

SELF-ESTEEM, DISCLOSURE AND CONSEQUENT GAINS AND
LOSSES OF ESTEEM AS A DETERMINANT OF RESPONSES
TO EVALUATIONS FROM OTHERS

by

VALERYE AGNES HUNT

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Department of Psychology

The University of British Columbia
Vancouver 8, Canada

Date April 10, 1972

Abstract

The hypothesis that expectations of disclosure and a consequent gain or loss in esteem from another would determine reactions to initially positive or negative evaluations congruent or incongruent with self-evaluation was tested. Subjects experienced success or failure at problem-solving and then received congruent or incongruent evaluations from others when disclosure of performance was either inevitable or impossible. Predictions that subjects anticipating disclosure and subsequent gains and losses of esteem would exhibit a consistency effect while those safe from the consequences of disclosure would show approval seeking behavior received no clear-cut support. Possible factors involved in the study's failure to support the hypotheses were discussed.

The study also tested the hypothesis that ratings of the evaluator on some scales would reflect only the positive or negative nature of the note received while others would require consideration of consistency between self and other evaluation. Results offered some support for this hypothesis and justified the recommendation that future research give priority to development of measures to reliably and validly detect interaction effects. Examination of direct and indirect ratings of the note-sender implied that ability relevance, rather than directness, may account for observed discrepancies between direct and indirect ratings.

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CHAPTER I

REVIEW OF THE LITERATURE

Generally, formulae for winning friends recommend that flattery, in one form or another, will result in reciprocation and friendship formation. Only those well versed in social psychological studies of interpersonal attraction would be inclined to advocate that, at least in some cases, there is truth in the old adage: "Flattery will get you nowhere". Some investigators suggest that effective ingratiation tactics may range from derogation to adulation depending on the level of self-esteem experienced by the target person. Others, however, would disagree. All findings imply that the importance of self-esteem as a theoretically central variable with significant consequences for the individual has not been overestimated. When it comes to specification of the exact operation and consequences of self-esteem, however, controversy replaces consensus. Research in the area is plagued by a history of conflicting theories and findings. Attempts to reconcile the theories by definition and isolation of mediating variables suggest that an almost endless selection of such variables may be discovered. The goal of this chapter is to review some of the relevant studies in hopes of deducing a model that will not only reconcile conflicting theories but also subsume rapidly proliferating mediating variables.

Review of the literature, however, must be preceded by consideration of whether self-esteem as manipulated and investigated by the experimenter is equivalent to self-esteem discussed by the theorist. Of the many available definitions of self-esteem, the one offered by Coopersmith

(1967) is most satisfactory for use in the present context. He regards self-esteem as:

...the evaluation which the individual makes and customarily maintains with regard to himself: it expresses an attitude of approval or disapproval, and indicates the extent to which the individual believes himself to be capable, significant and worthy. In short, self-esteem is a personal judgment of worthiness that is expressed in the attitudes that the individual holds toward himself (Coopersmith, 1967, p. 5).

Coopersmith (1967) also makes an important distinction between the terms self-esteem and self-evaluation by defining the latter as: "...a judgmental process in which the individual examines his performance, capacities and attributes according to his personal standards and values and arrives at a decision of his own worthiness (p. 7)".

Self-evaluation and self-esteem have also frequently been used to refer to an individual's self-assessment after exposure to experimental manipulations designed to induce him to adopt some estimate of himself, his performance or his behavior. Since it is regarded as unlikely that anything other than an extremely potent experimental manipulation is apt to appreciably alter a person's overall feeling of worthiness, it seems that self-esteem should not be used in this context. Reference to manipulation of an individual's self-evaluation of himself on some specific trait or attribute seems more appropriate. In the present paper, self-esteem refers to an individual's overall feeling of worthiness and self-evaluation to his positive or negative judgment of himself regarding a specific trait or attribute. "Induced" used as a preface to either term will indicate self-esteem or self-evaluation based on manipulations encountered in the experimental situation. When not so prefaced, the terms

may be taken as referring to naturally occurring self-esteem or self-evaluation.

The majority of the studies to be discussed appear to deal with the consequences of induced self-evaluation for relationships with others. Whether these findings may be generalized to cover the consequences of self-esteem in similar circumstances is a point that has received scant research attention. Previous investigators (e.g., Deutsch & Solomon, 1959) appear to have assumed that such a generalization was valid. Some evidence (e.g., Bramel, 1963; Walster, 1965; Wiest, 1965) has been offered which suggests that naturally occurring self-esteem does operate in a fashion similar to induced self-evaluation. At present, it is regarded as plausible that findings from studies investigating the effects of induced self-evaluation may also apply to self-esteem. A definite commitment to such a point of view, however, must await further empirical evidence.

The greatest impetus for social psychological investigation of the effects of self-esteem or self-evaluation for relationships with others appears to come from various consistency theories. Heider (1958) explicitly acknowledged that his formulation of balance theory assumed a positive self-evaluation. Here, Heider (1958) stated:

the possibility of a negative attitude toward the self ($p \text{ DL } p$) must also be considered. One would expect it to play a role contrary to that of ($p \text{ L } p$). If p dislikes himself he might reject a positive x as too good for him; a negative p and a positive x do not make a good unit. Or, the minus character of p may spread to the x he has made; e.g., if his friend admires his work, he will think that the friend does so because of politeness. The tendency toward symmetry of the L relation would also be disrupted; if p dislikes himself, he might easily think that o dislikes him too, especially if he likes o . The conditions given are:

(p DL p) (p L o), or one negative and one positive relation. According to the conditions of balance, such a combination tends to induce a third relation which is negative, in this case (o DL p) (p. 210).

It is clear, then, that Heider felt that, in the case of a person who regarded himself negatively, balance theory predictions would be reversed. Such an individual might not only be most favorably disposed to those who disliked him but might also derogate his own possessions and belittle his accomplishments. Balance theory, then, provided a theoretical basis for predicting and understanding such apparently irrational behaviors.

Festinger's (1957) theory of cognitive dissonance also provides a basis for predicting such behaviors. Behavior or an evaluation at odds with the person's cognitions about himself should produce dissonance. Dissonance would be reduced by altering cognitions concerning the behavior or cognitions about the evaluator. Implicit in this line of reasoning is the assumption that the self-evaluation is deeply rooted and more resistant to change. Such an assumption seems valid when considering naturally occurring self-evaluation or self-esteem. But this assumption does little to explain why, when confronted with information discrepant with experimentally induced self-evaluation or esteem, the individual does not simply alter the newly induced cognitions concerning the self. The most successful studies of dissonance dealing with the consequences of induced self-evaluation or esteem have presented potentially devastating feedback in an extremely credible fashion (e.g., Bramel, 1962, 1963; Glass, 1964; Walster, 1965). Such

feedback may induce cognitions relatively resistant to change. The nature of the feedback in these studies makes it appropriate to consider them as manipulating overall self-esteem. Studies using feedback designed only to induce subjects to adopt different self-evaluations regarding such abilities as problem-solving have concentrated primarily on reactions to task relevant evaluations.

Predictions made on the assumption that the individual's need for consistency results in behavior in keeping with induced self-evaluation or self-esteem have received empirical support. For example, Israel (1960) demonstrated that an individual induced to adopt a negative self-evaluation would derogate a prize he had worked to obtain while Gerard, Malcolm & Blevans (1964) found that such an individual would devalue an item he had chosen. Aronson & Mettee (1967) found that subjects provided with false personality feedback designed to induce low global self-esteem increased cheating behavior. Similarly, Aronson & Carlsmith (1962) found that subjects would reject unexpected success when it was inconsistent with self-expectations. Bramel (1962) found that magnitude and direction of projection of an undesirable trait differed with levels of induced self-esteem. Further, Bramel (1963) cited evidence indicating that projection as a function of naturally occurring self-esteem operated in a fashion similar to that observed with induced self-esteem. Glass (1964) demonstrated that aggressive behavior incongruent with induced high self-esteem led to derogation of the victim not evidenced by similar low self-esteem subjects.

While the studies cited offer support for the proposition that

self-esteem or self-evaluation influences behavior toward, and perception of, others; present interest is focused primarily on studies investigating the role of self-evaluation in determining reactions to direct evaluations from others. Among the first to investigate the possibility that a self-derogator might dislike people expressing esteem for him while reserving his affections for those who dislike him were Deutsch & Solomon (1959). They hypothesized that an individual would react favorably to others whose evaluations of the individual were congruent with his self-evaluation and unfavorably to those offering incongruent evaluations. In their study, Deutsch & Solomon (1959) induced subjects to adopt either positive or negative self-evaluations of performance. Each subject subsequently received an evaluation, allegedly from a teammate, that was either congruent or incongruent with his performance. Successful subjects rated a positive evaluator most favorably and a negative evaluator most unfavorably while unsuccessful subjects differed only slightly in their ratings of the positive and negative evaluators. Deutsch & Solomon (1959) interpreted their results as showing: "...there is both the interaction effect as predicted by the hypothesis of cognitive balance and a 'positivity' effect such that the Ss tended to evaluate the positive notes more favorably than the negative notes (p. 106)".

Balance theory predictions regarding the effect of self-evaluation upon reactions to evaluations by others also received support in a study by Wiest (1965). Wiest's specific hypothesis was: "...the degree of correlation between a person's liking for various

others and his perception of how much they like him, varies positively with the person's level of self-esteem (1965, p. 7)". Using two measures of self-esteem (a self rating and a teacher rating) Wiest found strong support for this hypothesis. His study is valuable not only for its quantitative extension of Heider's balance theory but also for its demonstration that naturally occurring self-esteem seems to operate in a fashion similar to induced self-evaluation.

Wilson (1965) reasoned that a decision to take or to avoid a test represented an implicit self-evaluation and hypothesized that a person's attraction to an evaluator would depend on the congruency between the individual's self and received evaluation. Subjects were given a failure experience and then permitted to elect to avoid a similar test when doing so meant loss of a chance for a reward. Results indicated that, following a personal decision to avoid the test, subjects were significantly less attracted to a teammate providing a positive evaluation dissonant with the induced self-evaluation. Wilson concluded that his findings supported the proposition that attraction to another was dependent on consistency between self and other evaluation.

Although consistency theory predictions have received empirical support, they have also been questioned by several investigators who have obtained evidence supporting a conflicting theory. For example, Dittes (1959) proposed that self-esteem would influence reactions to others somewhat differently from predictions made by consistency theorists. Dittes based his model on findings from studies investigating groups. He proposed that:

A person's attraction toward membership in a group, like motivational attraction toward any object, may be considered a function of two interacting determinants: (a) the extent to which his particular needs are satisfied by the group, and (b) the strength of his needs (Dittes, 1959, p. 77).

Dittes further assumed that the strength of an individual's need would be indicated by his level of self-esteem and that need for approval increased as self-esteem decreased. His specific hypotheses were:

Hypothesis I. The tendency of greater acceptance in a group to produce greater attraction toward the group is greater among persons with low self-esteem than among persons with high self-esteem.

Hypothesis II. Among persons experiencing acceptance in a group, attraction to the group is greater among persons with low self-esteem than among persons with high self-esteem.

Hypothesis III. Among persons experiencing non-acceptance in a group, attraction to the group is less among persons with low self-esteem than among persons with high self-esteem (Dittes, 1959, p. 78).

Dittes used measures of naturally occurring self-esteem and manipulated subjects' perceived acceptance in groups. Support was obtained for the first hypothesis: low self-esteem subjects expressed greatest attraction to the group when accepted and least when rejected. High self-esteem subjects were less extreme in their reactions. The third hypothesis also received some support ($p < .10$) in that low self-esteem individuals encountering rejection were less attracted to the group than were similar high self-esteem subjects. With regard to the second hypothesis, differences were in the predicted direction in that low self-esteem subjects experiencing acceptance were more attracted to the group than were similar high self-esteem subjects. The difference, however, was not significant.

Predictions similar to Dittes' were made and empirically supported by Walster (1965). She predicted that low self-esteem individuals would express greater liking for an affectionate other than would persons high in self-esteem. Walster provided subjects with false personality feedback that was either very favorable or very unfavorable and thus induced high and low self-esteem. Subjects were exposed to a confederate who expressed liking and acceptance. Findings were that subjects who had received an esteem lowering treatment rated the confederate significantly more favorably than did subjects exposed to the esteem raising treatment. Further, these subjects did not differ significantly on their ratings of other individuals. To completely verify Dittes' model, the study would require the addition of a condition in which high and low induced self-esteem subjects experienced rejection.

Walster suggested one factor that might account for the availability of empirical data supporting both balance and need theory might be the ambiguity of the situation. She proposed that in situations where the individual had to infer how another felt about him, persons high in self-esteem would expect acceptance while those low in self-esteem anticipated rejection. Because of a tendency to reciprocate anticipated like and dislike, there would be a positive correlation between self-esteem and liking when ambiguity prevailed. When, however, the other was clear in his expression of acceptance or rejection, the relationship between self-esteem and liking would be as specified by Dittes.

A problem with Walster's ambiguity proposal is that consistency predictions have been supported in situations (e.g., Deutsch & Solomon, 1959) where feedback was not ambiguous but definite. Berscheid & Walster (1969) modified the ambiguity proposal so that it applied only to situations where subjects experienced generalized acceptance not based on specific traits. They suggested:

- 1) If another likes us for traits unrelated to those traits for which we admire or despise ourselves, the lower our general self-esteem the more we will resent rejection.
- 2) If another likes us for the very traits for which we admire or despise ourselves, the more accurate the other is the more we will like him in return (Berscheid & Walster, 1969, p. 61).

Although the accuracy of the evaluation may well be a factor in determining the reaction to it, there is evidence to suggest that accuracy does not necessarily engender liking. Subsequent discussion will report studies by Jones (1968), Jones & Schneider (1968), Jones & Pines (1968) and Jones & Ratner (1967) demonstrating that, under some conditions, an inaccurate and flattering evaluation is preferable to an accurate and unflattering one.

Jones, Gergen & Davis (1962) offer two reasons why liking based on an accurate evaluation should be preferred to that based on an inaccurate one. The first relates to the instrumental value of approval: a person expects to have power or control over those who like him. Control over others who perceive accurately is not only easier to maintain because of elimination of the need to dissemble but, presumably, is also more firmly rooted. The second reason relates to approval needs: approval resulting from another's realistic and accurate

perception has positive implications for one's worth as a person.

