

APPENDIX B:
SUBJECT SCREENING PHASE:
INFORMED CONSENT

Informed Consent Form: Adults 18 and older

Title of Experiment: Performance Judgements

Experiment Number: 1092-95

1. Purpose of Experiment:

You are invited to participate in a study about factors that might affect performance judgements.

2. Procedures to be Followed in the Study:

To accomplish the goals of the study, you will be asked to answer a short questionnaire that addresses many behavioral characteristics. You will also be asked to put your name and phone number on a cover sheet attached to the questionnaire. This information will enable the researcher to contact you if you are selected to continue in the study. However, after you are contacted your answers will be coded, the cover sheet will be removed and there will be no way to personally identify you with your questionnaire. The time commitment for the present study is one half hour.

3. Anonymity of Subjects and Confidentiality of Results:

The results of this study will be kept strictly confidential. At no time will the researchers release your results to anyone without your written consent. The information you provide will have your name removed and only a subject number will identify you during the analyses and write-up of the research.

4. Discomforts and Risks From Participating in the Study:

There are no apparent risks to you from participation in this study.

5. Expected Benefits:

Your participation will help increase our knowledge of performance judgements. At the completion of the study further benefits will be explained to you.

6. Freedom to Withdrawal:

You are free to withdrawal from this study at any time without penalty.

7. Extra Credit:

For your participation you will receive one extra credit point.

8. Use of Research Data:

The information from this research may be used for scientific or educational purposes. It may be presented at

scientific meetings and/or published and reproduced in professional journals or books, or used for any other purpose that Virginia Tech's Department of Psychology considers proper in the interest of education, knowledge, or research.

9. Approval of Research:

This research project has been approved by the Human Subjects Committee of the Department of Psychology and by the Institutional Review Board of Virginia Tech.

10. Subjects Permission:

I have read and understand the above descriptions of the study. I have had an opportunity to ask question and have had them all answered. I hereby acknowledge the above and give my voluntary consent for participating in the study. I further understand that if I participate I may withdraw at any time without penalty. I understand that should I have any questions regarding this research and its conduct, I should contact any of the persons named below.

| | |
|---------------------------------------|----------------|
| PRIMARY RESEARCHER: Bethany J. Bodo | PHONE:552-8471 |
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| CHAIR, HSC: Richard M. Eisler | PHONE:231-7001 |
| CHAIR, IRB: Ernest R. Stout | PHONE:231-9359 |

SUBJECT'S SIGNATURE: _____

DATE: _____

APPENDIX C:
SUBJECT SCREENING PHASE:
EXPERIMENTAL PROTOCOL

Protocol

Following is the protocol for the subject screening phase:

1. Subjects enter the room and take a seat.
2. Hand-out the informed consent forms (2 per subject) and one orange opscan.

Say, "Please read the informed consent form carefully. When you are done sign and date the bottom of both copies. In addition, fill in the orange opscan with your name, social security number, and the digits 092 in the space for the seat number. One consent form is yours to keep in case you have any questions regarding the study."

3. Give the subjects a few minutes to complete the forms. When they are finished go around the room and get a consent form and orange opscan from every participant.
4. When everyone is finished and you have collected both the consent form and the orange opscan.
5. Hand-out a second orange opscan and the small subject information sheet. Tell the subjects...

"The second orange opscan is for your responses to the questionnaire. The small piece of paper is a subject information sheet. This sheet is solely for the purpose of calling you back to participate in the second half of the study. Please fill out all the information asked for. In addition, fill out only your social security number on the orange opscan. After you are called back all of the information will be coded and there will be no way you can be identified with your responses."

6. Give the subjects a few seconds to fill in the requested information, then hand out the JAS and tell the subjects...

"This questionnaire will ask you questions about your behavioral characteristics and performance judgements. We ask the you read each question carefully and answer truthfully. When you are done you may return the from to me and then are you free to go. If you have any questions you may ask them at this time. You now may begin"

NOTE: Subjects are to take nothing home with them except one copy of the informed consent form!!!!!!

APPENDIX D:
PROOFREADING TASK:
SAMPLE PAGE

1

Karen Rusa was a 30-year-old married woman and the mother of four children. Although she had been having anxiety-related problems for a number of years, she had never sought professional help prior to this time. During the preceding three months, she had become increasingly depressed; her family physician finally suggested that she seek psychological services.

For the past several months Karen had been experiencing intrusive, repetitive thoughts that centered around her children's safety. She frequently found herself imagining that a serious accident had occurred; she was unable to put these thoughts out of her mind. On one such occasion she imagined that her son, Alan, had broken his leg playing football at school. There was no reason to believe that an accident had occurred, but Karen brooded about the possibility until she finally called the school to see if Alan was all right. Even after receiving their reassurance that he had not been hurt, she described herself as being somewhat surprised when he later arrived home unharmed. Karen also noted that her daily routine was seriously hampered by an extensive series of counting rituals that she performed throughout each day. Specific numbers had come to have a special meaning to Karen; she found that her preoccupation with these numbers was interfering with her ability to perform everyday activities. One example was grocery shopping. Karen believed that if she selected the first item (e.g., a box of cereal) on the shelf, something terrible would happen to her oldest child. If she selected the second item, some unknown disaster would befall her second child, and so on for the four children. The children's ages were also important. The sixth item in a row, for example, was associated with her

APPENDIX E:
EXPERIMENTAL CONSENT FORMS

APPENDIX E-1:
PUBLIC CONSENT FORM

Informed Consent Form: Adults 18 and older

Title of Experiment: Performance Judgements

Experiment Number: 1092-95

1. Purpose of Experiment:

You are invited to participate in a study about performance judgements. This study is being conducted to facilitate a greater understanding of people's judgements of performance standards.

2. Procedures to be Followed in the Study:

To accomplish the goals of the study, you will be asked to perform a proofreading task and a short questionnaire. At the completion of these measures you will be forming a group and discussing your opinions on the present study as well as your answers on the questionnaire. The time commitment for the present study is less than one hour.

3. Anonymity of Subjects and Confidentiality of Results:

The results of this study will be kept strictly confidential. At no time will the researchers release your results to anyone without your written consent. The information you provide will have your name removed and only a subject number will be used to identify your data during the analyses and write-up of the research.

4. Discomforts and Risks From Participating in the Study:

There are no apparent risks to you from participation in this study.

5. Expected Benefits:

Your participation will help increase our knowledge of performance judgements. At the completion of the study further benefits will be explained to you.

6. Freedom to Withdrawal:

You are free to withdraw from this study at any time without penalty.

7. Extra Credit:

For your participation you will receive two extra credit points.

8. Use of Research Data:

The information from this research may be used for scientific or educational purposes. It may be presented at scientific meetings and/or published and reproduced in professional journals or books, or used for any other

purpose that Virginia Tech's Department of Psychology considers proper in the interest of education, knowledge, or research.

9. Approval of Research:

This research project has been approved by the Human Subjects Committee of the Department of Psychology and by the Institutional Review Board of Virginia Tech.

