Teacher Evaluation, Peer Approval and Grade Point Average as Related to Locus of Control and Need for Approval in High School Boys

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Teacher Evaluation, Peer Approval and Grade Point Average as Related to Locus of Control and Need for Approval in High School Boys

By

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Life

Thomas James Graziano was born in Chicago, Illinois on July 21, 1943. After graduating from Weber High School of Chicago in 1961, he enrolled at Loyola University of Chicago. He was awarded a Bachelor of Science Degree from Loyola in February of 1966.

Mr. Graziano was accepted into Loyola University's Clinical Psychology program in September of 1966. He served with Father Michael O'Brien and Father Paul Robb, S.J. in his first year working as a graduate assistant. In his second year, he accepted a clerkship at Hines Veterans Hospital working as a psychology trainee in the area of vocational rehabilitation.

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Chapter I - Introduction

Recently some authors (Matell & Smith, 1970; Petzel, 1972) have suggested that approval motivation is related to academic achievement in some students. Matell and Smith (1970) have commented that in our achievement oriented society it is apparent that behaviors instrumental to academic achievement typically have a history of being reinforced by the approval of others (e.g., parents, teachers, and peers). It follows that since approval motivated persons appear more dependent on social cues than persons less motivated by approval (Crowne & Marlowe, 1964), they may be expected to have internalized this societal achievement norm more than persons less motivated by approval. Thus Petzel's (1972) findings that high need approval motivated students were more "grade conscious" than low approval motivated subjects seems to verify this point.

Another personality variable associated with need satisfaction (e.g., need for approval) is Rotter's Internal-External Locus of Control (Rotter, 1966). During the past decade a number of investigations have been concerned with the importance of this variable. The internal-external control dimension as derived from social learning theory (Rotter, 1954) posits two characteristic world views or generalized expectancies concerning reinforcements. Individuals who characteristically see the reinforcements they receive as caused by their own instrumental behaviors have been termed
"internals", while "externals" are persons who believe that reinforcements are caused by agents outside themselves or forces over which they have no control.

The purpose of this thesis was to investigate the relationship of approval motivation and internal-external locus of control to certain classroom behaviors and achievements. More specifically this experiment assessed high school boys' academic achievement, and teacher and peer evaluations of them as function of locus of control and need for approval. The rationale for the experiment lies within the framework of Social Learning theory (Rotter, 1954). This theory proposes that the probability of behavior occurring (behavioral potential) is a function of the relative value or preference for certain reinforcements along with the individual's subjective probability of expectancy that these reinforcements can be attained. More specifically:

\[
\text{Behavior Potential} = F (\text{Relative value of certain reinforcements} + \text{Expectancy to attain these reinforcements})
\]

If we were to consider the need for approval scale (Marlowe-Crowne Social Desirability Scale, 1964) as an index of the relative value of approval and affectional reinforcements, and the Rotter Internal-External scale (1966) as a measure of the generalized expectancy of success as a result of one's own abilities to attain these reinforcements; we ought to be able to make more refined predictions concerning behavior, specifically within the classroom. Figure 1 presents this relationship.
Rotter's (1954) formula:

\[
\text{Behavior Potential} = f \left( \frac{\text{Relative Value of Certain Reinforcements}}{\text{Expectancy of an Individual to Attain These Reinforcements}} \right)
\]

Translated into the present study:

\[
\text{Classroom Approval Seeking Behaviors (ie., teacher evaluations and GPA)} = f \left( \frac{\text{Marlowe-Crowne Scale as a Measure of Need for Approval}}{\text{Rotter's Locus of Control as a Measure of Personal Control of Reinforcements}} \right)
\]

Figure 1. Theoretical Relationship of Need for Approval and Locus of Control to Rotter's Social Learning Theory.
The behavioral situation of school involves an interpersonal situation which provides an opportunity for a high need approval student to seek such approval from significant others (e.g., teachers). Further, internally oriented students within this situation would feel that they have a greater degree of control over these social reinforcements, and thus may try to influence the dispensers of these reinforcers (i.e., teachers) by behaving in socially acceptable ways.

Thus we would expect students high on need approval who are also internally oriented to receive more positive teacher evaluations and better grades than either high need approval students who are externals or low need approval students.