To test their hypotheses concerning the greater value of approval following an honest self-presentation, Jones, Gergen & Davis (1962) instructed half their subjects to provide an interviewer with a completely candid self-description while the rest were asked to do everything possible to impress the interviewer favorably. Subjects were then informed that the interviewer's evaluation of them had been positive or negative. Jones, Gergen & Davis hypothesized that ratings of the interviewer by "accuracy" subjects would be more affected by the positivity or negativity of the evaluation than would be ratings made by "hypocrisy" subjects. Although results were in the direction predicted, they were not significant. The investigators reported: "It was apparent that the perceptual effects of set were obscured by retrospective distortion: those receiving approving feedback concluded that they were more accurate in self-presentation than those creating a negative impression (Jones, Gergen & Davis, 1962, p. 16)."

A study by Harvey and Clapp (1965) also appears to provide justification for maintaining that factors other than accuracy of an evaluation operate to determine reactions to it. Subjects indicated how they would expect to be rated by a stranger and were then exposed to ratings allegedly made by the stranger. These ratings deviated from subjects' own ratings in either a favorable or unfavorable direction by a large or small amount. Harvey & Clapp hypothesized that the effects of an unexpectedly favorable evaluation would differ significantly from the effects of an unexpectedly negative evaluation. They further hypothesized that subjects expecting negative evaluations would be more

wounded by ratings that were even less favorable than expected and more receptive to unexpectedly favorable ratings than would be subjects having higher expectancies. Of interest was the finding that individuals of lower expectancy were not only more hurt by unexpectedly negative feedback but also less able to accept unexpectedly positive evaluations. It thus appears Dittes' predictions regarding the effects of rejection on low self-esteem individuals were borne out but the study also partially supports consistency theory since these persons were not more receptive to overly positive evaluations.

Jones (1966) questioned whether balance theory predictions would be confirmed in situations where subjects expected to continue exchanging evaluations directed at specific actions of others. He argued in favor of consideration of reciprocation theory which predicts that individuals will reward positive evaluators and punish negative ones. Further, Jones pointed out that it is only in the case of the negative self-evaluator that balance and reciprocation theories make different predictions. In a study to compare the theories, Jones used false performance feedback to induce subjects to adopt high or low self-evaluations. They were then placed in a situation where they took turns answering questions and providing evaluations of their own and others' answers. The study contained four groups: high self-evaluators receiving positive evaluations, high self-evaluators receiving negative evaluations, low self-evaluators receiving favorable evaluations and low self-evaluators receiving unfavorable evaluations.

Major dependent variables were the positive or negative evaluations a subject sent to his colleagues and the number of positive or negative

evaluations he made of his own responses. Findings supported reciprocation rather than balance theory. Jones (1966) suggested two factors that might account for predominant tendencies toward reciprocation:

1) Subjects were evaluating single actions of other people rather than making global evaluations and, 2) Subjects were sending evaluations directly to others. Accordingly, Jones suggested when interpersonal evaluations enable one to achieve control over others' behavior, a person may be primarily motivated by the instrumental value of the evaluations he sends. Additionally, Jones found some support for need theory: as subjects decreased the number of positive self-evaluations, they became increasingly favorable toward positive evaluators and unfavorable toward negative ones.

Jones & Ratner (1967) suggested that investigation of the role of self-evaluation as a determinant of reactions to evaluations from others entailed isolating variables that mediated between consistent or reciprocal responses. They further suggested that commitment to self-appraisal might be such a variable. Jones & Ratner (1967) stated:

...When exchanging evaluations with others, people may well be concerned with the consequent behaviors implied in the kind of evaluative information they accept for themselves....If a person has made no commitment to a low self-appraisal, then accepting praise or rejecting censure from another person implies choosing a level of performance beyond his capabilities with the hazard of experiencing failure. However, if a person is committed to a low self-appraisal by the decisions he makes or by public acknowledgment, then he is protected from the negative implications of accepting praise. In effect, he has avoided the choice of difficult situations implied in accepting the esteem of others by irrevocably committing himself to easy situations which are commensurate with his low self-evaluation. In this case the person can accept the esteem without simultaneously

risking the undesirable consequences of "living up to" its implications. If commitment has such a protective function, then one would expect that, contrary to the consistency analysis, the extent of a person's commitment to a low self-appraisal would be inversely related to the tendency to devalue a peer sending positive evaluations relative to a peer sending negative evaluations (pp. 442-43).

Jones & Ratner provided subjects with negative feedback regarding performance on a written test and thus induced low self-evaluation of personality inference ability. Subjects were told they would subsequently evaluate a clinical case which they could select from a list of cases varying in difficulty. Half the subjects were permitted to choose a case immediately after the written test, the other half anticipated selecting a case after completing the oral portion of the test. All subjects then took the oral portion of the test, exchanged evaluations of answers with peers and evaluated their own answers.

Results indicated that experimental manipulations had induced low self-evaluations of ability and that subjects given an opportunity to commit themselves to an easy case did so. Most importantly, subjects committed to easy cases favored a positive evaluator while subjects in the no commitment condition preferred a negative evaluator. Jones & Ratner interpreted these results as supporting their hypotheses.

Jones & Pines (1968) suggested that people would be motivated by consistency needs when inconsistency could lead to punishment but, in the absence of undesirable consequences, approval needs would prevail. They designed a study to determine whether anticipation of self-revealing events would mediate between consistent and approval seeking

responses to evaluations. Self-revealing events were circumstances likely to lead to a clear indication of degree of competence. It was hypothesized that low self-evaluators would behave as predicted by consistency theory when self-revealing events were anticipated and in accord with approval theory when such events were not expected.

In a study to test this hypothesis, Jones & Pines used false performance feedback to induce low self-evaluation of ability. Anticipation of self-revealing events was manipulated by telling half the subjects that, following oral answers and peer evaluations, the experimenter would announce whether or not answers were correct. The rest of the subjects were not given such expectations. Results confirmed the hypothesis: subjects favored the negative evaluator when self-revealing events were anticipated and the positive evaluator when such events were not expected. Furthermore, subjects were asked to indicate which of the evaluations received (expert = 33% correct or peer = 58% correct) best indicated their actual ability. Subjects anticipating self-revealing events were more likely to endorse the lower rating.

Jones (1968) contended that the expectation of self-revealing events might explain results from previous studies (e.g., Aronson & Carlsmith, 1962) which indicated that subjects encountering unexpected success would alter subsequent performance so it would be consistent with previously established expectations. Jones noted that subjects in the Aronson & Carlsmith study expected a post-test interview in which, on the basis of test performance, they may have anticipated doing well or poorly. Therefore, these subjects could be categorized as expecting

self-revealing events. To test this hypothesis, Jones (1968) used an experimental paradigm similar to that of Aronson & Carlsmith. In Jones' study, however, half the subjects expected an interview to follow the test, the rest had no such expectation. Since it was thought that subjects might attempt to control self-representation by actual performance and also by expressed opinions about ability, dependent variables included a behavioral measure (the number of items changed from the first to second taking of the fifth section of the test) and a questionnaire measure. Jones found tentative support for his suggestion that subjects would appear most consistent when anticipating an interview. He also found evidence suggesting that greatest effort was made to correct overly favorable impressions when interviews were expected; otherwise, stress was placed on correcting a less favorable impression.

Mettee (1971) examined the roles of consistency and future interaction in the rejection of unexpected success. He suggested two reasons for rejection of such success: one, it is inconsistent and, two, acceptance of such success may entail negative consequences as suggested by Jones (1968). Mettee's study entailed manipulation of the situation so that success for some subjects was inconsistent and carried a threat of future failure; for others it was neither inconsistent nor threatening and, for a third group, it was only inconsistent. Mettee concluded that psychological inconsistency and future negative consequences were both factors in rejection of unexpected success. Additionally, the subjects' expectation that the task or skill might be learned would be

a factor in determining whether unexpected success would be accepted or rejected. If subjects believed it possible to learn an ability, sudden success might be taken as a demonstration of learning.

Jones & Schneider (1968) suggested that the degree of certainty of self-appraisal might also determine reactions to evaluations from others. They suggested that the individual still uncertain of his ability might welcome further information that clarified his position. They further argued that consistency motives would not be operative until an individual had adopted a fairly firm and certain ability appraisal. Accordingly, Jones & Schneider argued, the less certainty an individual had regarding his ability, the more he would tend to favor a positive evaluator.

In a study to test this hypothesis, Jones & Schneider persuaded subjects to adopt a low ability appraisal but varied the degree of certainty with which subjects held this appraisal. Subjects were then exposed to positive and negative peer evaluations of ability. It was found that Certain subjects sent more positive evaluations to a negative evaluator while Uncertain subjects favored the positive evaluator. Questionnaire ratings revealed that subjects in all conditions not only liked the positive evaluator most but also most desired further informal association with her. Jones & Schneider state:

...Why the pencil-and-paper ratings which were communicated only to the experimenter showed a different pattern of results than the switch-throw measure involving direct social exchange is unclear.... The possibility exists that communicated and non-communicated evaluations of others involve quite different processes, and such differences should be subject to more systematic analysis (1968, p. 399).

Skolnick (1971) attempted to replicate the Deutsch & Solomon (1959) study. The replication used a procedure similar to that followed by the original investigators. There were, however, some differences. Skolnick (1971) used introductory psychology students as subjects and included a control group that did not receive feedback regarding test performance but did receive notes from teammates. Skolnick assumed that the no feedback subjects would have no self-evaluation for task performance and, consequently, neither positive nor negative other evaluations could appear incongruous. Skolnick further argued:

...If subjects were seeking congruity alone then, they would have no clear preference for the positive or negative evaluator; alternatively, if subjects are seeking positive evaluations, subjects in this uncertain group should prefer the positive to the negative evaluator (1971, p. 63).

Two possible problems may be noted: one is that no feedback subjects may, on the basis of stable self-esteem, have formed hypotheses regarding their ability. Secondly, Jones & Schneider (1968) demonstrated that degree of certainty regarding one's ability appraisal may determine reactions to evaluations. Possibly the most important procedural alteration was that subjects in the Skolnick (1971) study definitely expected to form teams for a contest after exchanging notes while subjects in the Deutsch & Solomon (1959) study believed the contest concluded before exchanging notes. Skolnick's (1971) data indicated that positive evaluators were liked better than negative ones. Further, the interaction effect (feedback x evaluation) tended ($p < .09$) to approach significance due to a strong tendency for failure subjects to be most receptive to a positive evaluator and success subjects most favorable

to a negative one. These results prompted Skolnick to state:

The major findings of this study are that (a) persons like positive evaluators, regardless of their self-esteem, and (b) persons who dislike themselves are more desirous of positive evaluation than persons who have positive self-concepts. These findings provide support for a signification model and, at the same time, contradict consistency theories and the results of the Deutsch & Solomon experiment (1971, p. 66).

Skolnick attributes failure to replicate the Deutsch & Solomon study to possible suspicion and lack of involvement on the part of subjects in the original study. He further advocates that these are the conditions under which consistency effects are likely to occur and that: "...a signification model is likely to be supported where there is high ego involvement and suspicion is minimal (p. 66)". It will be left to the reader to judge the validity of the claims that telephone operators are apt to be less ego-involved concerning intelligence, or lack of it, as well as more suspicious of psychological experiments than present day college students.

However, a procedural alteration in the Skolnick (1971) study may account for the failure to replicate. Subjects presumably expected future interaction since they were told that teammate selection would follow the exchange of notes. Thus, in Skolnick's study, the statement of being most or least wanted as a teammate may be regarded as carrying with it meaningful acceptance or rejection since subjects presumably expected to form teams. Accordingly, the meaningfulness of the evaluation in terms of anticipated future interaction may be yet another variable operating to determine whether balance or need motives will predominate.

A possible shortcoming of both the Deutsch & Solomon (1959) and Skolnick (1971) studies is the nature of the feedback given to subjects. Success subjects were informed that their score was almost twice as great as the average while failure subjects were informed that theirs was a little less than half the average score. Festinger (1954) cites evidence to indicate that use of extreme feedback may make it more difficult for subjects to assess their own ability relative to that of others. Secondly, subjects could easily categorize the evaluation as coming from someone whose test performance was either inferior or superior to theirs. This may have resulted in a subjective perception of status differences. Iverson (1968) investigated the effects of status on reactions to partners who provided invalid or valid praise and found reactions varied with status. Subjects receiving evaluations from inferiors were most attentive to the validity of the proffered praise while subjects being evaluated by superiors did not demonstrate such discrimination. Therefore, it may be that positive evaluations in the Deutsch & Solomon and Skolnick studies may not only have been perceived as being valid or invalid but also as coming from sources varying in competence.

Thus far the literature reviewed seems to offer support for positing both consistency and need for approval motives as factors determining reactions to evaluations from others. Further, it appears that research attention has most recently been directed toward isolation and definition of variables such as certainty of self-appraisal, anticipation of self-revealing events and commitment which

may operate to determine which motive will be uppermost. Rather than continuing attempts to define and isolate such mediating variables, it seems that a more promising approach would entail developing a model that would not only reconcile conflicting findings but also subsume and explain the operation of previously defined mediating variables.

CHAPTER II

RATIONALE AND HYPOTHESES OF THE PRESENT STUDY

The gain-loss theory set forth by Aronson (1969) may be extended to explicate the contradictory findings regarding the role of self-esteem or self-evaluation in determining responses to evaluations from others. This theory proposes that receiving evidence of positive regard from another has greater reward value if the other is someone from whom we have not previously received so much approval. Similarly, a loss in esteem or an expression of disapproval from a formerly approving other has greatest punishment value.

Aronson (1969) reports testing his theory in a study using four experimental conditions. In the first (Positive) condition, subjects received constantly positive evaluations; in the second (Negative) condition, they received constantly negative evaluations; in the third (Gain) condition, the evaluations were initially negative but became positive and in the fourth (Loss) condition, the initially positive evaluations became negative. Aronson found that subjects in the Gain condition expressed greater liking for the evaluator than did subjects in the Positive condition. Similarly, subjects in the Loss condition tended to dislike the evaluator more than did subjects in the Negative condition.

Aronson (1969) also suggested that an individual's reaction to a positive or negative evaluation is partially based on expectations of receiving praise or derogation from a particular source. Thus, a close

friend from whom one expects approval has little potential for providing a gain in esteem but has greater power to exert punishment since, the greater the past history of approval, the greater the possibilities for losses in esteem. Similarly, strangers and acquaintances have greatest reward power. As support for this point, Aronson (1969) cites studies demonstrating more positive reactions to praising strangers and more negativity upon encountering censure from a friend.

Extension of the gain-loss theory to reconcile and explain contradictory findings regarding the effects of self-esteem or evaluation on reactions to evaluations from others requires consideration of different expectancies associated with different levels of self-esteem or self-evaluation. Such expectancies are discussed by Coopersmith (1967) who suggests that individuals differing in self-esteem may have very different expectations regarding the outcome of any situation. Of high self-esteem individuals, Coopersmith states:

...In social situations persons who are accustomed to acceptance and expect to be successful are likely to believe that they will be treated with due appreciation of their worth. They will probably insist upon their rights and prerogatives and resist any treatment that even suggests that they are not equal to others....We would expect that a beneficent cycle of...expectations of success leads to...confidence and more frequent successes, which in turn leads to greater expectations of success (1967, p. 251).