10. Subjects Permission:

I have read and understand the above descriptions of the study. I have had an opportunity to ask question and have had them all answered. I hereby acknowledge the above and give my voluntary consent for participating in the study. I further understand that if I participate I may withdraw at any time without penalty. I understand that should I have any questions regarding this research and its conduct, I should contact any of the persons named below.

| | |
|---------------------------------------|----------------|
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| CHAIR, IRB: Ernest R. Stout | PHONE:231-9359 |

SUBJECT'S SIGNATURE: _____

DATE: _____

APPENDIX E-2:
PRIVATE CONSENT FORM

Informed Consent Form: Adults 18 and older

Title of Experiment: Performance Judgements

Experiment Number: 1092-95

1. Purpose of Experiment:

You are invited to participate in a study about performance judgements. This study is being conducted to facilitate a greater understanding of people's judgements of performance standards.

2. Procedures to be Followed in the Study:

To accomplish the goals of the study, you will be asked to perform a proofreading task and a short questionnaire in a private and confidential rating setting. The time commitment for the present study is less than one hour.

3. Anonymity of Subjects and Confidentiality of Results:

The results of this study will be kept strictly confidential. At no time will the researchers release your results to anyone without your written consent. The information you provide will have your name removed and only a subject number will be used to identify your data during the analyses and write-up of the research.

4. Discomforts and Risks From Participating in the Study:

There are no apparent risks to you from participation in this study.

5. Expected Benefits:

Your participation will help increase our knowledge of performance judgements. At the completion of the study further benefits will be explained to you.

6. Freedom to Withdrawal:

You are free to withdraw from this study at any time without penalty.

7. Extra Credit:

For your participation you will receive two extra credit points.

8. Use of Research Data:

The information from this research may be used for scientific or educational purposes. It may be presented at scientific meetings and/or published and reproduced in professional journals or books, or used for any other purpose that Virginia Tech's Department of Psychology considers proper in the interest of education, knowledge, or

research.

9. Approval of Research:

This research project has been approved by the Human Subjects Committee of the Department of Psychology and by the Institutional Review Board of Virginia Tech.

10. Subjects Permission:

I have read and understand the above descriptions of the study. I have had an opportunity to ask question and have had them all answered. I hereby acknowledge the above and give my voluntary consent for participating in the study. I further understand that if I participate I may withdraw at any time without penalty. I understand that should I have any questions regarding this research and its conduct, I should contact any of the persons named below.

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SUBJECT'S SIGNATURE: _____

DATE: _____

APPENDIX F:
SELF-RATING FORM

Questionnaire

Using the following nine-point scale, please answer the following questions about your performance on the task.

- 1 = worse than anyone else
- 2 = very poor
- 3 = poor
- 4 = below average
- 5 = average
- 6 = above average
- 7 = very good
- 8 = excellent
- 9 = better than anyone else

1. How do you believe you performed on the present task?

2. What was the effort level you used in completing the task?

3. What was your commitment level when completing the task?

4. What was the ability level you used when completing the task?

5. Quantity of proofreading (total # of pages completed).

6. Quality of proofreading (average # of mistakes detected per page).

APPENDIX G:
DEBRIEFING

Debriefing

At the outset of the present study the full experimental purpose was not revealed to you. The reason for this was that full disclosure could affect participants behavior. Thus, the research would not be indicative of real world occurrences.

The true purpose of the study was to assess those factors that would affect self-evaluations of performance. This study examined two contextual factors and one personality trait factor. These factors were assessed as to their effects on leniency and accuracy. The personality dimension that was examined is the Type A versus Type B personality characteristic. This was the purpose of the first half of the study. After call backs were made subjects were either given social comparison information or no social comparison information. This was the first contextual variable under investigation. The second contextual factor was the public or private rating setting. In these conditions subjects either evaluated their performance in a completely private setting or were told that they were to participate in a group discussion after the questionnaires were completed.

You have just participated in an experiment that is trying to assess the self-evaluations of individuals that exhibit Type A or Type B personality traits. I will be collecting data and matching your coded performance measure to the code on the evaluation. However, this information will not be used to single you out from any other subject within this experimental setting. Rather, the obtained information will only be used for group level data.

As to the purpose behind this study, it is suspected that individuals who receive social comparison information will be less lenient and more accurate in their evaluations when compared to those who did not receive social comparison information. In addition, Type A individuals will be more lenient in public evaluations than in private evaluations. This effect will not be exhibited by Type B individuals. This same pattern of results is suspected to occur for the accuracy measure. Finally, private self-evaluations of Type A individuals will be the most lenient.

PLEASE READ THE FOLLOWING AND SIGN BELOW:

I understand that the purpose of the present study was to examine the effects of personality characteristics and contextual factors on self-ratings of performance. The factors of interest were the Type A versus Type B personality distinction, availability of social comparison information, and the condition of public/private rating

settings. These factors were assessed on their affects on leniency and accuracy of self-ratings.

I realize that feedback about the results of the study will be made available to me upon request and at the completion of the data analysis for the study. In addition, all of my responses will be confidential and all data will be coded and analyzed by using that coding number.