The present experiment will utilize the Marlow-Crowne Social Desirability Scale (M-C) and Rotter Internal-External Locus of Control Scale (I.E.) as independent variables. The following review of the literature presents studies relevant to research with the M-C and I.E. scales. We will begin with the M-C scale, presenting a brief historical review of the origins of the scale while tracing pertinent research to the present day.
The Marlowe-Crowne Social Desirability Scale; A Measure of Need Approval

The beginnings of the construct of Social Desirability came from the observations that scores on personality questionnaires were influenced by factors other than the manifest content of the items. A number of questions emerged: Did subjects "fake good or bad" according to their purpose? Were they careless or defensive? Could some subjects just want to make themselves look good? Initially several techniques for scoring personality tests to detect faking good were created and were moderately successful; nevertheless, the problem lingered. At about this time, the concept of response set was introduced; that is, the subject brings to the testing situation a habitual set of response preferences, such as a tendency to agree indiscriminately with test items. From this idea of response sets came the concept of social desirability, referring to both personality test items as socially desirable statements about oneself and the tendency of subjects to endorse socially desirable options. Marlowe and Crowne (1964) set out to explore the social desirability response set by investigating a rather simple explanation as to the casuality of the concept, i.e., people describe themselves in favorable, socially desirable terms in order to achieve the approval of others. Their eventual scale has been widely used as a measure of need approval since its construction. Marlowe and Crowne were not alone in their construction of a social desirability scale, Edwards (1957), Hanley (1956), and Wiggins and Rumrill
(1959), all created social desirability scales to directly assess the differing tendencies of subjects to give socially desirable responses. A Children's Social Desirability Questionnaire (CSD) was constructed by Crandall (1965) to assess this tendency in children. Even shortened forms of the M-C scale have recently appeared in the literature (Greenwald & Satow, 1970).

The Scale Itself

The Marlowe-Crowne Social Desirability Scale (M-C) to be used in the present study consists of 33 True-False items. The M-C scale supposes that a person brings to the test situation a habitual pattern or style of evaluation and will tend to endorse test items in a manner that reflects this particular style. The items consist of good things to say about oneself that are probably untrue, (i.e., "I never hesitate to go out of my way to help someone in trouble"), and bad things to say about oneself that are probably true (e.g. "I sometimes feel resentful when I don't get my way"). It is further assumed that people differ in the strength of need to be thought well of by others, and for those high in need approval; we would assume a generalized expectancy that approval satisfaction is attained by engaging in behaviors which are culturally sanctioned and approved of and by avoiding those responses which are not.

M-C Research Since 1960

The direction of research since 1960 has aimed at testing the tendency to appear socially desirable in other than testing situations. Marlowe and Crowne (1961) began their investigations into implied demand and conformity with the "spool packing"
experiments. College students served as subjects in an experiment where they were greeted by an "aloof, professionally mannered E who made sure the subjects knew he was a Ph.D. and psychologist." They were administered the M-C scale and then given an "incredibly" boring task of putting spools into a box and taking them out over and over again for 25 minutes. After this, the E then gave the students a questionnaire on which he rated his enjoyment in the task and the experiment itself. It was hypothesized and found that high need approval subjects (high nApp) showed more favorable attitudes toward the extremely dull spool packing task than did low need approval (low nApp) subjects.

Verbal Conditioning, Conformity, and Hostility as Related to Need Approval

In the area of suggestibility, Marlowe, Steiler, and Davis (1962) used a verbal operant conditioning paradigm where critical responses were immediately followed by social reward from the experimenter, and found that high nApp subjects showed an increase in response rate significantly greater than low nApp subjects. Within conformity studies, Strickland and Crowne (1962), Horton, Marlowe and Crowne (1963) and Crowne and Liverant (1963) have shown high nApp subjects to be more responsive than low nApp subjects to perceived situational demands and more likely to respond affirmatively to social influence within a range of quite dissimilar settings and tasks. This finding has been supported whether the attempts to influence are obvious or relatively subtle, and whether they emanate from an individual
or a group. Crowne and Liverant (1963, p. 552) have indicated
that: "Conformers can be regarded as individuals, who have a
high need for approval but a relatively low expectancy of suc­
cess as a result of his own abilities and efforts. His fear of
social rejection results in a strong disposition to conform."