This may be contrasted with the expectations associated with low self-esteem described by Coopersmith: "The...expectations of individuals with low self-esteem are marked by lack of faith, expectations of failure and the anticipation of rejection (1967, p. 252)." These statements provide some grounds for suggesting that high and low self-esteem

persons may have very different expectations of encountering success, acceptance and liking in any given situation. Individuals induced to adopt differential self-evaluations of ability may also have different expectations of receiving approval or disapproval. That is, one who believes himself a failure at solving problems or inferring personalities may expect others to also derogate his ability. Similarly, persons experiencing success may expect their demonstration of superior ability to excite the admiration and approval of others. These differential expectations, taken in conjunction with Aronson's findings regarding the effects of gains and losses in esteem, may provide a key to understanding different reactions to evaluations from others as a function of self-esteem or self-evaluation.

It may be recalled that Aronson found a gain in esteem was most rewarding, followed by a constant high level of esteem, followed by a constant low level of esteem with a loss in esteem most punishing of all. On this basis, taking expectancies into account, consideration of whether an evaluation represents a gain, loss or constant level of esteem may enable prediction of responses to it. These predictions follow:

1. The high self-evaluator should expect a positive evaluation. Receipt of such an evaluation would represent a constant level of esteem and lead to moderate liking.
2. The low self-evaluator should expect a negative evaluation. Receipt of a positive evaluation should represent a gain in esteem and, accordingly, lead to greater liking for the positive evaluator than would be evidenced by a high self-evaluator.

3. The low self-evaluator should find a negative evaluation in accord with his expectancies. Since he is experiencing a constant level of esteem, he may be expected to express only moderate dislike for the negative evaluator.

4. The high self-evaluator receiving a negative evaluation may be regarded as experiencing a loss in esteem and should, therefore, express greatest dislike for the negative evaluator.

Several studies do demonstrate that the low self-evaluator reacts to praise by expressing more liking for the evaluator than the high self-evaluator. For example, Walster (1965), Dittes (1959) and Jones (1966) have obtained such results. However, only Dittes and Jones included high self-evaluators exposed to negative evaluations. In the former study, contrary to predictions derived from the gain-loss theory, subjects low in self-esteem expressed greater dislike when rejected than did high self-esteem subjects. Furthermore, on the basis of data reported by Jones (1966) it is possible to conclude that subjects induced to adopt a low self-evaluation were no less unfavorable to a negative evaluator than were high self-evaluators. This pattern of results is not in accord with predictions made on the basis of the gain-loss theory. Thus, it appears that in some cases, low self-evaluators express more dislike when rejected or negatively evaluated than do high self-evaluators.

A second problem arises in connection with data from studies supporting consistency or balance predictions (e.g., Deutsch & Solomon, 1959). In these studies, the behavior of high and low self-evaluators receiving negative evaluations is in accord with predictions derived

from the gain-loss theory: high self-evaluators express most dislike for the negative evaluator. However, predictions fail to be borne out in instances of subjects receiving positive evaluations since low self-evaluators for whom a positive evaluation presumably represents a gain in esteem, expressed less, rather than more, liking for the positive evaluator than did high self-evaluators.

Consideration of expectations of self-disclosure may explain these inconsistencies and also why such variables as anticipation of self-revealing events, certainty of self-appraisal and commitment mediate between approval and consistency behaviors. It is suggested that expectations of self-disclosure with a consequent gain or loss in esteem may underlie all these variables and thus lead to their effect.

Disclosure might be defined as a process through which an individual becomes known to others. Although a person may attempt to conceal deficiencies and weaknesses, continuing interaction increases not only the amount but also the accuracy of personal information available to others. An individual who adopts an attitude of self-disapproval because he believes himself to be incompetent, inept and unworthy may expect disclosure to result in revelation of his inadequacies and subsequent disapproval from others. Accordingly, the anticipation of self-disclosure may affect an individual's response to initial approval from others. If the situation is one such that the other offers approval despite full knowledge of the individual's inadequacy or will never discover the inadequacy, then the low self-evaluator may respond by expressing great liking for the approving other. When, however, disclosure is not complete and the situation is one such that the truth cannot remain

hidden; the individual must face the possibility that the evaluator will reverse his opinion and come to regard the individual negatively. (Recall that Aronson has demonstrated that a loss in esteem is most punishing of all.) Under these circumstances, in anticipation of this loss of esteem, the individual may protect himself by lowering his liking for the other.

Support for the above proposition comes from the observation that low self-evaluators have failed to respond most favorably to a positive evaluator mainly when situations were conducive to disclosure. For example, Jones & Ratner (1967), Jones & Pines (1968) and Jones (1968) found subjects acted in accord with need motives when circumstances were such that individuals induced to evaluate themselves negatively were certain of not being found out. Subjects behaved according to balance predictions when self-disclosure was likely. Jones & Schneider (1968) found certainty of self-appraisal to be a mediating factor. This may illustrate that the more certain one is of one's incompetence, the more certain it is that disclosure will lead to a loss in esteem.

Similarly, Harvey & Clapp (1965) found that low self-esteem subjects confronted with an overly positive evaluation from a stranger did not react to it as favorably as did high self-esteem subjects. Expectancy of self-disclosure may also account for this finding: subjects believed that the rater was a classmate and may have anticipated that closer acquaintance would result in a lowered evaluation. The results of the Deutsch & Solomon (1959) study are not in accord with the disclosure model since low self-evaluators receiving a favorable evaluation did not increase their liking for the evaluator. There is, however,

the possibility that these subjects may have very seriously questioned the evaluator's intentions and/or intelligence.

It is mainly when self-disclosure is anticipated that balance predictions are supported. Under these circumstances, empirical results have deviated from gain-loss predictions in cases of high and low self-evaluators confronted with negative evaluations. Some instances are in keeping with gain-loss predictions in that high self-evaluators receiving a negative evaluation have expressed greatest dislike for the evaluator. In others (Dittes, 1959; Harvey & Clapp, 1965), low self-evaluators have expressed greatest dislike for a negative evaluator. Again, consideration of expectations of self-disclosure and subsequent gains or losses in esteem may help reconcile these findings. Presumably individuals who evaluate themselves highly expect to receive expressions of approval from others. When confronted with an initially negative evaluation, these individuals may welcome future interaction and disclosure since they expect the negative evaluation to eventually become positive. Anticipation of eventual higher esteem may lead to a milder reaction to a negative evaluator.

It seems, then, that determining whether consistency or approval motives will influence reactions to evaluations from others may be done by considering self-disclosure and consequent gains or losses in esteem. The individual who evaluates himself negatively may experience a favorable evaluation from another as a gain in esteem. Whether he responds to this expression of esteem by increasing or decreasing his liking for the evaluator may depend on whether or not he expects the other to reverse his initial opinion. Thus, when the truth is unlikely to be

revealed or the worst is already known, he may reciprocate. When, however, the low self-evaluator fears that disclosure may result in an opinion reversal he may, in anticipation of a punishing loss of esteem, lower his liking for the other.

The high self-evaluator may regard disapproval as a loss of esteem. If disclosure is expected to result in a reversal of the initially negative evaluation, anticipation of eventual positive esteem may act to temper dislike for the evaluator.

Since the disclosure model seemed adequate to explain most of the data reviewed, the primary purpose of the present study was to determine whether or not it was viable. It was suggested that the primary factor determining whether an individual expects approval or disapproval from others is his view of himself. High self-evaluators should expect self-disclosure to reveal abilities and attributes that would favorably impress others while low self-evaluators should expect it to lay bare their inadequacies. Consequently, the present study tested the disclosure model by providing half the subjects with favorable ability feedback and the other half with unfavorable feedback. Subjects were exposed to a positive or negative evaluation allegedly from a prospective teammate under conditions such that self-disclosure was either inevitable or impossible. On the basis of the literature reviewed, the following hypotheses were formulated:

1. When disclosure is expected, success subjects will like a negative evaluator more than they will when disclosure is not anticipated.
2. When disclosure is not expected, failure subjects will like a positive evaluator more than they will when disclosure is expected.

3. When disclosure is not expected, failure subjects will like a positive note-sender more than will success subjects; when disclosure is expected, success subjects will like a positive note-sender more than will failure subjects.
4. When disclosure is expected, failure subjects will prefer a negative to a positive note-sender; when it is not expected, failure subjects will prefer a positive to a negative note-sender.

As well as investigating specific hypotheses relating to disclosure and anticipated gains and losses of esteem, the study also tentatively investigated the suitability of various scales as measures of attraction in studies concerned with the effects of self-evaluation on responses to evaluations from others. Osgood, Suci & Tannenbaum (1957) reported that a problem that had not been overcome dealt with comparability of various scales across concepts. Although the three factors: evaluative, activity and potency reappeared despite changes in the concept being judged, individual scales did not maintain the same meanings and inter-correlations with other scales across all concepts. This problem may be illustrated by considering the meanings of the scale fast-slow with reference to sports cars and women. Osgood, Suci and Tannenbaum further reported that evaluative scales seem to be the least stable and most susceptible to variability across concepts.

The twelve adjective pairs which Osgood, Suci & Tannenbaum (1957) identified as loading most heavily on the evaluative factor were: kind-cruel, positive-negative, optimistic-pessimistic, sociable-unsociable, good-bad, grateful-ungrateful, true-false, reputable-disreputable, harmonious-dissonant, beautiful-ugly, successful-unsuccessful, and wise-foolish. While these all appeared suitable for evaluation of

stimulus persons, the main concern of the present study was detecting the effects of consistency or inconsistency between self and other evaluation. Some ratings could logically follow from the nature (positive or negative) of the note and would not require consideration of consistency between other-evaluation and self-evaluation. A positive note-sender, for example, could be perceived as kind, positive, optimistic and sociable regardless of consistency between self and other evaluation. However, the recipient of a positive (and incongruent) note would be required to take into account the consistency between received evaluation and self-evaluation when rating the sender as true or false. Accordingly, the twelve adjective pairs were separated into two categories: a category of Positivity scales and a category of Consistency scales. Since it appeared that ratings on the adjective pairs: kind-cruel, positive-negative, optimistic-pessimistic and sociable-unsociable could be made without reference to self-evaluation, these were categorized as Positivity scales. The remainder were categorized as Consistency scales and included the adjective pairs: good-bad, grateful-ungrateful, harmonious-dissonant, beautiful-ugly, successful-unsuccessful, true-false, reputable-disreputable and wise-foolish. It was predicted that the Positivity scales would reflect only the nature of the note while the Consistency scales would be more sensitive to the interaction of self and other evaluation.

The study also attempted to further investigate the Jones & Schneider (1968) finding that pencil-and-paper ratings sent to the experimenter differed from behavioral ratings communicated directly to the evaluator. Recall that Jones & Schneider found that Certain

and Uncertain failure subjects showed little difference in evaluations sent directly to the positive evaluator but that they did differ significantly in reactions to a negative evaluator: Certain subjects were significantly more favorable to a negative evaluator than were Uncertain subjects. Pencil-and-paper ratings sent to the experimenter revealed a different pattern of results: all subjects rated a positive evaluator more favorably than they did a negative evaluator. The present study compared pencil-and-paper ratings sent directly to the note-sender with similar ratings intended only for the experimenter. The purpose was to determine if the discrepancy observed by Jones & Schneider might be, as they suggested, that direct evaluations differ from indirect ones.

CHAPTER III

METHOD

Overview of the Design:

The study used a 2 x 2 x 2 completely crossed factorial design in which the variables manipulated were:

1. Self-evaluation: Half the subjects were told their task performance was superior, the other half that it was inferior.
2. Disclosure: Half the subjects expected their test scores to be made public, the other half believed this information would remain private.
3. Note: All subjects received a note alleged to come from another group member. Half the subjects received a note indicating that they were regarded as a desirable teammate; the other half a note implying that they were regarded as an undesirable teammate.

Subjects:

Subjects used were volunteers from introductory Psychology classes at the University of British Columbia. The design called for a total of 100 subjects: 10 in each of the eight experimental cells and an additional 10 in each of two control cells. Subjects participated in groups ranging in size from three to six. A total of 27 groups took part in the study: five contained three subjects, nine contained four subjects, six contained five subjects and six contained six subjects. It was

randomly determined whether a group would be in the Disclosure or No Disclosure condition and subjects were randomly assigned to positions within each group.

A total of 117 subjects participated in the study. Of these, 17 were eliminated: seven from Disclosure groups, eight from No Disclosure groups and two from a control cell, for the reasons specified later in this chapter.

Procedure:

The experimental apparatus was designed so that up to six subjects at a time could participate in the experiment. Subjects were separated from one another and from the experimenter by opaque partitions. Pre-experimental interaction among subjects was minimized by escorting each subject, immediately upon arrival, to the experimental room where screens had been erected. Subjects were instructed to avoid looking at or communicating with others while waiting for the rest of the group to arrive.

Subjects were given an identity letter which was used throughout the experiment. The identity letter received by a subject determined the nature of the feedback and note received by the subject. These letters were also placed on all forms used by subjects during the study.

Subjects were told that the purpose of the study was to investigate factors that influence teammate selection and subsequent team performance in situations where prospective partners were not well known to one another.¹ Subjects were told that their task was to choose a

¹See Appendix A for a copy of the experimental instructions.

teammate from among the other group members and work together on contest problems. It was added that screens and identity letters were used not only to ensure that decisions would be based solely on information provided during the experiment but also so that they would feel free to exchange honest evaluations later on. In order to motivate the subjects to take the task seriously, they were told that the one team having the highest score of all teams participating in the project would receive a \$10.00 prize.

Once preliminary instructions had been given, the self-evaluation manipulation was introduced. Subjects were told that, in order to give them some experience with the type of problem they would encounter during the contest and an idea of their own problem-solving ability, they would do a couple of problems similar to the contest ones. It was stressed that performance on practice and contest problems would be very similar since initial performance on the problems had been found to be almost identical to later performance. This was an attempt to ensure that subjects would not accept a positive evaluation in hopes that sudden insight would enable them to live up to it. The problems used were the "Cracker Jack Problem" and the "Politics Problem" from the Wff'n'Proof game.² Subjects were given seven minutes to complete each of the problems.