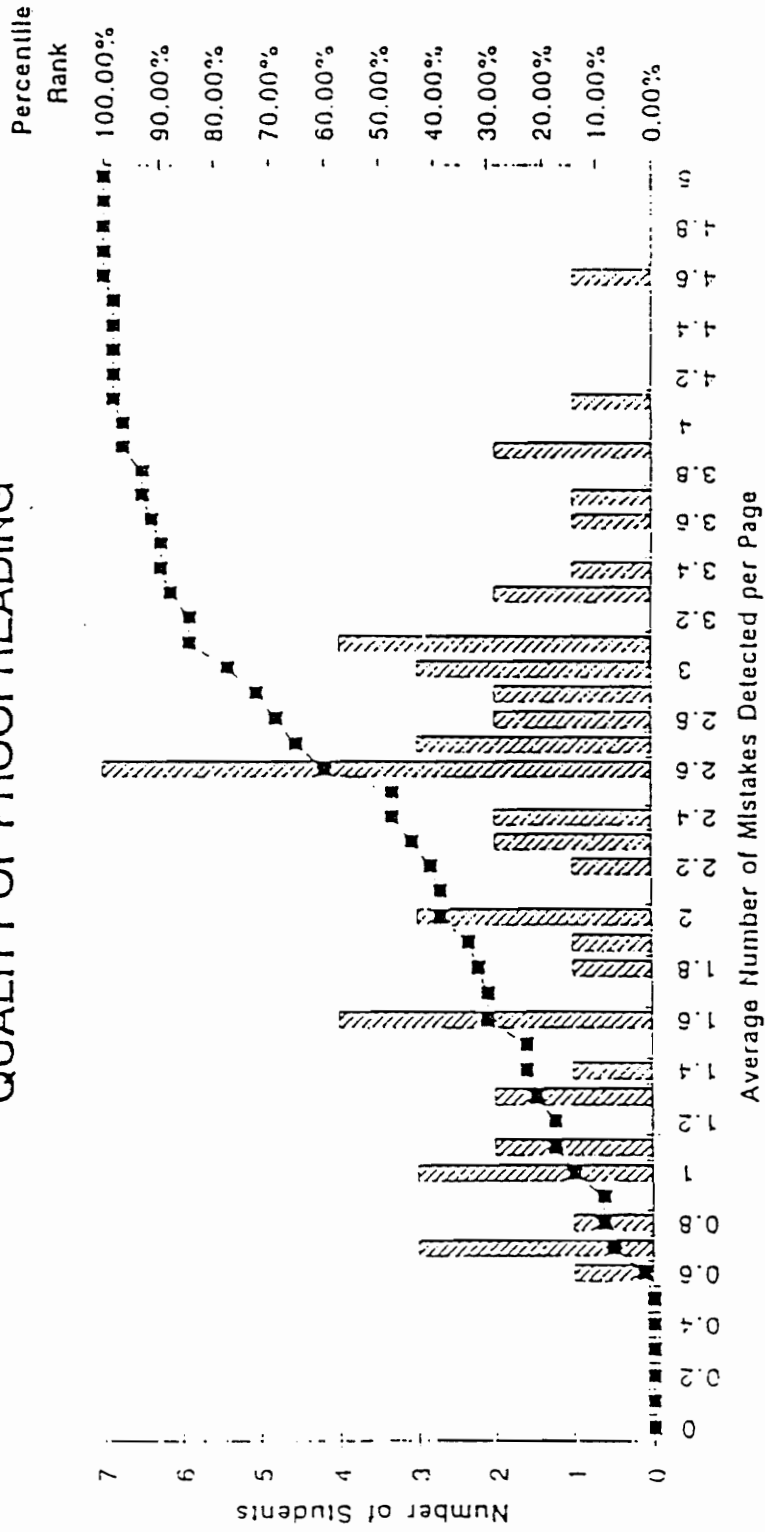
I understand that discussion of this research project with other in my class will jeopardize the results and I will refrain from discussion until the conclusion of the semester.

SIGNED _____

DATE: _____

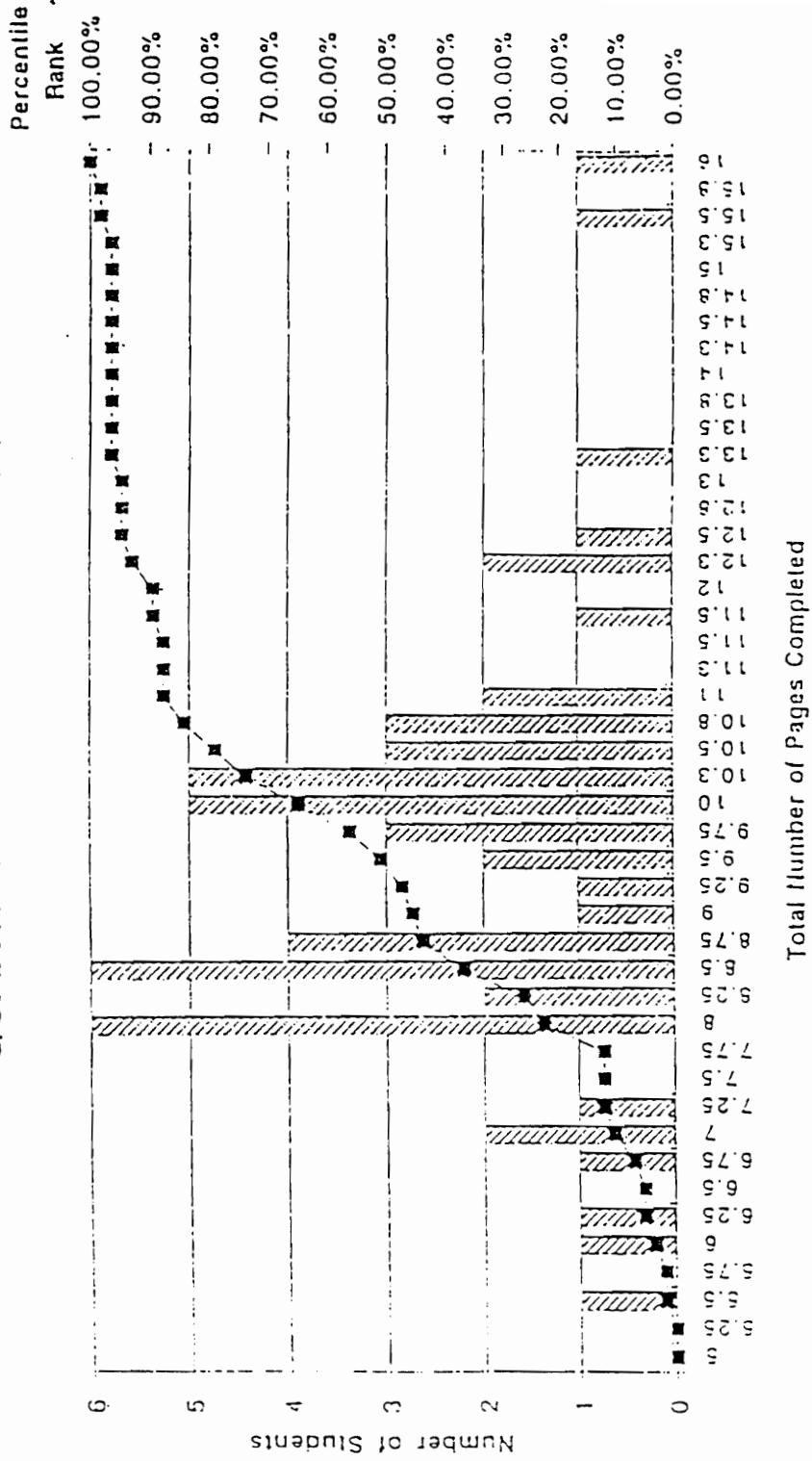
APPENDIX H:
SOCIAL COMPARISON DATA SHEETS

QUALITY OF PROOFREADING



Average Performance Score = 2.3 mistakes

QUANTITY OF PROOFREADING



Average Performance Score = 9.5 pages

APPENDIX I:
FULL PROTOCOL:
SOCIAL COMPARISON INFORMATION CONDITION

APPENDIX I-1:
FULL PROTOCOL:
PUBLIC RATING SETTING WITH
SOCIAL COMPARISON INFORMATION

Protocol
Public / Social Comparison Information Condition

1. Make sure all subjects that enter the room are in your experimental session and ask them to sit in the specified seat.
2. Seat placement numbers for collection of materials are as follows:

| | |
|---|---|
| 6 | 5 |
| 4 | 3 |
| 2 | 1 |

CHALK BOARD

3. Say "First I will be handing out the informed consent forms. Please read this form carefully and sign and date both copies. In addition, for those subjects that are in introduction to psychology fill in your name, ID number and in seat number put 092 on the orange op-scan."
4. Next collect the informed consent forms in the order described in the protocol.
5. Next tell the subjects that "Now, you will be given a proofreading task. You will have 15 minutes to work on the task. The objective of this task is to circle all of the misspelled words in the given text. You are not to correct these words and you need not circle proper names. When time is called I will ask you to place an X by the last line that you read. I will then come around and collect a task from each of you.
Once again the objective is to circle all of the misspelled words in the given text. Are there any questions? Now I will hand out the task and a red pen for use to use on the task. Please do not begin until you are told to do so"
6. Hand-out the tasks in the order as described previously in the protocol and once all are handed out say "You may now begin" and time the subjects for exactly 15 minutes.
7. Once the 15 minutes are up say "Please stop working on the task, place an X by the last line you have read and I will come around to collect the proofreading task."
8. After you have collected all the proofreading task, tell the subjects....
"You will now be able to relax for a few minutes and during this time I will give you two graphs that I would like you to examine"