When high nApp subjects are presented with an experimen­
tal hostility arousing situation, they indicate a particular
style of defense against hostility utilizing self-protective,
avoidant measures to avert anticipated threats to self esteem
(Conn & Crowne, 1964). Further, Strickland and Crowne (1963)
have found that high nApp subjects, because of their avoidant
measures to threatened self esteem, have a tendency to display
more of a "leaving the field" form of resistance in psycho­
therapy than low nApp subjects.

Sex Differences and Need Approval

The issue of sex differences and the Marlowe-Crowne scale
is a complex one, and still in the need of more clarification
and research. When Marlowe and Crowne established their scale
(1960) as a measure of the approval notice, they found no
significant differences between the men and women in their
college sample. Earlier Edwards (1957) found no significant
differences between college men and women with his Social
Desirability Scale. In a recent study (1971), Williams found
no sex differences in need approval as measured by the Marlowe­
Crowne Scale among a college sample of students. However,
Masterson (1971) did find females higher than males in need approval in an undergraduate sample of 155 students on the M-C Scale. And finally, Crandall, Crandall and Katkovsky (1965) in refining their Children's Social Desirability (CSD) questionnaire tested 956 children ranging from 3rd to 12th grade. Their findings indicated that the younger girls gave more socially desirable responses than did the boys. They suggested the possibility that females in American culture are more consistently taught and expected to be nicer than are males, unless they come from an academically oriented background where the parents may be less concerned with this aspect of behavior development. The present experiment utilized male subjects exclusively thus eliminating a possible source of variance for this study.

Peer Ratings and Need Approval

The present study will attempt to assess the relationship of students' peer evaluations to locus of control and need for approval. It appears that little work has been done in this specific area and thus the basis for predictions is somewhat tenuous. Barthel (1963) administered the M-C and the I.E. scales to a group of fraternity brothers. The brothers then rank ordered each other on a sociometric nominating device with defensive and non-defensive descriptions. Barthel found that high nApp subjects who were external were rated by their fraternity brothers as more defensive in interpersonal relationships than low nApp subjects or high nApp subjects who were internal.
Marlowe (1964) reports a study in which 24 members of a small fraternity, noted for its stress on group activities and sociability were given the M-C scale and five T.A.T. cards scored for nAffiliation (Atkinson, 1958). The subjects then rank ordered each other on a sociometric nominating device with a likeable and unlikeable description. The results indicated that high nApp subjects do have a higher need for affiliation than low nApp subjects but that high nApp subjects do, in fact, elicit more unfavorable evaluations from their peers than low nApp subjects. Because of the rather small Ns and selective populations, these studies are merely suggestive. Nevertheless these studies suggest that students high on need approval should receive more negative peer evaluations than low need approval students.
The Rotter Internal-External Control Scale; A Measure of Locus of Control.

The first studies utilizing the concept of locus of control were those of Phares (1955, 1957). He used an ambiguous color matching task and instructed one-half of the subjects that the task was so difficult as to be a matter of luck (chance condition), and the other half of his subjects that previous research had shown that some people were very good at the task (skill condition). Before attempting each item, he had each subject rate how well he expected to do on that item. Phares found that:

1) increments and decrements of expectancies following success and failure were significantly greater under skill than under chance conditions, 2) reinforcements under skill conditions had a greater effect on raising or lowering expectancies for future reinforcements, and 3) he found that subjects under the chance conditions showed more unusual shifts in expectancies, that is, increased expectancies after failure and decreased after success (the gambler's fallacy).

Other research followed within this skill and chance task study series. James and Rotter (1958) conducted a similar study using an ESP type task while instructing half of the subjects that the task was chance and the other half that it required skill. Contrary to the usual findings regarding resistance to extinction, under skill conditions they found greater resistance to extinction of expectancy ratings following a 100% reinforcement schedule than a 50% reinforcement schedule.
James (1957) also found a greater generalization of expectancies and more spontaneous recovery under skill than under chance conditions. James concluded that a better type of learning occurs under skill than under chance conditions. Phares (1962) continued the skill and chance studies using a tachistoscopic presentation of nonsense syllables, some of which were accompanied by shock. The skill group was told that the shock could be escaped by pressing a correct button which could be learned. The chance group was instructed that they could press any of the sequence of buttons and that this may or may not allow them to avoid the shock depending on chance. Subjects who believed they had control of the situation (skill condition) exhibited perceptual behavior which enabled them to cope with potentially threatening situations more efficiently than subjects who believed chance or other non-controllable forces determined whether their behavior would be successful.