Manipulation of self-evaluation entailed providing false feedback regarding performance on these problems. Half the subjects were informed that they had scored at the 91st percentile and theirs was the highest score in the group. Failure subjects were told that they had placed at the 19th percentile and, thus, had the lowest score in the group. Scores

²See Appendix B for copies of these problems.

attributed to other group members varied with the size of the group. Subjects in groups of three were told that the group contained one member of comparable (although slightly lower) ability and one of intermediate competence. Subjects in groups of four were told that the group contained other members of high, medium and low competence while subjects in larger groups were led to believe that the group contained two or three members of medium competence. In order to increase feedback credibility, scores for each subject on the two problems were varied so that the average was at the 91st or 19th percentile. Subjects were given scorecards with their identity letter circled and, beside it, a score followed by a percent sign. The bottom of the card contained a row of scores allegedly made by other group members. Subjects were explicitly told that scores shown for other group members were randomly ordered so that a particular score could not be identified as belonging to a specific subject. It was thought that a possible advantage of this procedure might be that subjects would be less able to categorize the evaluation as coming from someone of definitely superior or inferior ability.

After completion of each problem, subjects received the scores allegedly made on the problem. Once subjects had had a minute or so to digest the second round of scores, they were asked to rate themselves on nine-point scales for six traits: problem solving ability, desirability as a teammate, intelligence, team spirit, desirability as a friend and likeability.³ Once these had been collected, subjects were

³See Appendix C for a copy of Self Rating Scales and instructions.

given a second set of scales⁴ and asked to indicate how they would expect to be rated by other group members on the same characteristics. This constituted a check to determine whether or not the manipulation effectively established expectations of positive or negative evaluations from others.

Once these ratings had been obtained, subjects were asked to complete a sheet providing information about their appearance, whether their high school programme had included any Math, Physics or Chemistry courses and whether their last year's average had been below average, average or above average. Subjects were also asked to list courses in which they were currently enrolled and three of their hobbies.⁵

Subjects were told that the purpose of the information sheet was to provide other group members with some basis for forming an impression of their desirability as a teammate. It was expected that the majority of subjects would have to indicate they had taken some Math and Science courses and had achieved above average marks. This was intended to cause subjects receiving positive evaluations to feel that their answers provided the note-senders with reasonable grounds for expecting superior performance from them. Recipients of negative notes might, it was thought, attribute the evaluation to such factors as courses in which subjects were currently enrolled. Whether or not an evaluator had justification for forming an expectation concerning a person's

⁴See Appendix D for a copy of Expected Rating Scales and instructions.

⁵See Appendix E for a sample of the Experimental Information Sheet.

performance might affect reactions to the prospect of violating these expectations. That is, subjects might react differently to an evaluator possessing task relevant information than they would to one who did not have such information. Consequently, the study included two control cells: High Feedback-Negative Note and Low Feedback-Positive Note. Subjects in control cells were given sheets asking only for information which was obviously irrelevant to task performance and could provide no logical basis for forming an expectation concerning problem-solving ability.⁶

Once the completed information sheets had been collected, subjects were told they would be given the sheet completed by another group member. They were to decide how they felt about having that person as a teammate and to write a note to the person informing him of their decision. The instructions at this point introduced the Disclosure versus No Disclosure manipulation. The Disclosure groups were told:

Before you prepare to write a note, I would like to stress that the information on the sheet is not the only information you'll have for deciding how you feel about having that person as a teammate. Before you make a final decision, you'll be told how the person did on the test problems. But -- I'm interested in seeing how accurately you can judge without that information. I want you not to discuss your test performance in your note.

When you receive the information sheet -- please read it carefully and do your best to form an accurate impression of the person it describes. Then convey your honest impressions clearly to the person to whom you are writing the note.

I mentioned before that precautions had been taken to preserve anonymity and thereby ensure that you felt free to evaluate one another honestly. Since you may

⁶See Appendix F for a sample of the Control Information Sheet.

be wondering how it is possible to maintain anonymity and work together on contest problems, I'll explain how this is to be done. Once you have formed teams you will, as before, each be given a problem. You will follow exactly the same procedure as before in solving this problem. The total score for your team on a problem will consist of points earned by you plus those earned by your partner. That is, you'll work separately and your scores will be summed. As you can see -- having a chance of winning depends not only on your performance but also on that of your partner.

Once you've completed the contest problems, I'll be able to tell you your team score. Also, I'll let you know how many points you made on each problem and how many your partner made. You'll have to wait until the project is finished to find out if your team won or lost. Once this project is over -- probably in about two months -- you'll each receive a letter telling you if your team won or lost. I might add, if yours is the winning team, you'll also receive a cheque representing your share of the winnings.

Instructions to No Disclosure groups were as follows:

Before you prepare to write a note, I would like to stress that the information on the sheet is the only information you'll have for deciding how you feel about having that person as a teammate. You will not have scores obtained on the test problems to help in your decision when you write the note. Nor will they be available at any other time. Your test problem scores are to remain known only to yourself. I want you not to discuss your test performance in your note.

.....

Since time is limited, I won't provide you today with any information concerning your performance or your team score for the contest problems. I assume, anyway, that you're not really interested in how many points you or your partner made so I won't provide you at all with this information. I will, of course, let you know if your team won or lost the contest....

Subjects were then given the information sheet completed by a group member and directed to write a note to him. They were provided

with note forms⁷ showing the subject's identity letter and that of the prospective recipient of the note. To ensure that the notes written would be brief, subjects were instructed to write only one sentence, or two at the very most. Additionally, a time limit was set: they had two minutes to read the information sheets and to compose notes. At the conclusion of the allotted time, notes were collected.

The third manipulation, that of other evaluation, was accomplished by substituting previously prepared notes for those actually written by the subjects. Positive notes contained the message: "You are the person I would most prefer to have as a teammate" while negative ones stated: "You are the person I would least prefer to have as a teammate".⁸ The previously mentioned restrictions concerning length of notes were imposed to ensure that these messages would not be suspiciously brief. Additionally, the notes were written in variously colored inks and pencils by appropriately sexed accomplices. The substitution was accomplished by retreating behind a screen with the notes actually written by subjects. The experimenter then noisily shuffled the notes and stapled second sheets⁹ to them. Then the experimenter emerged and distributed the previously prepared notes.

The second sheets served two purposes: they continued the Disclosure manipulation and enabled collection of ratings intended by

⁷ See Appendix G for a sample of the Note Forms.

⁸ These notes were similar to those used by Deutsch & Solomon (1959) and Skolnick (1971).

⁹ See Appendix H for copies of Disclosure and No Disclosure second sheets.

subjects to be sent to the evaluator. In the Disclosure condition, the second sheet contained spaces for subjects to fill in their test problem scores. These were omitted from the second sheet in the No Disclosure condition. For all subjects, the second sheet contained a nine-point scale on which the subject was to indicate how much he wanted the evaluator as a teammate.

Once subjects had received the notes and had sufficient time to read and to absorb the contents, the Disclosure versus No Disclosure manipulation continued via the instructions. All subjects were told:

First of all, I'd like you to check and make sure the note you received is addressed to your identity letter. Now turn to the second sheet -- the one I just stapled to the note. Please check to make sure that the space marked "To" contains the identity letter of the person who sent you the note (pause) and that your identity letter is in the space showing that this second sheet is "From" you.

In the Disclosure condition, the experimenter added: "Now put the percentile rankings you made on the test trials in the spaces provided." All subjects were then further instructed:

On the scale underneath, indicate how much you would like to have the person who sent you the note as a teammate. Later on you'll return this to the person who wrote you the note who will then have a chance, (after considering your scores on the test problems/after further consideration), to again indicate how he/she feels about having you as a teammate.

Subjects were requested to re-read the note and form the strongest possible impression of the sender. Subjects were then asked to rate the note-sender on nine-point scales for: desirability as a teammate, intelligence, team spirit, desirability as a friend and

likeability.¹⁰ Subjects were told that these ratings were intended only for the experimenter. This was done so that the desirability as a teammate rating collected here could be compared with the one intended for the note-sender. Subjects were also asked to evaluate the note-sender on twelve bipolar seven-point Semantic Differential scales.¹¹ The adjective pairs contained on the form were those constituting the Positivity and Consistency scales.

Once ratings of the note-sender had been collected, subjects were requested to complete the Janis & Field (1959) "Feelings of Inadequacy" Scale. Here, subjects were told:

Before we continue, I'll need to go over these ratings. It will take me a few minutes so I'd like you to complete a short personality inventory form while you wait. The form has five answer categories underneath each question. Please read each question and then place a checkmark beside the category that best represents your answer to the question. Please let me know if you have any questions about completing the inventory. And please let me know when you're done by announcing out loud that you've finished.

Subjects' post-experiment scores on the Janis & Field (1959) Scale were compared with measures obtained before the experiment to determine if the manipulation was sufficient to affect overall self-esteem as well as self-evaluation on task relevant traits. Pre-experiment scores were collected by distributing the scale in several Psychology 100 classes and requesting students to complete and return it. Pre- and post-measures were obtained only for the sub-sample

¹⁰See Appendix I for a sample of the Trait Rating Scale.

¹¹See Appendix J for a sample of these scales and accompanying instructions.

of subjects who completed the scale in class and also participated in the study.

Once subjects had completed the Janis & Field (1959) Scale they were told:

I'll need to score these inventories before we continue. We seem to be running short of time here today so I'm going to give you this questionnaire (the post-experimental questionnaire¹²) now. It's to make sure that the instructions have been clear. You're not really supposed to do it until the end of the experiment but I can't see that it really makes that much difference if you do it now -- and we are short of time. If you have any questions about completing this -- please don't hesitate to let me know. And, again, please let me know when you've done by announcing "Finished" out loud.

The post-experimental questionnaire contained questions designed to determine whether or not subjects could recall their scores, had understood the meaning of a percentile score and had comprehended the disclosure manipulations. The final two questions were designed to elicit subjects' suspicions concerning deceptions in the study and what they thought the purpose of the study might be, if they believed it to be other than as stated. The post-experimental questionnaire also served as a guideline for elimination of subjects since it was decided to replace any subject who:

- 1) could not recall his score or did not understand the meaning of a percentile score;
- 2) had failed to comprehend the Disclosure or No Disclosure manipulations; or,

¹²See Appendix K for a sample of the Post Experimental Questionnaire.

3) very definitely suspected that the scores and/or notes were phoney. The post-experimental questionnaire was inspected and a decision made to discard a subject without reference to his ratings on any of the scales:

At the conclusion of the study, the experimenter announced that the scores and notes had been pre-programmed according to the subjects' identity letters. Subjects were then invited to come out from behind the screens while the experimenter explained the purpose of the experiment and the necessity for the manipulations. Every attempt was made to ensure that subjects felt their participation had been both valuable and appreciated. Subjects were told that their scores on the test problems would be used to determine which of the teams would receive the promised prize and that their identity letters would provide a basis for pairing them into teams. Since many subjects expressed interest in knowing the outcome of the study, they were also promised a brief description of the findings.

CHAPTER IV

RESULTS AND DISCUSSION

Results reported in this chapter are accompanied by a discussion of their implications for the present study and, where appropriate, for future research. The outcomes of tests to determine the effectiveness of the experimental manipulations are, of course, first to be reported and discussed. Discussion will then concentrate on findings relevant to the suitability of various measures for studies investigating the effects of self-evaluation on responses to evaluations from others. Finally, findings concerning the experimental hypotheses regarding the effects of disclosure will receive consideration.

After experiencing the success or failure manipulation, subjects were asked to rate themselves on nine-point scales for six traits: problem-solving ability, desirability as a teammate, intelligence, team spirit, desirability as a friend and likeability. The first three traits were clearly task relevant and it was predicted that subjects' self-ratings would follow the direction of the manipulation. A one-tail t test, significant at the $p < .10$ level, was the predetermined criterion of whether or not the manipulation effectively induced subjects to adopt different self-evaluations on each of these three traits. The last three traits were not so obviously task relevant and were thought less likely to be affected by a manipulation directed specifically at subjects' self-evaluations of problem-solving ability. On these three traits, a difference significant at the $p < .05$, two-

tail, level would have been regarded as grounds for suggesting that the effects of a task specific manipulation were capable of spreading to traits less directly related to performance. Scores for subjects in the experimental and control groups were combined for these tests. Table 1 shows the mean evaluations for the groups on each of the six traits and the t values associated with obtained differences between groups. As may be seen from Table 1, subjects adopted significantly different evaluations of their problem-solving ability and desirability as a teammate. Although differences on the other four traits were in a direction consistent with the manipulation, they were not significant.

Table 1

Subjects' Self Ratings on Six Traits

Trait Rated	High Feedback	Low Feedback	df	t	p
Problem-solving ability	2.92	7.09	98	2.22	<.005
Desirability as a teammate	3.61	5.97	98	1.59	<.10
Intelligence	3.68	4.27	98	.66	
Team spirit	3.63	4.04	98	.26	
Likeability	4.00	4.04	98	.03	
Desirability as a friend	3.91	4.12	98	.18	

Subjects were also asked to indicate how they would expect to be rated by others in the group on these six traits. Since it was

predicted that subjects would most expect to be derogated or esteemed on the three task relevant traits: problem-solving ability, desirability as a teammate and intelligence, one-tail t tests with a criterion of $p < .10$ were used to test these ratings. The last three traits were not obviously related to task performance and there were no directional predictions regarding differences on these traits. Two-tail t tests with a criterion of $p < .05$ were used to test these ratings. Table 2 shows mean expected evaluations and observed t values for the differ-

Table 2
Subjects' Expected Ratings on Six Traits

Trait Rated	High Feedback	Low Feedback	df	t	p
Problem-solving ability	3.02	7.20	98	3.23	<.005
Desirability as a teammate	3.73	6.18	98	1.53	<.10
Intelligence	3.38	5.28	98	1.47	<.10
Team spirit	4.20	4.48	98	<1	
Likeability	4.26	4.56	98	<1	
Desirability as a friend	4.43	4.67	98	<1	

ences between groups. Subjects expected significantly different ratings on problem-solving ability, desirability as a teammate and intelligence. There were no significant differences on the other three traits. Since it had been regarded as

questionable that the effect of a success-failure manipulation directed specifically at problem-solving ability would spread to non-task relevant traits, this finding was not unexpected.