Hand out the graphs

"These graphs represent the performances of other students on the proofreading task that you have just completed. They show information on the Quantity and Quality of these students performances. The shaded bars represent the number of students that performed at each level. For example: on the quantity graph four students read 8.75 pages."

Show them the graph - QUANTITY GRAPH

"The black boxes represent the percentile rank. For example: on the quantity graph 90% of the subjects read 12 pages or less."

Show them the graph - QUANTITY GRAPH

"Please examine these graphs for the next few minutes"

9. Give the subjects three minutes to study the social comparison information sheets.

10. At the end of the three minutes say "I will now collect the graphs"

11. After collecting the graphs tell the subjects...

"Next you will be asked to complete a short questionnaire. Please use the 1-9 response scale provided to answer every question. After everyone is finished responding to the questionnaire we will be forming a group and everyone will have a chance to discuss their task performance and their responses to the questionnaire. Everyone will be able to bring their questionnaire with them to refer to it for their responses during the discussion ."

12. Hand out the questionnaire. Give the subjects three minutes to complete the questionnaire.

13. After all of the subjects form the group and ask "What did you think of the proofreading task" Let the subjects talk for two minutes, collect the a questionnaire for each subject and then hand-out the debriefing form.

Tell the subjects "Please read the debriefing form carefully and if you have no questions sign and date the bottom of the form." " When you have completed the debriefing form and if you have no questions you may leave. However if you have any questions please feel free to ask me at any time."

15. Dismiss the subjects.

APPENDIX I-2:
FULL PROTOCOL:
PRIVATE RATING SETTING WITH
SOCIAL COMPARISON INFORMATION

Protocol
Private / Social Comparison Information Condition

1. Make sure all subjects that enter the room are in your experimental session.

2. Seat placement numbers for collection of materials are as follows:

| | |
|---|---|
| 6 | 5 |
| 4 | 3 |
| 2 | 1 |

CHALK BOARD

3. Say "First I will be handing out the informed consent forms. Please read this form carefully and sign and date both copies. In addition, for those subjects that are in introduction to psychology fill in your name, ID number and in seat number put 092 on the orange op-scan."

4. Next collect the informed consent forms in the order described in the protocol.

5. Next tell the subjects that "Now, you will be given a proofreading task. You will have 15 minutes to work on the task. The objective of this task is to circle all of the misspelled words in the given text. You are not to correct these words and you need not circle proper names. When time is called I will ask you to place an X by the last line that you read. I will then bring around a covered box for you to place your task in. To assure you of the confidentiality of this experiment I will not be analyzing any of the data in the box until the study's completion. In addition, to assure you that your performance will be confidential I would like to assure you that all of the task are the same.

Once again the objective is to circle all of the misspelled words in the given text. Are there any questions? Now I will hand out the task and a red pen for use to use on the task. Please do not begin until you are told to do so"

6. Hand-out the tasks in the order as described previously in the protocol and once all are handed out say "You may now begin" and time the subjects for exactly 15 minutes.

7. Once the 15 minutes are up say "Please stop working on the task, place an X by the last line you have read and I will come around with the box for you to place your

proofreading task into."

8. After you have collected all the proofreading task, tell the subjects....

"You will now be able to relax for a few minutes and during this time I will give you two graphs that I would like you to examine"

Hand out the graphs

"These graphs represent the performances of other students on the proofreading task that you have just completed. They show information on the Quantity and Quality of these students performances. The shaded bars represent the number of students that performed at each level. For example: on the quantity graph four students read 8.75 pages."

Show them the graph - QUANTITY GRAPH

"The black boxes represent the percentile rank. For example: on the quantity graph 90% of the subjects read 12 pages or less."

Show them the graph - QUANTITY GRAPH

"Please examine these graphs for the next few minutes"

9. Give the subjects three minutes to study the social comparison information sheets.

10. At the end of the three minutes say "I will now collect the graphs"

11. After collecting the graphs tell the subjects...

"Next you will be asked to complete a short questionnaire. Please use the 1-9 response scale provided to answer every question. This questionnaire will be completely confidential and there will be no way to identify your responses from other subjects. When you complete these forms you will place them into the covered box you placed your proofreading task in and again they will not be analyzed until the study's completion."

12. Hand out the questionnaire. Give the subjects three minutes to complete the questionnaire.

13. Tell the subjects "Now I will walk around the room with the covered box. You can place your questionnaire in the box. At the same time I will be handed you a debriefing form. Please read it carefully and if you have no questions sign and date the bottom of the form." " When you have

completed the debriefing form and if you have no questions you may leave. However if you have any questions please feel free to ask me at any time."

15. Dismiss the subjects.

APPENDIX J:
FULL PROTOCOL:
NO SOCIAL COMPARISON INFORMATION CONDITION

APPENDIX J-1:
FULL PROTOCOL:
PUBLIC RATING SETTING WITH
NO SOCIAL COMPARISON INFORMATION

Protocol
Public / No Social Comparison Information Condition

1. Make sure all subjects that enter the room are in your experimental session.

2. Seat placement numbers for collection of materials are as follows:

| | |
|---|---|
| 6 | 5 |
| 4 | 3 |
| 2 | 1 |

CHALK BOARD

3. Say "First I will be handing out the informed consent forms. Please read this form carefully and sign and date both copies. In addition, for those subjects that are in introduction to psychology fill in your name, ID number and in seat number put 092 on the orange op-scan."

4. Next collect the informed consent forms in the order described in the protocol.

5. Next tell the subjects that "Now, you will be given a proofreading task. You will have 15 minutes to work on the task. The objective of this task is to circle all of the misspelled words in the given text. You are not to correct these words and you need not circle proper names. When time is called I will ask you to place an X by the last line that you read. I will then come around and collect a task from each of you.

Once again the objective is to circle all of the misspelled words in the given text. Are there any questions? Now I will hand out the task and a red pen for use to use on the task. Please do not begin until you are told to do so"

6. Hand-out the tasks in the order as described previously in the protocol and once all are handed out say "You may now begin" and time the subjects for exactly 15 minutes.