The Scale for Locus of Control

The first attempt to measure the individual differences in a generalized expectancy or belief in external control was Phare's (1955) construction of a Likert type scale with 13 items stated as external attitudes and 13 stated as internal attitudes. The scale supposedly measured a general attitude or personality characteristic of attributing occurrence of reinforcements to chance rather than oneself. James dissertation (1957) revised Phares test and used internal-external items plus filler items.
He hypothesized and found that within each group, either skill or chance, those subjects who scored toward the external end of the continuum behaved in each group in the same way as the difference between the skill and chance groups for all subjects. Within the external group, James found small increments and decrements following success or failure. They evidenced less generalization from one task to another. Further they recovered less following the extinction period, and finally they tended to produce more unusual shifts (up after failure and down after success) in expectancy. On the basis of the studies reported to this point, it would appear that internals learn better, generalize more and retain more than external subjects.

The James-Phares scale grew to a 100 item forced choice test under Liverant, Rotter and Seeman (Rotter, 1966). They developed subscales for areas such as achievement, affection and general social and political attitudes. Liverant factor and item analyzed the test reducing it to a 60 item scale on the basis of internal consistency criteria. Further item analysis, however, indicated that the subscales were not generating separate predictions and the measurement of specific subareas of internal-external control was abandoned. Further work with the 60 item scale revealed significant negative correlations with Marlow and Crowne's Social Desirability Scale ($r = -.35$ to $-.40$). These correlations were far too high, so by eliminating those items which had a high correlation with the Marlowe-Crowne scale, the
scale was reduced to 23 items. These items which deal with an individual's belief about the nature of the world, plus six filler items make up the present I.E. scale. The 23 items are presented in a forced-choice format with an internal item being presented with an external item (e.g. External 2a, "Many of the unhappy things in life are partly due to bad luck." Internal 2b, "People's misfortunes result from mistakes they make.") Each of the items is concerned with an individual's expectations about how reinforcements are controlled. The total test is considered to be a measure of an individual's generalized expectancy of his control of reinforcements. The scores range from zero (the consistent belief that individuals can influence the environment - that rewards come from Internal sources) to 23 (the belief that all rewards come from External sources). Rotter's discussion (1966) of the discriminant validity of the I.E. scale indicated that correlations with intelligence and political liberalism were low. Minimal sex differences were observed based upon control data from samples of college and high school students. Further research (Hersch & Scheibe, 1967) has verified that the test retest reliability is consistent and acceptable.

Research with the Locus of Control Scale

A recent bibliography (Throop & MacDonald, 1971) contains 339 references of studies investigating locus of control with 206 of these articles having been published since 1966. Presently the Psychological Abstracts indicates no let up in the volume of research into the locus of control variable with 25-30 studies
being reported each month up to **July, 1972**. Most of the studies dealing with high school, and college students, or adults have used the 29 item scale. Rotter (1971) also reports that the test has been translated into at least six other languages (Schmidt, 1971), with as many as four children's scales presently in use (Battle & Rotter, 1963; Bialer, 1961; Crandall, Katkowski, & Crandall, 1964; Dean, 1961).

**Locus of Control and Ethnicity**

Lefcourt's review (1966) presented the many faces of research undertaken early with the scale. Graves and Jessor (1961) in still another adaption of the I.E. scale, this time for high school students, investigated ethnic differences among whites, Spanish-Americans, and Indians within an isolated tri-ethnic community. Graves found whites to be the most internal followed by Spanish Americans with the Indians most external in attitudes. Battle and Rotter (1963) found an interaction between race and social class using 6th and 8th graders on the control variable so measured by a projective device called the Children's Picture Test of Internal-External control. Lower class blacks were significantly more external than lower class whites of middle class blacks and whites.