The study investigated the effect of a task specific success-failure manipulation on self-esteem as measured by the Janis & Field (1959) "Feelings of Inadequacy" Scale. Pre- and post-experiment scores on this scale were obtained for a total of 48 subjects. Possible scores on the scale range from 0 for no feelings of inadequacy to 92 for maximum feelings of inadequacy. Since both the nature of the feedback concerning performance and the nature (positive or negative) of the note were thought likely to affect self-esteem, subjects were separated into four groups: High Feedback-Positive Note, High Feedback-Negative Note, Low Feedback-Positive Note and Low Feedback-Negative Note. A change score was calculated for each subject by subtracting his post-experiment score on the scale from his pre-experiment score. Higher scores on the Janis & Field scale indicate lower esteem. Therefore, a negative change score indicates a lowering of self-esteem and a positive one an elevation in self-esteem. Table 3 shows mean change scores for subjects

Table 3

Mean Change Scores on Janis & Field Scale

Feedback		
	Positive Note	Negative Note
High	-0.166 (n = 12)	-1.285 (n = 14)
Low	-3.380 (n = 13)	2.555 (n = 9)

*p < .025, one-tail, as indicated by Wilcoxon sign-rank test.

in each of the four groups. The Wilcoxon matched-pairs, signed-ranks test, which permits utilization of information concerning both the magnitude and direction of differences (Siegel, 1956) was used to determine whether the groups showed a significant change. Only the Low Feedback-Positive Note ($T = 16.5$, $N = 13$, $p < .025$, one-tail) group showed a significant change. Since only one of the four groups registered such a change and since subjects did not differ significantly on self-ratings of non-task relevant traits, the safest conclusion seems to be that the task specific success-failure manipulation did not appreciably alter overall self-esteem as measured by the Janis & Field (1959) "Feelings of Inadequacy" scale.

The experiment required only that subjects adopt significantly different self-evaluations of ability. Obtained differences in self-evaluations were significant according to pre-determined criteria in the case of problem-solving ability and desirability as a teammate. Although subjects' self-ratings of intelligence were in the direction predicted, they did not significantly differ for the high and low feedback conditions. While this implies that the manipulation may not have been as potent as desired, it may also reflect subjects' resistance to derogating their overall intelligence if task failure can be attributed to a lack of mathematical training or even of mathematical ability. The nature of the task may have made it possible for subjects to rationalize their performance in this manner. Additionally, subjects were not told that performance on the task had any relevance to intelligence. Reference to Table 2 indicates that subjects did expect, according to

pre-established criteria, significantly different evaluations from others on the three task relevant traits: problem-solving ability, intelligence and desirability as a teammate. Since it was hypothesized that subjects' reactions to note-senders would depend, to a large part, on subjects' expectations concerning the positive or negative consequences of disclosure of task performance, these differences in conjunction with subjects' self-evaluations of problem-solving ability and desirability as a teammate, were considered justification for proceeding with the analysis.

Tests of Hypotheses Concerning Positivity and Consistency Scales

Subjects rated the note-sender on 12 seven-point bipolar scales in Semantic Differential form. It may be recalled that the four adjective pairs: kind-cruel, positive-negative, sociable-unsociable and optimistic-pessimistic were categorized as Positivity scales. The adjective pairs good-bad, beautiful-ugly, grateful-ungrateful, harmonious-dissonant, successful-unsuccessful, true-false, reputable-disreputable and wise-foolish composed the set of Consistency scales. The Positivity and Consistency scales were analyzed separately. A single score for each subject on each set of scales was derived by calculating the mean rating on each set. These scores were then submitted to analysis of variance.

Tables 4 and 5, respectively, show the mean ratings on the set of Positivity scales and the results of the analysis of variance. As was predicted, only the main effect for the note ($F = 122.59$, $df = 1/72$, $p < .001$) was significant. All other main effects and interactions produced values of $F < 1$. Reference to the means shown in Table 4

indicates that the set of Positivity scales reflected the positive or negative nature of the note received.

Table 4

Mean Ratings of Note-Sender on Set of Positivity Scales

Evaluation	Note	Disclosure	No Disclosure	Combined
High	Positive	1.475	1.375	1.425
	Negative	-0.825	-0.550	-0.687
Low	Positive	1.325	1.750	1.537
	Negative	-0.650	-0.575	-0.612
	Combined	0.331	0.500	

Table 5

Summary of Analysis of Variance of Subjects' Ratings of Note-sender on Positivity Scales

SOURCE	SS	df	MS	F	p
Total	145.73	79			
D (Disclosure)	.57	1	.57	.77	
E (Evaluation)	.17	1	.17	.23	
N (Note)	90.84	1	90.84	122.59	<.001
D x E	.13	1	.13	.18	
D x N	.00	1	.00	.00	
E x N	.01	1	.01	.01	
D x E x N	.66	1	.66	.89	
Error	53.35	72	.74		

Table 6

Mean Ratings of Note-sender on Set of Consistency Scales

Evaluation	Note	Disclosure	No Disclosure	Combined
High	Positive	1.100	1.162	1.131
	Negative	-0.200	-0.187	-0.193
Low	Positive	0.862	0.912	0.887
	Negative	0.525	-0.250	0.137
	Combined	0.571	0.409	

Table 7

Summary of Analysis of Variance of Ratings of Note-sender on Set of Consistency Scales

SOURCE	SS	df	MS	F	p
Total	58.04	79			
D (Disclosure)	.53	1	.53	1.19	
E (Evaluation)	.04	1	.04	.08	
N (Note)	21.52	1	21.52	48.74	<.01
D x E	.80	1	.80	1.81	
D x N	.96	1	.96	2.16	
E x N	1.65	1	1.65	3.74	<.10
D x E x N	.75	1	.75	1.70	
Error	31.79	72	.44		

The mean ratings on the set of Consistency scales and the results of the analysis of variance are shown in Tables 6 and 7. Examination of Table 7 indicates that the main effect of the note ($F = 48.74$, $df = 1/72$, $p < .01$) was significant. Additionally, the note x evaluation interaction approached significance ($F = 3.74$, $df = 1/72$, $p < .10$).

The significant main effect of the note is attributable to a preference for positive versus negative note-senders. The near significant note x evaluation interaction results from success subjects rating a positive note-sender more favorably than did failure subjects. Additionally, success subjects reacted more unfavorably to a negative note-sender than did failure subjects. It should be noted that the tendency of failure subjects to better receive a negative note is due entirely to ratings of the sender under the Disclosure condition. When disclosure was not expected, these subjects rated a negative note-sender slightly more unfavorably than did success subjects.

Comparison of the analyses on the Positivity and Consistency scales indicates that the former were insensitive to factors other than the nature of the note received while the latter appeared to reflect an interaction between self and other evaluation. It may be recalled that the Consistency scales included the following adjective pairs: good-bad, grateful-ungrateful, harmonious-dissonant, beautiful-ugly, successful-unsuccessful, true-false, reputable-disreputable and wise-foolish. Subsequent reflection led to the conclusion that the four pairs: good-bad, grateful-ungrateful, harmonious-dissonant and beautiful-ugly may not have been correctly categorized as Consistency scales. While consistency between self and other evaluation may be a determinant of a rating of the note-sender as true or false, it may have little relevance to a judgment of the sender as beautiful or ugly. Accordingly, the adjective pairs good-bad, grateful-ungrateful, harmonious-dissonant and beautiful-ugly were eliminated from the Consistency scales. This left the pairs: true-false, successful-unsuccessful, reputable-disreputable and wise-foolish in the Consistency scales. The mean rating on this set

was computed for each subject. These scores were submitted to a post hoc analysis of variance. Table 8 shows the mean ratings on the reduced set of Consistency scales and Table 9 summarizes the results of the post hoc analysis of variance.

Table 8

Mean Ratings of the Note-sender on the Reduced
Set of Consistency Scales

Evaluation	Note	Disclosure	No Disclosure	Combined
High	Positive	1.175	1.075	1.125
	Negative	-0.175	0.025	-0.075
Low	Positive	0.775	0.775	0.775
	Negative	0.800	-0.075	0.362
	Combined	0.644	0.450	

Table 9

Summary of Analysis of Variance of Ratings of Note-sender
on Reduced Set of Consistency Scales

SOURCE	SS	df	MS	F	p
Total	74.73	79			
D (Disclosure)	.75	1	.75	.99	
E (Evaluation)	.03	1	.03	.05	
N (Note)	13.00	1	13.00	17.16	<.01
D x E	1.18	1	1.18	1.56	
D x N	.41	1	.41	.54	
E x N	3.10	1	3.10	4.09	<.05
D x E x N	1.72	1	1.72	2.28	
Error	54.54	72	.75		

Reference to Table 9 reveals a pattern of results similar to that obtained for the original set of Consistency scales. The significant ($F = 17.16$, $df = 1/72$, $p < .01$) main effect of the note was due to a preference for positive note-writers. However, the significant ($F = 4.09$, $df = 1/72$, $p < .05$) note x evaluation interaction indicates that success subjects were more favorable to positive note-senders and more unfavorable to negative note-writers than were failure subjects. Again, the tendency for failure subjects to evaluate a negative note-writer more favorably than success subjects is almost solely attributable to ratings made by failure subjects expecting disclosure. Under this condition, failure subjects rated a negative note-sender favorably; when disclosure was not expected, failure subjects tended to rate a negative note-sender unfavorably.

These findings seem to justify the argument that future research attention should be devoted to investigation of the scales used as measures of interpersonal attraction, especially in cases where the object is to determine how self-evaluation influences responses to others. It is presently suggested that such adjective pairs as those categorized as belonging to Positivity scales may not be appropriate measures since ratings of the stimulus person appear to be made solely as a function of the note received without reference to consistency between self and other evaluation. It is also suggested that adjective pairs classified as Consistency scales may be better measures for studies investigating the effects of congruency between self and other evaluation on attraction to others since these scales appear to reflect the interaction of self and other evaluation.

Tests of Differences Between Communicated and Non-Communicated Ratings

Ratings intended by subjects to be sent directly to the note-sender were compared with ratings intended only for the experimenter. These were ratings of the note-senders' desirability as a teammate and were collected on nine-point scales with the lowest value indicating the most favorable rating. Table 10 shows the mean ratings intended for the note-sender and Table 11 shows mean ratings intended for the experimenter.

Table 10

Mean Rating for Desirability as a Teammate Sent to Note-sender

Evaluation	Note	Disclosure	No Disclosure	Combined
High	Positive	3.391	3.670	3.530
	Negative	7.210	7.603	7.406
Low	Positive	3.000	2.422	2.711
	Negative	8.000	7.300	7.650
	Combined	5.400	5.249	

Table 11

Mean Rating for Desirability as a Teammate Sent
to the Experimenter

Evaluation	Note	Disclosure	No Disclosure	Combined
High	Positive	3.979	3.817	3.898
	Negative	7.340	7.587	7.463
Low	Positive	3.940	3.202	3.571
	Negative	8.069	7.229	7.649
	Combined	5.832	5.457	

Difference scores were calculated by subtracting the rating intended for the experimenter from the rating intended for the note-sender. Since a smaller score indicated a more positive evaluation, a negative difference score indicates that the evaluation sent to the experimenter was less favorable than that sent to the note-sender; a positive score indicates that the evaluation sent to the experimenter was more favorable than that sent to the note-sender. Mean difference scores are shown in Table 12.

Table 12

Mean Difference Between Ratings Sent to the Note-Sender
and to the Experimenter

Evaluation	Note	Disclosure	No Disclosure	Combined
High	Positive	-0.588	-0.147	-0.367
	Negative	-0.130	0.016	-0.057
Low	Positive	-0.940	-0.780	-0.860
	Negative	-0.069	0.071	0.001
	Combined	-0.431	-0.210	

These difference scores were submitted to an analysis of variance and the summary table is shown in Table 13. The only significant F obtained was that for the main effect of the note. This indicates that

Table 13

Summary of Analysis of Variance of Differences Between Ratings Sent to
the Note-sender and to the Experimenter

SOURCE	SS	df	MS	<u>F</u>	p
Total	92.02	79			
D (Disclosure)	.98	1	.98	.86	
E (Evaluation)	.94	1	.94	.83	
N (Note)	6.86	1	6.86	6.06	<.05
D x E	.10	1	.10	.09	
D x N	.12	1	.12	.11	
E x N	1.51	1	1.51	1.33	
D x E x N	.09	1	.09	.08	
Error	81.42	72	1.13		

greatest discrepancies between direct and indirect ratings occurred when subjects were responding to a positive note-sender. Inspection of Table 12, which shows magnitude and direction of differences, reveals that ratings sent directly to a positive evaluator were more favorable than ratings sent directly to the experimenter. Subjects receiving negative notes showed less difference between ratings intended for the note-sender and those intended for the experimenter. Overall, subjects were more favorable to positive note-senders and no less unfavorable to negative note-senders when sending direct evaluations. Thus, subjects appeared to reciprocate when sending direct evaluations: in effect, they rewarded positive note-senders and punished negative ones. When sending evaluations to the experimenter, all subjects tended to rate positive note-senders slightly less favorably while ratings of negative note-senders were much the same as those conveyed directly to the evaluator.

It may be noted that this comparison of direct and indirect evaluations reveals a pattern of results contrary to those observed by Jones & Schneider (1968). They found that subjects in Certain and Uncertain conditions showed little difference in ratings sent directly to positive evaluators. When responding to negative evaluators, however, Certain subjects gave most favorable evaluations and Uncertain subjects the most negative ones. Additionally, Jones & Schneider reported that ratings sent to the experimenter showed the greatest positivity effect while the present results indicate a greater tendency toward positivity in direct ratings. It may be speculated, then, that the discrepancies found by Jones & Schneider may not reflect differences between direct and indirect ratings.

The switch-throw evaluations exchanged by subjects in the Jones & Schneider (1968) study could be considered ratings of evaluators' personality inference ability. Similar measures were used in the Jones & Ratner (1967) study. Both studies dealt only with subjects induced to adopt a low ability appraisal and both isolated variables that appeared to mediate between consistency and approval motives as determinants of responses to evaluations from others. In both studies subjects differed little in their direct responses to positive evaluators but did differ in their responses to negative evaluators. That is, subjects responded most favorably to negative evaluators in one condition and most unfavorably in the other. In the present study, examination of failure subjects' ratings of note-senders on Consistency scales reveals a similar tendency. Failure subjects showed little difference in their ratings of positive note-senders under different disclosure conditions. However, these subjects tended to react favorably to a negative note-sender when disclosure was expected and unfavorably when it was not. The pencil-and-paper ratings used by Jones & Schneider (1968) included ratings of subjects' liking for evaluators and desire for informal association with evaluators. These ratings showed a Positivity effect. It may be that direct evaluations were of an ability-relevant trait while indirect ones were of non-ability-relevant traits. Possibly, then, ratings of ability-relevant traits may be, like Consistency scales, sensitive to the interaction of self and other evaluation while ratings of non-ability-relevant traits are not. Deutsch & Solomon (1959) collected ratings of note-senders on some measures presumably relevant to ability. These included ratings on an "effectiveness" factor and a rating of intelligence. Failure subjects

in the Deutsch & Solomon study rated a negative (and congruent) note-writer more favorably on these traits than they did a positive (and incongruent) note-writer. Thus, failure subjects in the Deutsch & Solomon study rated positive and negative evaluators on ability-relevant traits in a manner similar to subjects in the Certain condition in the Jones & Schneider study and No Commitment condition in the Jones & Ratner study.