7. Once the 15 minutes are up say "Please stop working on the task, place an X by the last line you have read and I will come around to collect the proofreading task."

8. After you have collected all the proofreading task, tell the subjects....

"You will now be able to relax for a few minutes and

during this time I would like you to think about your performance on the task that your just completed"

9. After the three minutes are up tell the subjects that

"Next you will be asked to complete a short questionnaire. Please use the 1-9 response scale provided to answer every question. After everyone is finished responding to the questionnaire we will be forming a group and everyone will have a chance to discuss their task performance and their responses to the questionnaire. Everyone will be able to bring their questionnaire with them to refer to it for their responses in the discussion."

10. Hand out the questionnaire. Give the subjects three minutes to complete the questionnaire.

11. After all of the subjects form the group and ask "What did you think of the proofreading task" Let the subjects talk for two minutes, collect the a questionnaire for each subject and then hand-out the debriefing form.

12. Tell the subjects "Please read the debriefing form carefully and if you have no questions sign and date the bottom of the form." " When you have completed the debriefing form and if you have no questions you may leave. However if you have any questions please feel free to ask me at any time."

13. Dismiss the subjects.

APPENDIX J-2:
FULL PROTOCOL:
PRIVATE RATING SETTING WITH
NO SOCIAL COMPARISON INFORMATION CONDITION

Protocol
Private / No Social Comparison Information Condition

1. Make sure all subjects that enter the room are in your experimental session.

2. Seat placement numbers for collection of materials are as follows:

| | |
|---|---|
| 6 | 5 |
| 4 | 3 |
| 2 | 1 |

CHALK BOARD

3. Say "First I will be handing out the informed consent forms. Please read this form carefully and sign and date both copies. In addition, for those subjects that are in introduction to psychology fill in your name, ID number and in seat number put 092 on the orange op-scan."

4. Next collect the informed consent forms in the order described in the protocol.

5. Next tell the subjects that "Now, you will be given a proofreading task. You will have 15 minutes to work on the task. The objective of this task is to circle all of the misspelled words in the given text. You are not to correct these words and you need not circle proper names. When time is called I will ask you to place an X by the last line that you read. I will then bring around a covered box for you to place your task in. To assure you of the confidentiality of this experiment I will not be analyzing any of the data in the box until the study's completion. In addition, to assure you that your performance will be confidential I would like to assure you that all of the tasks are the same.

Once again the objective is to circle all of the misspelled words in the given text. Are there any questions? Now I will hand out the task and a red pen for use to use on the task. Please do not begin until you are told to do so"

6. Hand-out the tasks in the order as described previously in the protocol and once all are handed out say "You may now begin" and time the subjects for exactly 15 minutes.

7. Once the 15 minutes are up say "Please stop working on the task, place an X by the last line you have read and I will come around with the box for you to place your proofreading task into."

8. After you have collected all the proofreading task, tell the subjects....

"You will now be able to relax for a few minutes and during this time I would like you to think about your performance on the task that your just completed"

9. After the three minutes are up tell the subjects that...

"Next you will be asked to complete a short questionnaire. Please use the 1-9 response scale provided to answer every question. This questionnaire will be completely confidential and there will be no way to identify your responses from other subjects. When you complete these forms you will place them into the covered box you placed your proofreading task in and again they will not be analyzed until the study's completion."

10. Hand out the questionnaire. Give the subjects three minutes to complete the questionnaire.

11. Tell the subjects "Now I will walk around the room with the covered box. You can place your questionnaire in the box. At the same time I will be handed you a debriefing form. Please read it carefully and if you have no questions sign and date the bottom of the form." " When you have completed the debriefing form and if you have no questions you may leave. However if you have any questions please feel free to ask me at any time."

12. Dismiss the subjects.

APPENDIX K:
PERFORMANCE DIFFERENCE ANALYSES

APPENDIX K-1:
QUANTITY PERFORMANCE ANALYSIS

Table K-1

ANOVA Table for the Quantity Performance Difference
Manipulation Check: Number of Pages Completed by the
Subjects

| Source | DF | Mean Square | F-Ratio |
|------------------------|-----|-------------|---------|
| Type A / Type B (A/B) | 1 | 5.373 | .923 |
| Public / Private (P/P) | 1 | 20.228 | 3.473 |
| SCI / No SCI* (S/N) | 1 | 9.223 | 1.584 |
| AB X PP | 1 | 1.599 | .275 |
| AB X SN | 1 | 11.136 | 1.912 |
| PP X SN | 1 | 3.641 | .625 |
| AB X PP X SN | 1 | 9.487 | 1.629 |
| Residual | 115 | 5.824 | |

* SCI - Social Comparison Information

APPENDIX K-2:
QUALITY PERFORMANCE ANALYSIS

Table K-2

ANOVA Table for the Quality Performance Difference

Manipulation Check: Quality Score Computed for Each Subject

| Source | DF | Mean Square | F-Ratio |
|------------------------|-----|-------------|---------|
| Type A / Type B (A/B) | 1 | .172 | .132 |
| Public / Private (P/P) | 1 | 1.069 | .820 |
| SCI / No SCI* (S/N) | 1 | 3.447 | 2.647 |
| AB X PP | 1 | .390 | .299 |
| AB X SN | 1 | .844 | .648 |
| PP X SN | 1 | .482 | .370 |
| AB X PP X SN | 1 | .348 | .267 |
| Residual | 115 | 1.303 | |

* SCI - Social Comparison Information

APPENDIX L:
SUMMARY TABLES FOR LENIENCY DEPENDENT VARIABLE

APPENDIX L-1:
LENIENCY HYPOTHESIS TESTS:
OVERALL PERFORMANCE QUESTION

Table L-1

ANOVA Table for the Self-Ratings on the Overall Performance
Question: Leniency

| Source | DF | Mean Square | F-Ratio |
|------------------------|-----|-------------|---------|
| Type A / Type B (A/B) | 1 | 0.010 | 0.006 |
| Public / Private (P/P) | 1 | 4.154 | 2.422 |
| SCI / No SCI* (S/N) | 1 | 9.258 | 5.398** |
| AB X PP | 1 | 0.538 | 0.314 |
| AB X SN | 1 | 2.484 | 1.449 |
| PP X SN | 1 | 4.839 | 2.822 |
| AB X PP X SN | 1 | 0.041 | 0.024 |
| Residual | 115 | 1.715 | |

* SCI - Social Comparison Information

** p < .05

APPENDIX L-2:
DUNCAN'S MULTIPLE COMPARISON TESTS
OVERALL PERFORMANCE QUESTION

Table L-2

Duncan's Multiple Comparison Tests on the Overall
Performance Question

| Mean | Group | G5 | G7 | G3 | G2 | G1 | G6 | G4 | G8 |
|--------|-------|----|----|----|----|----|----|----|----|
| 5.2000 | G5 | | | | | | | | |
| 5.2667 | G7 | | | | | | | | |
| 5.4375 | G3 | | | | | | | | |
| 5.4667 | G2 | | | | | | | | |
| 5.5625 | G1 | | | | | | | | |
| 5.6000 | G6 | | | | | | | | |
| 6.0625 | G4 | | | | | | | | |
| 6.5333 | G8 | * | * | * | * | | | | |