**Locus of Control and Political Participation**

Using southern black college students, Gore and Rotter (1963) found that the I.E. scale predicted the type and degree of commitment behavior manifested to effect social change. Internal subjects indicated a greater amount of interest in social action by signing statements concerning a March on Washington and the
forming of a freedom riders group, while externals either expressed less interest in participation or minimal involvement (willingness to attend a rally). More recently, Rosen and Salling (1971) using 45 male undergraduates as subjects, found that political participation (as measured by a Political Activity questionnaire and test) was significantly correlated with internal locus of control. These studies along with a host of others to be reported present the theme of the internal subject as one who will take behavioral steps to arrange the consequences of his environment.

Locus of Control and Adjustment

A number of studies have attempted to relate I.E. results to adjustment. James (1957) found a significant correlation between the James-Phares Likert type scale and Rotter's Incomplete Sentences Blank personal adjustment score for the middle ranges of the internality-externality continuum. The extreme scores in either direction were less well adjusted reflecting the curvilinear nature of the relationship. Hersch and Schelbe (1967) found internality consistently associated with indices of social adjustment and personal achievement. More recently Palmer (1971), found that 89 psychiatric patients matched for age, sex, and social class scored significantly more external on the I.E. than matched normals.

Locus of Control and Conformity

In a study concerning personality characteristics of conformers, Odell (1959) found a significant relationship between
the I.E. scale and Barron's Independence of Judgment Scale. Subjects high in externality showed greater tendencies to conform. Other studies in conformity have indicated that there are subtle differences in the conforming situation. Gore (1962) helped to clarify the issue by studying conformity under various conditions. Her studies showed no significant differences between internals and externals under an overt suggestion condition and control condition, but under a subtle, covert suggestion condition, the internals exhibited greater resistance to suggestion, than did subjects in the other suggestion condition. She concluded that the internal individual may go along with suggestions when he chooses to and when he is given a conscious alternative. However, if such suggestions or attempts at manipulation are not to his benefit or if he perceives them as subtle attempts to influence him without his awareness, he reacts resistively.

Locus of Control and Risk Taking

In an example of the research done with risk-taking behavior, Liverant and Scodel (1960) engaged subjects in a risk-taking situation in which they were required to bet on the outcome of 30 trials of dice throwing. The subjects selected the amounts of their bets and chose one of seven alternate bets with given objective probabilities. Generally internal subjects were more cautious bettors. They chose more high probability low payoff bets. They also selected more bets of intermediate probability than did external subjects. In a similar vein, Lichtman and
Julian (1964) found internal subjects preferred closer distances from which to throw darts to maximize their success probabilities than did external subjects.

The Variety of Research with Locus of Control

To gain an appreciation for the variety of research going on with the I.E. scale the following are presented. Harvey (1971) found that the results of 50 returned I.E. scales mailed to 70 upper level government officials revealed that these officials reflected an internality which increased significantly with the number of years in the position. He concluded that government positions offer strong reinforcement for a perception of personal control. Wall (1970) reported that high internal subjects were found to be significantly higher on Personal Orientation Inventory (POI) measures of self regard, self-actualization value, and the nature of man as constructive. Fish and Karabenick (1971) administered 285 male undergraduates the Rotter L.E. scale and Janis and Field's Feelings of Inadequacy scale. A significant negative correlation was obtained indicating that people with high self-esteem have a greater potential for self-reinforcement. Finally, Lundy (1972) gave 600 unmarried undergraduate women a questionnaire measuring their degree of sexual activity and the use or non-use of contraceptive devices. The subjects were also given Rotter's I.E. scale, the Rokeach Dogmatic Scale and a self-esteem scale by Rosenberg. One of the more interesting findings related that sexually active contraceptive users were more internal and less dogmatic than sexually active non-contraceptive users. Again, it is evident
that internals will take more behavioral steps to arrange the consequences of their environment than externals.