An alternative explanation may, therefore, be offered to account for discrepancies observed by Jones & Schneider (1968). This is that ratings on ability-relevant traits are sensitive to the interaction of self and other evaluations while ratings on non-ability-relevant traits are made primarily on the basis of the received evaluation. An attempt was made to offer some post hoc evidence to provide some justification for advocating that future research attention be directed toward investigation of this hypothesis. Subjects in the present study rated the note-sender on nine-point scales for five traits. Of these, the rating of desirability as a friend seems to involve components of liking and desire for informal association and, therefore, may be most similar to the Jones & Schneider (1968) pencil-and-paper ratings. The rating of intelligence was the most ability-relevant of the five collected. Since both were pencil-and-paper ratings and since both were sent directly to the experimenter, it was thought that comparison of responses might indicate whether the important difference might be between ability-relevant and non-ability-relevant ratings. Subjects' ratings of the note-senders on these traits were each submitted to a post hoc analysis of variance.

The mean ratings of desirability as a friend and a summary of the analysis of variance are shown in Tables 14 and 15, respectively.

Table 14

Mean Ratings of Note-senders for Desirability as a Friend

Evaluation	Note	Disclosure	No Disclosure	Combined
High	Positive	4.251	3.555	3.903
	Negative	7.117	7.210	7.163
Low	Positive	3.564	2.943	3.253
	Negative	6.900	6.741	6.820
	Combined	5.458	5.112	

Table 15

Summary of Analysis of Variance of Ratings of Note-sender for Desirability as a Friend

SOURCE	SS	df	MS	<u>F</u>	p
Total	386.06	79			
D (Disclosure)	2.39	1	2.39	1.20	
E (Evaluation)	4.92	1	4.92	2.47	
N (Note)	233.07	1	233.07	117.26	<.001
D x E	.03	1	.03	.01	
D x N	1.95	1	1.95	.98	
E x N	.47	1	.47	.23	
D x E x N	.13	1	.13	.06	
Error	143.10	72	1.98		

Reference to Table 15 reveals that the only significant F obtained was that for the main effect of the note (F = 117.26, df = 1/72, p < .001).

This is similar to Jones & Schneider's (1968) findings regarding subjects' pencil-and-paper ratings which indicated that positive evaluators were preferred to negative ones. It is also similar to present findings regarding subjects' ratings of note-senders on the Positivity scales.

Examination of Tables 16 and 17, which show mean ratings of note-senders' intelligence and the analysis of variance summary table, reveals

Table 16

Mean Ratings of Note-senders for Intelligence

Evaluation	Note	Disclosure	No Disclosure	Combined
High	Positive	4.202	4.299	4.250
	Negative	5.082	4.858	4.870
Low	Positive	4.241	4.032	4.136
	Negative	3.793	5.269	4.531
	Combined	4.329	4.614	

Table 17

Summary of Analysis of Variance of Ratings of Note-senders' Intelligence

SOURCE	SS	df	MS	F	P
Total	84.08	79			
D (Disclosure)	1.62	1	1.62	1.81	
E (Evaluation)	1.53	1	1.53	1.71	
N (Note)	6.20	1	6.20	6.93	<.02
D x E	2.43	1	2.43	2.72	
D x N	2.33	1	2.33	2.59	
E x N	.53	1	.53	.59	
D x E x N	5.03	1	5.03	5.62	<.05
Error	64.41	72	.89		

a somewhat different pattern of results. As may be seen from Table 17, the main effect of the note was significant ($F = 6.93$, $df = 1/72$, $p < .02$). The $D \times E \times N$ interaction was also significant ($F = 5.62$, $df = 1/72$, $p < .05$). Of greatest interest is the finding that, although failure subjects in the Disclosure and No Disclosure conditions did not differ greatly in their ratings of positive note-senders, their reactions to negative note-senders did vary as a function of disclosure. When disclosure was expected failure subjects rated the senders' intelligence most favorably; when disclosure was not expected these subjects evaluated the senders' intelligence most unfavorably. This pattern of results is similar to that reported by Jones & Schneider (1968) and by Jones and Ratner (1967). It is also similar to the pattern observed for failure subjects' ratings of note-senders on Consistency scales. Accordingly, it seems justifiable to urge that the important distinction between the switch-throw and pencil-and-paper measures used by Jones & Schneider may be that one involves ratings on ability-relevant traits and the other ratings on non-ability-relevant traits. Possibly, then, future research investigating measures should devote some attention to a category of ability-relevant traits as likely indicators of the interaction between self and other evaluation.

Comparison of Controls and Experimentals

The two control groups were compared with corresponding cells from the experimental groups. Two-tailed t tests were used to determine whether or not these groups differed significantly on the average ratings of the note-sender on the five traits or on either the Consistency or

Positivity Scales. Means are shown in Table 18 along with t values associated with the differences between these means. As may be seen from Table 18, the groups differed significantly on none of these ratings. This would imply that the relevance of the information available to the evaluators did not affect subjects' reactions to them.

Table 18

Comparison of Control with Experimental Groups

Evaluation	Note	Rating	Irrelevant Information	Relevant Information	<u>t</u>
High	Negative	Average rating on five traits	5.554	6.434	.87
		Average rating on Positivity Scales	-0.750	-0.825	.56
		Average rating on Consistency Scales	-0.337	-0.200	.19
Low	Positive	Average rating on five traits	3.273	3.777	.47
		Average rating on Positivity Scales	1.650	1.325	.40
		Average rating on Consistency Scales	0.875	0.862	.20

Tests of Experimental Hypotheses

Ratings of the note-sender on the a priori set of Consistency scales were used to evaluate the experimental hypotheses. Table 6 on page 52 shows subjects' mean ratings of the note-sender on these scales and Table 7 on page 52 summarizes the results of the analysis of variance.

As has already been mentioned, the significant main effect of the note ($F = 48.74$, $df = 1/72$, $p < .01$) indicated that positive note-senders were preferred to negative ones. Further, the note \times evaluation interaction approached significance ($F = 3.74$, $df = 1/72$, $p < .10$). This was due to success subjects rating a positive note-sender more favorably (1.131) than did failure subjects (0.887) receiving a similar note. Success subjects reacted more unfavorably to a negative (-0.193) note-sender than did failure (0.137) subjects.

The main effect of disclosure was not significant. It was, however, predicted in advance that this main effect would not be significant. The main evidence for disclosure as a mediating variable was not expected to come from consistently higher or lower ratings as a function of disclosure but from a different order of means within each condition. Looking at the overall pattern, both success and failure subjects rated positive note-senders more favorably (1.009) than negative (-0.028) ones and slightly more favorably in the No Disclosure condition than in the Disclosure condition. Additionally, success (0.062) and failure (0.050) subjects were about equally more favorable to a positive evaluator under No Disclosure conditions. Most importantly, while disclosure conditions made very little difference in success subjects' ratings of negative note-senders, failure subjects tended to rate a negative note-sender favorably (0.525) in the Disclosure condition and unfavorably (-0.250) in the No Disclosure condition. Thus, overall the pattern of means offers some evidence for a congruency effect under Disclosure conditions and approval theory under No Disclosure conditions.

A procedure developed by Dunn and outlined by Kirk (1968) was used

to evaluate the four experimental hypotheses. To reiterate, these hypotheses were:

1. When disclosure is expected, success subjects will like a negative evaluator more than they will when disclosure is not anticipated.
2. When disclosure is not expected, failure subjects will like a positive evaluator more than they will when disclosure is expected.
3. When disclosure is not expected, failure subjects will like a positive note-sender more than will success subjects; when disclosure is expected, success subjects will like a positive note-sender more than will failure subjects.
4. When disclosure is expected, failure subjects will prefer a negative to a positive note-sender; when it is not expected, failure subjects will prefer a positive to a negative note-sender.

None of the differences obtained was of sufficient magnitude to reach significance by Dunn's test.

Several findings were either unexpected or contrary to predictions, however. It had been predicted that success subjects would anticipate a gain in esteem as a function of disclosure and, therefore, temper dislike for a negative evaluator when disclosure was expected. This was not found to be the case. Similarly, failure subjects did not express significantly less liking for a positive note-sender when disclosure and, presumably, a loss in esteem, was expected. Also contrary to predictions was the finding that under No Disclosure conditions failure subjects did not like a positive note-sender more than did success subjects. Finally, although it had been predicted that failure subjects would express greater liking for a positive evaluator when disclosure was not anticipated, it

had not been expected that success subjects would also do so.

Failure of subjects to expect disclosure to lead to an alteration of note-senders' initial evaluations could account for unexpected findings. The post-experimental questionnaire was examined in an attempt to determine subjects' expectations regarding the consequences of disclosure. The following questions, originally intended as a check to determine whether or not subjects had understood the disclosure manipulations, were included in the post-experimental questionnaire:

- Will the note-sender have your test problem scores to use in making a final decision?
- If so, do you think he will alter his decision?
 - If not, do you think that, if test problem scores were available, he would alter his decision?

Table 19

Observed Responses to Questions Asking if Disclosure Would Result in Alteration of Note-sender's Opinion

Feedback	Note	Response Categories	Number of Subjects in Category
High	Positive	Yes	0
		Uncertain	3
		No	17
	Negative	Yes	11
		Uncertain	6
		No	3
Low	Positive	Yes	18
		Uncertain	1
		No	1
	Negative	Yes	5
		Uncertain	2
		No	13

After responding to the first part of the question, each subject answered whichever of the second parts was appropriate to his experimental condition. Subjects' replies to questions were categorized as "Yes", "No" or "Uncertain". Table 19 above summarizes the number of observed responses in each category for subjects in the four conditions: High Feedback-Positive Note, High Feedback-Negative Note, Low Feedback-Positive Note and Low Feedback-Negative Note.

Reference to Siegel (1956) suggested that the χ^2 statistic could be used to determine whether the observed responses in each of the four conditions differed significantly from those expected on a chance basis. Table 20 shows obtained χ^2 values for each of the four conditions and

Table 20

Obtained χ^2 Values for Distributions of Responses Within Conditions

Feedback	Note	χ^2	df	p
High	Positive	24.54	2	<.01
	Negative	4.87	2	
Low	Positive	28.75	2	<.01
	Negative	9.65	2	<.01

the associated p values. As may be seen from Table 20, success subjects receiving negative notes failed to emit the predicted response significantly more often than would be expected by chance. Subjects in the other

conditions did differ significantly from chance in their responses and these responses were the expected ones.

If subjects' expectations regarding the consequences of disclosure can be inferred from their responses, it would appear that success subjects receiving positive notes did not expect the evaluator to alter his opinion of them. It is, therefore, difficult to understand why these subjects expressed greater liking for the note-sender under the No Disclosure conditions. A possible explanation may be found in the nature of the task. These subjects may have experienced uncertainty as to whether or not their actual contest performance would be as good as pre-test performance. If this were the case, it would explain greater favorability toward the positive note-sender when subjects did not have to worry about living up to their past performance level.

From responses to the questions, it may be inferred that failure subjects receiving positive notes expected disclosure to lead to lowered regard from the note-sender. Presumably, then, these subjects should have derogated the note-sender when disclosure was expected and regarded him very favorably when it was not. Two factors may have operated to reduce the expected difference. Several subjects indicated that they found the note-sender unexpectedly decisive in his appraisal of them since they had expected to see information sheets from all participants before making a final decision. Situational factors, then, may have caused these subjects to expect, at best, a tentatively approving note. The definite acceptance implied by the note may have been, due to situational and performance factors, doubly unexpected. As a consequence, these subjects may have experienced such an immediate gain in esteem

from another that an anticipated loss paled by comparison. This may have reduced derogation of the note-sender in the Disclosure condition. Secondly, failure subjects not expecting disclosure may have felt guilty about accepting positive regard from one they might cause to lose a contest and prize. Such subjective discomfort might be a factor in reducing favorability toward a positive note-sender when disclosure was not expected. Here, it may be noted that the group of failure subjects receiving positive notes was the only one to show a significant loss in self-esteem as measured by the Janis & Field (1959) Scale.

Success subjects receiving negative notes did not exceed a chance level in emitting predicted responses to questions concerning the consequences of disclosure. It may, therefore, be inferred that many of these subjects felt they had little to gain from disclosure. This would have reduced the tempering effect expected to result from subjects' anticipation of reversal of the opinion. Additionally, the unexpectedly definite and negative note may have created an immediate loss effect thereby further reducing liking for the note-sender.

It would appear, then, that several factors may explain the study's failure to confirm the hypotheses. One factor may relate to the note used. This note was successfully used in previous studies and Deutsch & Solomon (1959) reported that variations in notes did not affect results obtained. Hindsight, however, suggests that the present study may have required a note that was somewhat less decisive and indicated clearly that acceptance or rejection was predicated on an inference concerning subjects' problem-solving ability. Since subjects expected to see information sheets from all participants before making a final decision, the

unexpectedly definite acceptance or rejection implied by the note may have, especially in the case of incongruent notes, created an immediate gain or loss effect. This effect may have been more intense in the Disclosure condition. Secondly, subjects may have been somewhat uncertain as to whether the note-sender had accepted or rejected them because of an inference concerning problem-solving ability or for some other reason. Consequently, all subjects may have experienced some degree of uncertainty as to whether disclosure would result in a reversal of the initial opinion. Both these factors would have weakened the effect of disclosure.

Although Skolnick (1971) reported successful use of problems similar to those used in the present study, these may have been less than ideal for present purposes. The nature of the task seems sufficiently complex to ensure that failure subjects would have had little doubt their contest performance would be unsuccessful. However, success subjects' preference for positive note-senders under No Disclosure conditions may indicate uncertainty as to whether they could repeat their earlier success. Possibly, then, a task of lesser complexity might be preferable for a study in which future performance may be of consequence to the subjects.

Finally, it may have been that the situation should not have been such that failure subjects could cause a positive evaluator to lose a chance for a prize when disclosure was not expected. It may be that when acceptance of unmerited esteem from another may entail negative consequences for that other, feelings of guilt and uncertainty may inhibit expressions of liking for the positive evaluator.

CHAPTER V

IMPLICATIONS FOR FUTURE RESEARCH

The results obtained in the study did not confirm the specific hypotheses or offer substantial support for the disclosure model. Several factors that may have weakened the effect of disclosure have been discussed. It is suggested that future investigations of disclosure and its consequences for responses to evaluations from others take these factors into account. At present it is urged, however, that research attention in this area should concentrate on dependent, rather than independent, variables.