* Groups significantly different at the .05 level

Note: G1 = Type A / Public / Social Comparison Information
 G2 = Type A / Public / No Social Comparison Information
 G3 = Type A / Private / Social Comparison Information
 G4 = Type A / Private / No Social Comparison Information
 G5 = Type B / Public / Social Comparison Information
 G6 = Type B / Public / No Social Comparison Information
 G7 = Type B / Private / Social Comparison Information
 G8 = Type B / Private / No Social Comparison Information

APPENDIX L-3:
COMPOSITE LENIENCY ANALYSIS

Table L-3

ANOVA Table for the Self-Ratings of Performance: Composite
Leniency Measure

| Source | DF | Mean Square | F-Ratio |
|------------------------|-----|-------------|---------|
| Type A / Type B (A/B) | 1 | 0.217 | 0.204 |
| Public / Private (P/P) | 1 | 1.683 | 1.584 |
| SCI / No SCI* (S/N) | 1 | 1.613 | 1.518 |
| AB X PP | 1 | 3.899 | 3.669 |
| AB X SN | 1 | 0.073 | 0.068 |
| PP X SN | 1 | 0.250 | 0.236 |
| AB X PP X SN | 1 | 1.080 | 1.016 |
| Residual | 115 | 1.063 | |

* SCI - Social Comparison Information

APPENDIX L-4:
COMPOSITE LENIENCY MEASURE:
DUNCAN'S AND STUDENT-NEWMAN-KEULS
MULTIPLE COMPARISON TESTS

Table L-4

Duncan's and Student-Newman-Keuls Multiple Comparison Tests:
Composite Leniency Measure

| Mean | Group | G1 | G7 | G2 | G5 | G6 | G8 | G3 | G4 |
|--------|-------|----|----|----|----|----|----|----|----|
| 5.8333 | G1 | | | | | | | | |
| 5.8444 | G7 | | | | | | | | |
| 6.1111 | G2 | | | | | | | | |
| 6.2444 | G5 | | | | | | | | |
| 6.4000 | G6 | | | | | | | | |
| 6.5208 | G8 | | | | | | | | |
| 6.6042 | G3 | | | | | | | | |
| 6.5333 | G4 | | | | | | | | |

No two groups are significantly different at the .05 level

- Note: G1 = Type A / Public / Social Comparison Information
 G2 = Type A / Public / No Social Comparison Information
 G3 = Type A / Private / Social Comparison Information
 G4 = Type A / Private / No Social Comparison Information
 G5 = Type B / Public / Social Comparison Information
 G6 = Type B / Public / No Social Comparison Information
 G7 = Type B / Private / Social Comparison Information
 G8 = Type B / Private / No Social Comparison Information

**APPENDIX M:
SUMMARY TABLES FOR ACCURACY DEPENDENT VARIABLES**

APPENDIX M-1:
ELEVATION ACCURACY HYPOTHESIS TESTS

Table M-1

ANOVA Table for the Self-Ratings of Performance: Elevation Accuracy Measure

| Source | DF | Mean Square | F-Ratio |
|------------------------|-----|-------------|-----------|
| Type A / Type B (A/B) | 1 | 1.122 | 1.118 |
| Public / Private (P/P) | 1 | 13.000 | 12.948*** |
| SCI / No SCI* (S/N) | 1 | .005 | .005 |
| AB X PP | 1 | .848 | .845 |
| AB X SN | 1 | .285 | .284 |
| PP X SN | 1 | .337 | .335 |
| AB X PP X SN | 1 | 1.849 | 1.841 |
| Residual | 115 | 1.004 | |

* SCI - Social Comparison Information

***p < .01

TABLE M-2:
DUNCAN'S MULTIPLE COMPARISON TEST
FOR ELEVATION ACCURACY

Table M-2

Duncan's Multiple Comparison Test for Elevation Accuracy

| Mean | Group | G5 | G2 | G1 | G6 | G3 | G4 | G8 | G7 |
|--------|-------|----|----|----|----|----|----|----|----|
| .9333 | G5 | | | | | | | | |
| 1.0000 | G2 | | | | | | | | |
| 1.2500 | G1 | | | | | | | | |
| 1.3667 | G6 | | | | | | | | |
| 1.5938 | G3 | | | | | | | | |
| 1.6250 | G4 | | | | | | | | |
| 1.8333 | G8 | * | * | | | | | | |
| 2.1000 | G7 | * | * | * | | | | | |

* Indicates significant differences

Note: G1 = Type A / Public / Social Comparison Information
 G2 = Type A / Public / No Social Comparison Information
 G3 = Type A / Private / Social Comparison Information
 G4 = Type A / Private / No Social Comparison Information
 G5 = Type B / Public / Social Comparison Information
 G6 = Type B / Public / No Social Comparison Information
 G7 = Type B / Private / Social Comparison Information
 G8 = Type A / Private / No Social Comparison Information

TABLE M-3:
STUDENT-NEWMAN-KEULS MULTIPLE COMPARISON TEST
FOR ELEVATION ACCURACY

Table M-3

Student-Newman-Keuls Multiple Comparison Test for Elevation Accuracy

| Mean | Group | G5 | G2 | G1 | G6 | G3 | G4 | G8 | G7 |
|--------|-------|----|----|----|----|----|----|----|----|
| .9333 | G5 | | | | | | | | |
| 1.0000 | G2 | | | | | | | | |
| 1.2500 | G1 | | | | | | | | |
| 1.3667 | G6 | | | | | | | | |
| 1.5938 | G3 | | | | | | | | |
| 1.6250 | G4 | | | | | | | | |
| 1.8333 | G8 | | | | | | | | |
| 2.1000 | G7 | * | * | | | | | | |

* Indicates significant differences

Note: G1 = Type A / Public / Social Comparison Information
 G2 = Type A / Public / No Social Comparison Information
 G3 = Type A / Private / Social Comparison Information
 G4 = Type A / Private / No Social Comparison Information
 G5 = Type B / Public / Social Comparison Information
 G6 = Type B / Public / No Social Comparison Information
 G7 = Type B / Private / Social Comparison Information
 G8 = Type B / Private / No Social Comparison Information

APPENDIX M-4:
DIMENSIONAL ACCURACY HYPOTHESIS TESTS

Table M-4

ANOVA Table for the Self-Ratings of Performance: Dimensional Accuracy Measure

| Source | DF | Mean Square | F-Ratio |
|------------------------|-----|-------------|---------|
| Type A / Type B (A/B) | 1 | .568 | .633 |
| Public / Private (P/P) | 1 | .029 | .032 |
| SCI / No SCI* (S/N) | 1 | .621 | .693 |
| AB X PP | 1 | .227 | .253 |
| AB X SN | 1 | 1.562 | 1.743 |
| PP X SN | 1 | 1.786 | 1.993 |
| AB X PP X SN | 1 | 3.597 | 4.014** |
| Residual | 115 | .896 | |

* SCI - Social Comparison Information

**p < .05

APPENDIX M-5:
SIMPLE EFFECTS ANALYSIS FOR THREE-WAY INTERACTION
OF DIMENSIONAL ACCURACY

Table M-5

ANOVA Table for the Self-Ratings of Performance: Dimensional Accuracy Measure for Public /Private by SCI / No SCI Interaction for Type B Individuals

| Source | DF | Mean Square | F-Ratio |
|-------------------------|-----|-------------|---------|
| Public / Private (P/P) | 1 | .204 | .228 |
| SCI / No SCI* (S/N) | 1 | .104 | .122 |
| PP X SN | 1 | 5.104 | 5.696** |
| Residual for full model | 115 | .896 | |

* SCI - Social Comparison Information

**p < .05

FIGURE M-6:
PUBLIC / PRIVATE X SCI / NO SCI INTERACTION
FOR TYPE B INDIVIDUALS

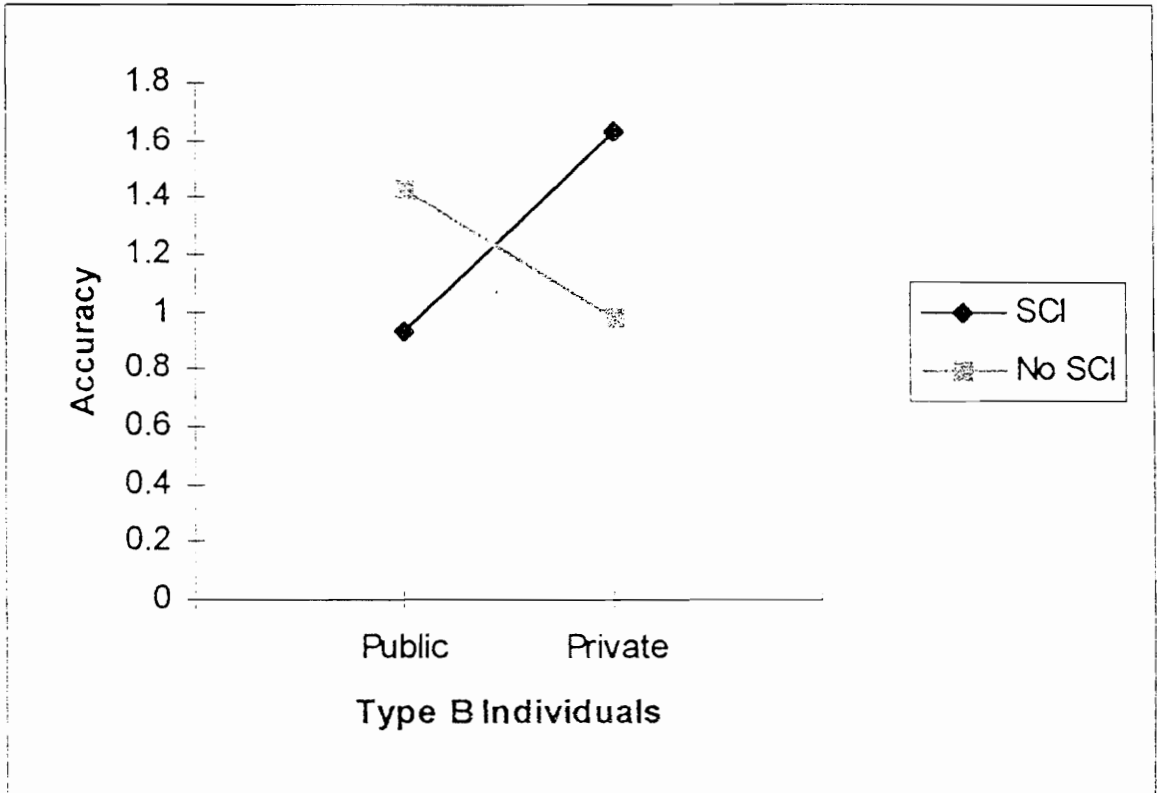


Figure M-6: Public / Private X SCI / No SCI Interaction for Type B Individuals

APPENDIX M-7:
SIMPLE EFFECTS ANALYSIS FOR TYPE B INDIVIDUALS
IN THE SCI CONDITION

Table M-7

ANOVA Table for the Self-Ratings of Performance: Dimensional Accuracy Measure for Type B Individuals in the SCI condition

| Source | DF | Mean Square | F-Ratio |
|-------------------------|-----|-------------|---------|
| Public / Private | 1 | 3.675 | 4.102** |
| Residual for full model | 115 | .896 | |

* SCI - Social Comparison Information

**p < .05

APPENDIX M-8:
SIMPLE EFFECTS ANALYSIS FOR THREE-WAY INTERACTION
OF DIMENSIONAL ACCURACY

Table M-8

ANOVA Table for the Self-Ratings of Performance: Dimensional Accuracy Measure for SCI / No SCI by Type A / Type B Interaction for Private Rating Settings

| Source | DF | Mean Square | F-Ratio |
|-------------------------|-----|-------------|---------|
| SCI / No SCI* (S/N) | 1 | .152 | .170 |
| Type A / Type B (A/B) | 1 | .762 | .850 |
| SN x AB | 1 | 1.951 | 5.569** |
| Residual for full model | 115 | .896 | |