Studies concerned with self-evaluation as a determinant of responses to consistent and inconsistent evaluations from others have used a wide variety of dependent variables. It appears to have been generally assumed that the interaction between self and other evaluation would determine ratings on all these scales. Results of the tentative investigation of Positivity and Consistency scales seem, however, to provide grounds for suggesting that this assumption may be false. That is, ratings on some scales may be made without reference to self-evaluation while ratings on others may reflect the interaction effects of self and other evaluation. While the present findings appear to provide support for such an hypothesis, they do little to determine which scales may most reliably and validly detect interaction effects. It is, therefore, suggested that a subsequent investigation explore various scales used in previous studies with a view to developing measures appropriate for use

in experiments concerned with consistency between self and other evaluation.

An initial study might entail inducing subjects to adopt high and low self-evaluations. Subjects would be provided with an other evaluation either consistent or inconsistent with the induced evaluations. Subjects would then be asked to rate the evaluator on a wide variety of scales. It is advocated that an initial study be largely exploratory in nature and concerned primarily with detecting measures that appeared sensitive to interaction effects. Such a study could provide hypotheses concerning the sensitivity of specific scales and these hypotheses could be tested in subsequent studies.

One such hypothesis may be derived from the present study. It may be recalled that this study examined direct and indirect pencil-and-paper ratings of desirability as a teammate and found that these ratings did not show the pattern of discrepancies reported by Jones & Schneider (1968). Some post hoc evidence was provided that indicated that discrepancies similar to those reported by Jones & Schneider were observed when indirect pencil-and-paper ratings of intelligence and desirability as a friend were compared. Accordingly, it was suggested that a possible hypothesis might be that the reason for the difference observed by Jones & Schneider was that ratings on ability-relevant traits are sensitive to the interaction effects of self and other evaluation while ratings on ability-irrelevant traits reflect only the nature of the evaluation received. A study might be designed to test this hypothesis. Such an investigation would entail use of two levels of an independent variable believed to mediate between consistent and approval seeking responses to

evaluations from others. Failure subjects would be asked to provide direct and indirect ratings of evaluators on both ability-relevant and irrelevant traits. Predictions might be as follows:

1. Ratings on ability-irrelevant traits will show a positivity effect with the greatest effect appearing in ratings sent directly to the evaluator.

2. Direct and indirect ratings on ability-relevant traits will not differ: on both, negative evaluators would be rated most favorably in one condition and most unfavorably in the other.

The main goal of this paper was to clarify some of the issues in the area of interpersonal attraction investigating congruency between self and other evaluation as a determinant of responses to others. This goal may, at the present time, be best served by a series of studies devoted to measurement. It would seem that conclusions regarding the effects of independent variables are only as reliable and valid as the measures used to detect these effects. Accordingly, it is urged that research be directed to the development of scales that will reliably detect the interaction of self and other evaluation.

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APPENDIX A

TEXT OF INSTRUCTIONS

Now that you've all arrived -- I'll tell you something about the study and the tasks you'll be given. If, at any time along the way, you find that the instructions are not clear and you have a question relevant to the task at hand, please let me know.

The purpose of this study is to investigate factors influencing teammate selection and subsequent team performance. As you've undoubtedly noticed, screens have been erected to cut down on oral and visual communication. This is so your reactions to one another will be based only on information provided.

As you know, in real life it is often necessary to choose teammates in situations where you really don't know prospective partners very well. For example, in a classroom, an instructor might ask you to pick a partner for a project for your course. I'm interested in finding out what factors would be important in influencing not only your decision but also your subsequent team performance. Today I'm going to ask you to form teams to work on some problems. During this project a total of about forty teams will do these problems. At the conclusion of the project, the one team with the highest score of the forty taking part in the project will receive a \$10.00 prize which, divided between you, will come to \$5.00 apiece. So -- to maximize your chances of winning -- do your best to form accurate impressions and choose a partner with whom you'll work well.

On the desk in front of you -- you'll see a card. Please turn it over. On it is a letter. This is your identity letter in this group. As the study progresses, you'll be known to other members of this group as Person A or whatever your letter is. We're avoiding use of names because I'm going to be asking you to tell other members of the group how you honestly feel about having them as teammates and I want you to feel free to exchange honest opinions. Also -- you'll be dismissed separately in order to avoid any possible embarrassment.

In real life, people generally have a pretty accurate idea of their abilities and how they'll be able to perform. So -- to give you a chance to familiarize yourself with the type of problem you'll encounter during the contest and to give you a chance to determine what your own problem-solving ability is, you'll first of all do a couple of problems similar to those you'll be doing later on. The scores you receive on these test problems are likely to be pretty similar to what you'll get on the later ones since we've found that initial performance is pretty well identical to later performance.

At this point the first problem was distributed. Please look at the instructions on the top sheet. I'll read them over and you can let me know if anything is not clear.

Once the instructions had been read and Ss had been given an opportunity to raise any questions they had, E continued as follows:

Since speed, as well as logical thinking, is an important factor in problem-solving ability, the time you have to spend on a problem is limited to seven minutes. If you complete the problem before the time

is up, please wait quietly. At intervals of one minute, I'll announce how much time remains. When I say "Go", please turn your page and begin. Go.

At the end of the allotted time, E announced:

Okay, time's up. It will take me a few minutes to score these so, during the interim, please feel free to have a cigarette or read any books you have with you. Please refrain from any attempts to talk to others.

After a length of time suitable for marking had elapsed, E emerged with scorecards and announced:

Now, I'm going to give you your score on this first test problem.

You'll be given a scorecard with your identification letter circled and, beside it, a number followed by a percent sign. This is your percentile ranking. Your percentile ranking indicates how your performance compares with that of 100 other first-year students. A percentile of, say 75, would indicate that out of a group of 100 students, 25 would do better than you while 74 would place below you. So .. the higher your percentile score .. the better your performance. At the bottom of the scorecard, you'll see the scores made by other members of this group. I'd like to stress that the scores at the bottom are in a random order and that no particular score can be attributed to a specific identity letter.

Scorecards were returned and Ss given an opportunity to digest the information. Then the instructions continued:

Now that you're familiar with the type of problem, you'll have a chance to do a second one. This second problem is very similar to the first one -- again you'll have 7 minutes to complete it and I will call out the time

remaining at one minute intervals. Please begin when I say "Go".

The second problem was distributed. Once Ss had had 7 minutes to complete it, the problem sheets were collected along with the scorecards. After elapse of a period of time suitable for marking -- the scorecards were returned.

Okay, I'm ready to give you your scores on this second problem. When you get your scorecard back .. you'll see that it contains your percentile score for the first problem and your score on the second problem. Also shown is your average score on the two problems. The bottom of the cards shows scores made by other group members on the second problem and their average scores for the two problems. I'd like to remind you that the scores at the bottom are in random order and no specific score can be attributed to a particular identity letter.

Once Ss had had time to examine their scores, E continued:

Now that you have an idea of the kind of problems you'll be encountering and your own problem-solving ability, I'd like you to give me some idea of how you'd rate yourself on certain characteristics. I'll distribute the scales and then go over the instructions for using them.

The scales shown in Appendix C were distributed and accompanying instructions were read out loud. Once Ss had completed the ratings, the forms were collected and the instructions continued:

As well as your self-ratings, I'm also interested in finding out how you'd expect to be rated by other members of the group. So -- I'm going

to ask you to give me some idea of how you expect others in this group to rate you. The scales are like the ones you just used so I'll simply distribute them. When you get the forms -- read over the instructions on the top sheet and go ahead and make the ratings. Let me know if you have any questions.

Once the scales shown in Appendix D had been completed,

E announced:

Now I'd like you to begin recording your impressions of one another as prospective teammates. Of course, you'll need something to base your impressions on. I'm going to distribute a form and ask you to provide about yourself the information requested. The information you're being asked to provide is the sort of thing that could be fairly easily acquired in a situation where you're preparing to choose teammates. Once you've completed the form -- I'll pass it on to another member of the group who will be asked to indicate -- on the basis of the information provided -- how he feels about having you as a teammate. I think the forms are fairly self-explanatory so I'll distribute them and ask you to fill them in. I'd like to stress that you are not to provide any information over and above that requested on the form.

Once the forms shown in Appendix E had been distributed,

E said:

Just take a second to look over the form. Does anyone have any questions about filling it out?

Once the forms had been completed and collected, the instructions continued:

The information form you've just completed will be passed to another group

member who, on the basis of the information you've provided, will decide how he/she feels about having you as a teammate. Similarly, you'll be given the information sheet completed by another group member and asked to indicate how you feel about having him/her as a teammate. When I give you the information sheet, what I want you to do is look at the information provided on that sheet and decide how you feel about having that person as a teammate. Then I want you to write a note to that person telling him/her how you feel about having him/her as a teammate.

At this point instructions differed depending on whether Ss were in a Disclosure or No Disclosure condition. Disclosure Ss were told:

Before you prepare to write a note, I would like to stress that the information on the sheet is not the only information you'll have for deciding how you feel about having that person as a teammate. Before you make a final decision -- you'll be told how the person did on the test problems. But -- I'm interested in seeing how accurately you can judge without that information. I want you not to discuss your test performance in your note.

No Disclosure Ss heard the following:

Before you prepare to write a note, I would like to stress that the information on the sheet is the only information you'll have for deciding how you feel about having that person as a teammate. You will not have scores obtained on the test problems to help in your decision when you write the note. Nor will they be available at any other time. Your test problem scores are to remain known only to yourself. I want you not to discuss your test performance in your note.

All S were instructed:

When you receive the information sheet -- please read it carefully and do your best to form an accurate impression of the person it describes. Then convey your honest impressions clearly to the person to whom you are writing the note.

I mentioned before that precautions had been taken in order to preserve anonymity and thereby ensure that you felt free to evaluate one another honestly. Since you may be wondering how it is possible to maintain anonymity and work together on contest problems, I'll explain how this is to be done. Once you have formed teams you will, as before, each be given a problem. You will follow exactly the same procedure as before in solving this problem. The total score for your team on a problem will consist of points earned by you plus those earned by your partner. That is, you'll work separately and your scores will be summed. As you can see -- having a chance of winning depends not only on your performance but also on that of your partner.

The instructions again differed for Disclosure and No

Disclosure groups. Disclosure Ss were told:

Once you've completed the contest problems, I'll be able to tell you your team score. Also, I'll let you know how many points you made on each problem and how many your partner made. You'll have to wait until the project is finished to find out if your team won or lost the contest.

No Disclosure Ss heard the following:

Since time is limited, I won't provide you today with any information concerning your performance or your team score for the contest problems.

I assume, anyway, that you're not really interested in how many points you or your partner made so I won't provide you at all with this information. I will, of course, let you know if your team won or lost the contest. But you'll have to wait until the project is finished to find out if your team won or lost the contest.

All Ss were told:

Once this project is over -- probably in about two months -- you'll each receive a letter telling you if your team won or lost. I might add, if yours is the winning team, you'll also receive a cheque representing your share of the winnings.

Information sheets and note forms were distributed

and Ss were given the following summary of instructions:

Okay, you have the information sheets. Please look at the information provided and decide how you feel about having that person as a teammate. Then write a note to that person telling him/her how you feel about having him/her as a teammate. Remember that the person to whom you are writing is not the same as the one writing to you. Remember, too, that the recipient of your note will be asked to form an impression of you on the basis of your note. So feel free to say anything else you think might help. But do not provide any information pertaining to your test problem scores. And do keep your note short -- one sentence -- or two at the very most. Does anyone have a question?.....You'll have two minutes to make your decision and write your note. Please begin now.

Notes written by Ss were collected. E retreated behind

the screen and re-emerged with previously prepared notes.

Now I'll pass to you the note written you by another group member.

Once Ss had been given the notes allegedly written them

and had time to read the contents, the instructions continued.

First of all, I'd like you to check and make sure the note you received is addressed to your identity letter.

Now, turn to the second sheet -- the one I just stapled to the note.

Please check to make sure that the space marked "To" contains the identity letter of the person who sent you the note ... (pause) ...

and that your identity letter is in the space showing that this second sheet is "From" you.

For Disclosure groups, E added:

Now, put the percentile rankings you made on the test trials in the spaces provided.

All Ss were told:

On the scale underneath, indicate how much you would like to have as a teammate the person who wrote you the note. Later on, you'll return this to the person who wrote you the note who will then have a chance, after considering your scores on the test problems/after further consideration, to again indicate how he/she feels about having you as a teammate.

Okay, now I'd like you to indicate your impressions of the person who sent you the note by rating him/her on some scales. These ratings will not be sent to the person you are rating but will be used only to give me some idea of the impressions you've formed. Before you do these ratings, I'd like to make it clear that the person who sent you the note is not the one for whom you have an information sheet. Rate the note-sender only on impressions conveyed to you by the note. Before you make

these ratings, please read the note over again and form as strong an impression of the note-sender as you can. Then indicate your impressions of the person who sent you the note on the scales. Please try to be as careful and accurate as possible. Remember to put in the identity letter of the person you are rating.

Once scales had been distributed Ss were instructed:

Please read over the instructions and let me know if you have any questions about using these scales. If everything's clear .. go ahead and make the ratings. Please let me know when you've done by announcing "Finished" out loud.

Once the scales had been collected, E continued:

I want you to rate the note-sender on two sets of scales. This second set is a bit different from those you've used before so I'll distribute them and then go over the instructions.

The scales shown in Appendix J were distributed and the accompanying instructions read over. The instructions continued:

If you're clear about the use of these scales, turn over to the second page and begin. Please announce out loud when you've finished.

Once these scales were completed and collected,

E announced:

Before we continue, I'll need to go over these ratings. It will take me a few minutes so I'd like you to complete a short personality inventory form while you wait. The form has five answer categories underneath each question. Please read each question and then place a checkmark beside the category that best represents your answer to the question.

Please let me know if you have any questions about completing the inventory. And please let me know when you're done by announcing out loud that you've finished.

The Janis & Field (1959) "Feelings of Inadequacy" Scale was distributed and Ss given time to complete it. Once the scales had been collected Ss were told:

I'll need to score these inventories before we continue. We seem to be running short of time here today so I'm going to give you this questionnaire now. It's to make sure that the instructions have been clear. You're not really supposed to do it until the end of the experiment but I can't see that it really makes that much difference if you do it now -- and we are short of time. If you have any questions about completing this -- please don't hesitate to let me know. And, again, please let me know when you've done by announcing "Finished" out loud.

The post-experimental questionnaire was distributed.

While distributing it, E added:

Most of these questions can be answered with a word or a short sentence. You may want more space to answer some of them. If you do need more space, please turn over the form and write on the back of the page.

Once the post-experimental questionnaire had been completed by all Ss, E announced that the experiment was officially over and invited Ss to come out from behind the screens for debriefing.