* SCI - Social Comparison Information

**p < .05

APPENDIX M-9:
FIGURE OF INTERACTION BETWEEN SCI / NO SCI
AND TYPE A / TYPE B INDIVIDUALS
IN THE PRIVATE RATING SETTING

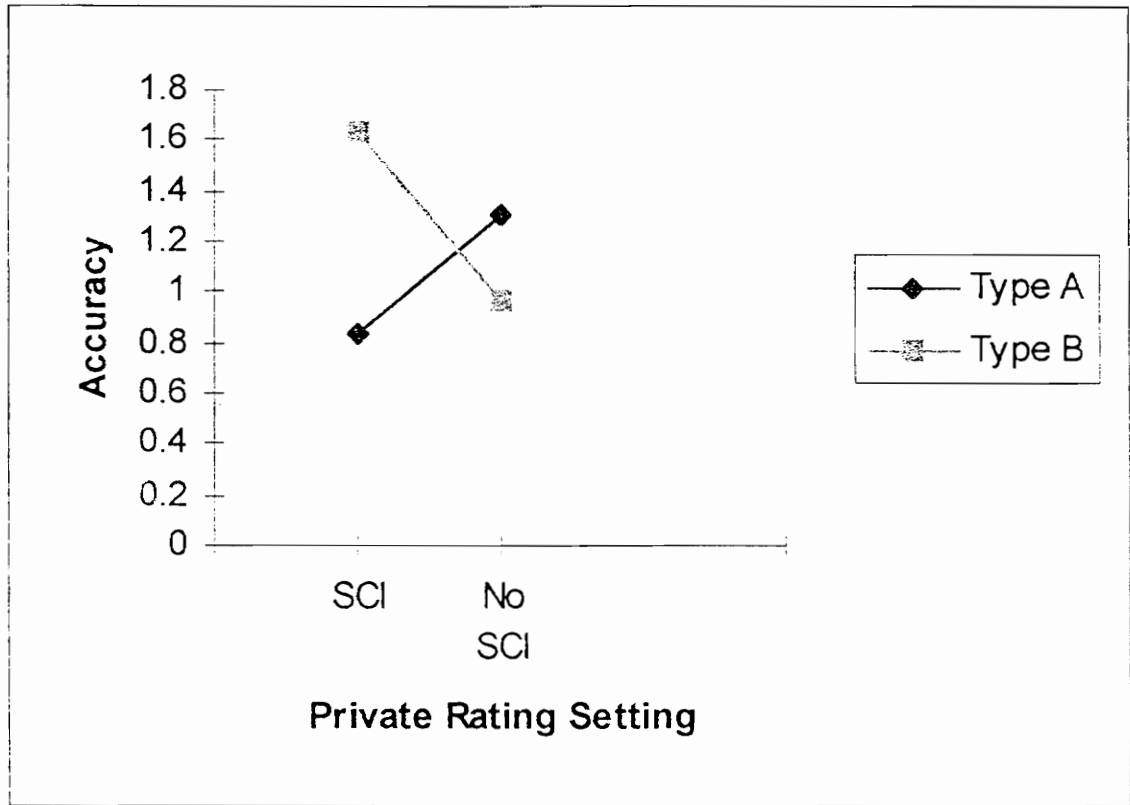


Figure M-9: SCI / No SCI X Type A / Type B Individuals for the Private Rating Setting

APPENDIX M-10:
SIMPLE EFFECTS ANALYSIS FOR THE SCI
PRIVATE RATING SETTING

Table M-10

ANOVA Table for the Self-Ratings of Performance: Dimensional Accuracy Measure for SCI in the Private Rating Settings

| Source | DF | Mean Square | F-Ratio |
|-------------------------|-----|-------------|---------|
| Type A / Type B (A/B) | 1 | 4.827 | 5.387** |
| Residual for full model | 115 | .896 | |

* SCI - Social Comparison Information

**p < .05

TABLE M-11:
DUNCAN'S MULTIPLE COMPARISON TEST
FOR DIMENSIONAL ACCURACY

Table M-11

Duncan's Multiple Comparison Test for Dimensional Accuracy

| Mean | Group | G3 | G5 | G8 | G1 | G2 | G4 | G6 | G7 |
|--------|-------|----|----|----|----|----|----|----|----|
| .8438 | G3 | | | | | | | | |
| .9333 | G5 | | | | | | | | |
| .9667 | G8 | | | | | | | | |
| 1.0000 | G1 | | | | | | | | |
| 1.2667 | G2 | | | | | | | | |
| 1.3125 | G4 | | | | | | | | |
| 1.4333 | G6 | | | | | | | | |
| 1.6333 | G7 | * | | | | | | | |

* Indicates significant differences

Note: G1 = Type A / Public / Social Comparison Information
 G2 = Type A / Public / No Social Comparison Information
 G3 = Type A / Private / Social Comparison Information
 G4 = Type A / Private / No Social Comparison Information
 G5 = Type B / Public / Social Comparison Information
 G6 = Type B / Public / No Social Comparison Information
 G7 = Type B / Private / Social Comparison Information
 G8 = Type B / Private / No Social Comparison Information

TABLE M-12:
STUDENT-NEWMAN-KEULS MULTIPLE COMPARISON TEST
FOR DIMENSIONAL ACCURACY

Table M-12

Student-Newman-Keuls Multiple Comparison Test for
Dimensional Accuracy

| Mean | Group | G3 | G5 | G8 | G1 | G2 | G4 | G6 | G7 |
|--------|-------|----|----|----|----|----|----|----|----|
| .8438 | G3 | | | | | | | | |
| .9333 | G5 | | | | | | | | |
| .9667 | G8 | | | | | | | | |
| 1.0000 | G1 | | | | | | | | |
| 1.2667 | G2 | | | | | | | | |
| 1.3125 | G4 | | | | | | | | |
| 1.4333 | G6 | | | | | | | | |
| 1.6333 | G7 | | | | | | | | |

* Indicates significant differences

Note: G1 = Type A / Public / Social Comparison Information
 G2 = Type A / Public / No Social Comparison Information
 G3 = Type A / Private / Social Comparison Information
 G4 = Type A / Private / No Social Comparison Information
 G5 = Type B / Public / Social Comparison Information
 G6 = Type B / Public / No Social Comparison Information
 G7 = Type B / Private / Social Comparison Information
 G8 = Type B / Private / No Social Comparison Information

Curriculum Vitae: Bethany J. Bodo

PERSONAL INFORMATION

Date of Birth: June 30, 1972

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EDUCATION

B.A. Lafayette College, Easton PA, graduated May
1994

First major field of study: Psychology

Second major field of study: Government

M.S. Virginia Polytechnic Institute and State
University

Major field of study: Industrial/Organizational
Psychology

Major Advisor: Dr. Neil M.A. Hauenstein

ACADEMIC EXPERIENCE

August 1995 - December 1995

Graduate T.A. - Department of Psychology, VPI
Responsible for assisting Dr. Neil Hauenstein
in the graduate level Research Methods course
as well as creating and grading homework
assignments on SPSS.

August 1994 - May 1995

Graduate Lab Instructor - Department of
Psychology, VPI
Responsible for teaching two undergraduate
Introductory to Psychology labs as well as
creating and grading exams and essays.

September 1992 - May 1994

Teaching Assistant - Department of Psychology,
Lafayette College. Assisted students with
laboratory work for the Experimental Psychology
course.

RESEARCH EXPERIENCE

August 1995 - present

Data Analysis - Department of Psychology, VPI
Under the supervision of Dr. Neil Hauenstein,
analyzed data using SAS for master's thesis.

June 1993 - May 1994

Honors Thesis - Department of Psychology,
Lafayette College
Under the supervision of Dr. Andrew Vinchur,
proposed and conducted an original project,
data input and analysis using SPSS-x, write-up,
and oral defense.

September 1992 - December 1993

Freshman Orientation Project - Analyzed data
from freshman orientation surveys, prepared
write-up, and presented results to the Deans of
the College.

RELEVANT GRADUATE COURSES

Research Methods
Social Psychology
Statistics for Social Science I, II
Psychometrics
Personality
Cognitive Psychology
Organizational Psychology II
Organizational Psychology I - Motivation
Industrial Psychology I - Personnel
Industrial Psychology II
Item Response Theory
Multivariate Regression
Quantitative Topics
GTA Training Workshop

PROFESSIONAL STUDENT AFFILIATIONS

American Psychological Association

COMPUTER SKILLS

Experience using SPSS and SAS statistical packages as
well as WordPerfect, and Power Point programs.