APPENDIX B

PROBLEMS AND ACCOMPANYING INSTRUCTIONS

PLEASE DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

The problem you will have is similar to the one illustrated below. At the top of the page you will see four statements which you may regard as premises. Underneath the four premises, you will see a series of items labelled Q1, Q2 and so forth. It is your job to decide, on the basis of the four premises given, whether or not each of the conclusions is valid. Please do this by placing a check mark under the column headed "Yes" or the one headed "No". That is, if you feel it is valid to draw a particular conclusion, place a check mark in the "Yes" column. If you feel it is not valid to draw that conclusion, place your check mark in the "No" column.

EXAMPLE

Given the following two statements as Premises:

- 1) If it is sunny, the ground is dry.
- 2) It is sunny.

is it valid to conclude:

	<u>Yes</u>	<u>No</u>
Q1. The ground is dry?	_____	_____

ID Letter _____

Problem 1:

Given the following four statements as Premises:

- 1) If Jack Cracker is in jail, then Jack Cracker is not a nuisance to his family.
- 2) If Jack Cracker is not a disgrace, then Jack Cracker is in the army.
- 3) Jack Cracker is in jail, if Jack Cracker is a disgrace.
- 4) If Jack Cracker is drunk, then Jack Cracker is a nuisance to his family.

Is it valid to conclude:

Yes No

- | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|
| Q1. that if Jack Cracker is not in jail or Jack Cracker is not in the army, then Jack Cracker is not drunk? | _____ | _____ |
| Q2. that if Jack Cracker is a nuisance to his family, then (a) Jack Cracker is in the army, or (b) Jack Cracker is drunk? | _____ | _____ |
| Q3. that (a) Jack Cracker is drunk, or Jack Cracker is not a disgrace, if (b) Jack Cracker is a nuisance to his family, and Jack Cracker is not in the army? | _____ | _____ |
| Q4. that Jack Cracker is a nuisance to his family, if Jack Cracker is a disgrace? | _____ | _____ |
| Q5. that if Jack Cracker is a disgrace, and Jack Cracker is drunk, then Jack Cracker is not in the army? | _____ | _____ |
| Q6. that (a) Jack Cracker is not a nuisance to his family, if (b) Jack Cracker is drunk, and Jack Cracker is a disgrace? | _____ | _____ |
| Q7. that if (a) Jack Cracker is not in the army, then (b) Jack Cracker is not drunk, and Jack Cracker is a disgrace? | _____ | _____ |
| Q8. that Jack Cracker is a disgrace, if Jack Cracker is a nuisance to his family? | _____ | _____ |
| Q. 9 that Jack Cracker is not drunk, or Jack Cracker is in the army? | _____ | _____ |
| Q10. that if Jack Cracker is a disgrace, and Jack Cracker is drunk, then Jack Cracker is not in jail? | _____ | _____ |
| Q11. that if Jack Cracker is a nuisance to his family, then (a) Jack Cracker is drunk, or (b) Jack Cracker is a disgrace? | _____ | _____ |
| Q12. that if Jack Cracker is a nuisance to his family, then it is not so that (a) Jack Cracker is drunk, or (b) Jack Cracker is a disgrace? | _____ | _____ |

ID Letter _____

Problem 2:

Given the following four statements as Premises:

- 1) (a) If Smith wins the nomination, then Smith feels happy, and (b) Smith is not a good campaigner, if Smith feels happy.
- 2) Smith loses the confidence of his party, if Smith does not win the nomination.
- 3) If Smith is not a good campaigner, then Smith should resign from the party.
- 4) Smith is not a good campaigner, if Smith loses the confidence of the party.

Is it valid to conclude:

Yes No

- | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|
| Q1. that if Smith wins the nomination, then Smith should resign from the party? | _____ | _____ |
| Q2. that if Smith wins the nomination, and Smith does not lose the confidence of the party, then is it not so that Smith should resign from the party? | _____ | _____ |
| Q3. that Smith should resign from the party, if Smith feels happy? | _____ | _____ |
| Q4. that if Smith does not lose the confidence of the party, or Smith wins the nomination, then is it not so that Smith should resign from the party? | _____ | _____ |
| Q5. that if Smith is a good campaigner, then Smith should resign from the party? | _____ | _____ |
| Q6. that Smith should resign from the party, if Smith does not lose the confidence of the party? | _____ | _____ |
| Q7. that Smith does not win the nomination, if Smith is a good campaigner? | _____ | _____ |
| Q8. that if Smith is a good campaigner, then (a) Smith feels happy, or (b) Smith loses the confidence of the party? | _____ | _____ |
| Q9. that if Smith wins the nomination, or Smith is a good campaigner, then is it not so that Smith should resign from the party? | _____ | _____ |
| Q10. that if Smith is a good campaigner, or Smith does not lose the confidence of the party, then is it not so that Smith should resign from the party? | _____ | _____ |
| Q11. that Smith is not a good campaigner, if Smith should resign from the party? | _____ | _____ |
| Q12. that if Smith does not lose the confidence of the party, then Smith is not a good campaigner? | _____ | _____ |

APPENDIX C

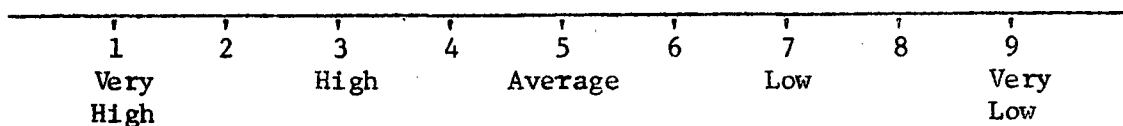
SELF RATING SCALES AND ACCOMPANYING INSTRUCTIONS

PLEASE DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

You are being asked to rate yourself on a number of characteristics. For a sample of the scales you'll be using, please look at the example below. In the example, the characteristic on which you are being asked to rate yourself is Sociability. Underneath the characteristic, you will see a scale which ranges from Very High to Very Low. You are to break the line at the point on the scale that indicates where you stand on this characteristic. If you feel that you are extremely sociable, you would draw a line through the scale at the extreme left side. If you felt that you were not extremely sociable but somewhat above average, then you would break the line at a point in between that best represents your degree of sociability. Similarly, if you regarded yourself as somewhat less than average in sociability, you would place yourself as much toward the right side of the scale as you felt represented your standing on this characteristic. The characteristics on which you are being asked to rate yourself are to be handled in a similar fashion.

EXAMPLE

Sociability



ID Letter _____

Problem-solving ability

1	2	3	4	5	6	7	8	9
Very High		High		Average		Low		Very Low

Desirability as a Teammate

1	2	3	4	5	6	7	8	9
Very High		High		Average		Low		Very Low

Intelligence

1	2	3	4	5	6	7	8	9
Very High		High		Average		Low		Very Low

Team spirit

1	2	3	4	5	6	7	8	9
Very High		High		Average		Low		Very Low

Desirability as a friend

1	2	3	4	5	6	7	8	9
Very High		High		Average		Low		Very Low

Likeability

1	2	3	4	5	6	7	8	9
Very High		High		Average		Low		Very Low

APPENDIX D

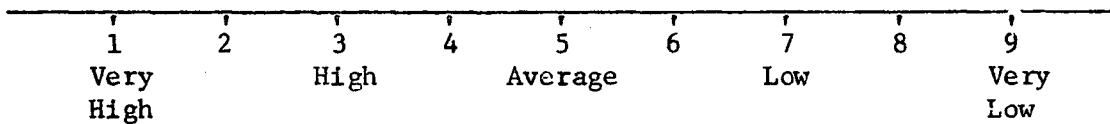
EXPECTED RATING SCALES AND ACCOMPANYING INSTRUCTIONS

PLEASE DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

You are being asked to indicate how you would expect to be rated by others in this group on a number of characteristics. As you may see from the example below, the scales are similar to those you used before. The characteristic on which you are asked to indicate how you expect others to rate you will be followed by a scale ranging from Very High to Very Low. As before, you are to break the line at the point on the scale that best indicates where you think others would place you on this characteristic.

EXAMPLE

Sociability



ID Letter _____

Intelligence

1	2	3	4	5	6	7	8	9
Very High		High		Average		Low		Very Low

Desirability as a teammate

1	2	3	4	5	6	7	8	9
Very High		High		Average		Low		Very Low

Problem-solving ability

1	2	3	4	5	6	7	8	9
Very High		High		Average		Low		Very Low

Desirability as a friend

1	2	3	4	5	6	7	8	9
very High		High		Average		Low		Very Low

Team spirit

1	2	3	4	5	6	7	8	9
Very High		High		Average		Low		Very Low

Likeability

1	2	3	4	5	6	7	8	9
Very High		High		Average		Low		Very Low

APPENDIX E

EXPERIMENTAL INFORMATION SHEET

Information Sheet

ID Letter _____

Hair color: _____ Height: _____ Weight: _____

Eye color: _____

Do you wear glasses: Always _____ Sometimes _____ Never _____

Do you ask questions in class: Frequently _____ Occasionally _____
Never _____

Do you initiate discussions in class: Frequently _____ Occasionally _____
Never _____

Do you usually dress for class in a style that is: Formal _____
Sloppy casual _____
Neat casual _____
Other _____

How did you do in your last year in high school?

Below average _____ Average _____ Above average _____
(0 - 49% average) (50-59% average) (60-100% average)

In high school did you take:

Mathematics: _____ Chemistry: _____ Physics: _____

What subject are you majoring in at University? _____

Please list below the courses you are taking this year:

_____	_____
_____	_____
_____	_____

Please list below three hobbies in order of preference:

APPENDIX F

CONTROL INFORMATION SHEET

Information Sheet

ID Letter _____

Hair color: _____ Height: _____ Weight: _____

Eye Color: _____

Do you ask questions in class: Frequently _____ Occasionally _____
Never _____

Do you initiate discussion in class: Frequently _____
Occasionally _____ Never _____

Do you usually dress for class in a style that is: Formal _____
Neat casual _____
Sloppy casual _____
Other _____

APPENDIX G

NOTE FORM

From: _____

To: _____

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

APPENDIX H

DISCLOSURE AND NO DISCLOSURE SECOND SHEETS

From: _____

To: _____

My test problem scores were:

Problem 1: _____ percentile

Problem 2: _____ Percentile

I want you as a teammate:

1	2	3	4	5	6	7	8	9
Very much		Fairly much		Somewhat		Not much		Not at all

From: _____

To: _____

I want you as a teammate:

1	2	3	4	5	6	7	8	9
Very much		Fairly much		Somewhat		Not much		Not at all

APPENDIX I

TRAIT RATING SCALES AND ACCOMPANYING INSTRUCTIONS

PLEASE DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

You are being asked to indicate how, on the basis of impressions formed after reading the note, you would rate the person who sent you the note. You are asked to rate this person on a number of characteristics. The scales are like the ones you used before. Please try to be as accurate as possible in recording your impressions of the person who sent you the note.

ID Letter _____

I am rating Person _____ (Please place in the space provided the ID letter of the person who sent you the note.)

Desirability as a teammate

1	2	3	4	5	6	7	8	9
Very High		High		Average		Low		Very Low

Intelligence

1	2	3	4	5	6	7	8	9
Very High		High		Average		Low		Very Low

Team spirit

1	2	3	4	5	6	7	8	9
Very High		High		Average		Low		Very Low

Desirability as a friend

1	2	3	4	5	6	7	8	9
Very High		High		Average		Low		Very Low

Likeability

1	2	3	4	5	6	7	8	9
Very High		High		Average		Low		Very Low

APPENDIX J

SEMANTIC DIFFERENTIAL SCALES AND ACCOMPANYING INSTRUCTIONS

PLEASE DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

On the next page of this booklet you will find a set of descriptive scales. You are to rate the person who sent you the note on each of the these scales in order.

Here is how you are to use these scales:

If you feel that the person is very closely related to one end of the scale, you should place your check-mark as follows:

fair X : : : : : : **unfair** **or**

fair : : : : : X unfair

If you feel that the person is quite closely related to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

strong _____ : **X** : _____ : _____ : _____ : _____ **weak** or

strong : : : : X : weak

If the person seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

active : : X : : : passive or

active : : : X : : passive

The direction toward which you check, of course, depends upon which of the two ends of the scale seems most characteristic of the person you're judging.

If you consider the person to be neutral on the scale, both sides of the scale equally associated with the person, or if the scale is completely irrelevant, unrelated to the person, then you should place your check-mark in the middle space.

safe : : : **X** : : : **dangerous**

IMPORTANT: (1) Place your check-marks in the middle of the spaces,
not on the boundaries:

	THIS		NOT THIS	
:	:	X	:	X

(2) Be sure you check every scale -- do not omit any.

(3) Never put more than one check-mark on a single scale.

Make each item a separate and independent judgement. Work at fairly high speed through these scales. Do not worry or puzzle over individual items. It is your first impressions, your immediate feelings about the person that we want. Please do not be careless, because we want your true impression.

ID Letter _____

good _____ bad

kind _____ cruel

grateful _____ ungrateful

harmonious _____ dissonant

beautiful _____ ugly

successful _____ unsuccessful

true _____ false

positive _____ negative

reputable _____ disreputable

wise _____ foolish

optimistic _____ pessimistic

sociable _____ unsociable

Person _____ (Please place in the space provided the identity letter
of the person who sent you the note.)

APPENDIX K
POST EXPERIMENTAL QUESTIONNAIRE

ID Letter _____

1. What is the purpose of the study?
2. How many teams will be formed during the project?
3. How much money will the winning team receive?
4. Why were you identified by a letter rather than by name during the experiment?
5. How is your performance during the contest likely to compare with your performance on the test problems?
6. If you were given an aptitude test for marble dropping and then told that you had scored at the 91st percentile, what could you say about your performance? -Out of 100 people of similar ability, how many would score above you? below you?
7. What were your percentile rankings on the test problems?
8. On what basis did the note-sender form his impression of you?
9. Were your test problem scores available to him when he wrote you the note?
10. Will the note-sender have your test problem scores to use in making a final decision?
-If so, do you think he will alter his decision?
-If not, do you think that, if test problem scores were available, he would alter his decision?
11. On what basis did you form an impression of the note-sender?
12. Once you have formed teams, how will you and your partner work together on problems?
13. Will the score made by your team on the contest problems be available to you?
-If so, when will you be told this score?
-If not, would you like to receive this information?
14. -Will you be told how many of the points made by your team on the contest problems were gained by you?
-Will you be told how many of the points made by your team on the contest problems were gained by your partner?
-Will your partner be told how many of the points made by your team on the contest problems were gained by you?
-Will your partner be told how many of the points made by your team on the contest problems were gained by him/her?
15. When will you find out whether or not your team won the contest?
16. How will this information be given to you?
17. Do you think that any deception has thus far been involved in this study?
-If you believe that deception has been involved in the study, please write down any guesses you may have as to what the deception was.
18. Finally, what do you think the study may be investigating and what do you think the experimenter may be trying to find out?