Theoretical Antecedants of Control

In Rotters' monograph (1966), he called for research investigating the theoretical antecedants to determine the specific childhood experiences which give rise to either a generalized internal or external orientation. Davis and Phares (1969) in an exploratory study utilizing children's reports of parental behavior indicated that parents of internally oriented children showed less rejection, hostile controls and withdrawal of relations, as well as indicating a more positive involvement and consistent discipline. Katkowsky, Crandall and Good (1967) found that parental behaviors characterized as warm, praising, protective and supportive were positively related with a child's belief in internal control, while negative parental behaviors such as dominance, rejection and criticality were negatively associated. MacDonald (1971) used restrospective parental reports of 427 male and female undergraduates and found that mothers who were more nurturant, had more predictable standards, and gave more achievement pressure were related to a belief in internal control. Mother's behaviors which were more protective and more inclined to use deprivation of privileges as punishment were related to a belief in external control.

Locus of Control and Achievement

The research most pertinent to the present study is that involving internality and achievement. Lefcourt (1966) has stated:
"Since the control dimension is usually measured by scales stressing academic interests, it would seem likely that learning skills and achievement behaviors would be highly related to control" (p.213). It does seem probable that the degree to which a student believes that his behavior is responsible for his academic successes and failures will effect his instrumental effort to attain these goals. Such a student should show greater initiative in seeking intellectual rewards and greater effort and persistence in intellectual tasks and situations. Conversely an individual who feels that his rewards and punishments are given him at the whim or design of other people or circumstances, has little reason to exert effort in an attempt to increase the probability of attaining reward and avoiding punishment. As a further correlate, it follows that if internal students do show a greater initiative in seeking and persisting at intellectual rewards, these behaviors should eventuate in the accumulation of more facts, concepts, and problem solving skills learned, thereby enabling these students to score higher on measures of academic competence such as grades and achievement test scores. It is important to note again that locus of control has consistently been differentiated from intelligence. Their reported correlations are low (Rotter, 1966).

Franklin (1963) studies a nationally stratified sample of 1000 high school students. He hypothesized 17 relationships of the I.E. scale to "reported" evidences of achievement
motivation. These included such things as early attempts to investigate college, amount of time spent doing homework, parents interest in homework, etc. He found a significant relationship in the predicted direction in 15 of his 17 relationships. Baker (1971) administered the I.E. scale and a questionnaire about nocturnal activity to 104 education graduate students. The results indicated that external subjects watched more television, dreamed more frequently and enjoyed dreaming more than internal subjects. These studies further indicate that internally oriented individuals will take behavioral steps to accomplish their intended goals, in this case academic achievement. Cellura (1963) found that internal scores predicted SRA academic achievement test scores with IQ partialled out on lower, socioeconomic boys through grade 7. However, no relationship was found for the girls. Chance (1965) using 3rd-7th graders found internality positively related to reading, arithmetic and spelling scores for both sexes. Crandall, Katkovsky, and Preston (1962) administered the IAR (Intellectual Achievement Responsibility Questionnaire), an adaption of the I.E. scale for school related behaviors, and compared the results with four achievement-related activities (time spent in intellectual free play pursuits, intensity of striving in intellectual free play pursuits, intelligence test performance, and reading and arithmetic performances). They found high internal boys as measured by the IAR spent more time in free play activities of an intellectual
nature while exhibiting more intense striving in those activities than did low internal boys. They also scored higher on intelligence tests, reading and arithmetic achievement tests than externals. There was no relationship found for the girls in their sample of early grade school age children. Crandall (1965) administered the IAR scale to 913 early grade school children with the chief finding being that early grade school girls are more prone to assign responsibility to themselves for results of intellectual achievement efforts than boys.

It is interesting that Crandall et al. (1965) originally developed their IAR scale because of the feeling that the requirements for reinforcement in an achievement situation are much too specific to be studied with the generalized locus of control construct. The IAR then provides a measure of children's locus of control beliefs specifically with the intellectual achievement situation. The scale yields two separate core scores: a score for internal beliefs regarding success and a separate score for failure. McGhee and Crandall (1968) found girls' performance scores equally consistent with beliefs in their own instrumentality for success and for failure using the IAR test. Boys' scores however were more consistently related to beliefs in responsibility for failure. They suggest that a boy's belief that he is responsible for his own academic failures may constitute a greater incentive to academic effort than a similar orientation with respect to his successes. Perhaps greater attention is given to his poor performance
avoiding failures (i.e. poor grades) and less positive anticipation of doing well. Solomon, Houlihan and Parelius (1969) in a study relating the IAR scores of 265, 4th-6th grade school children to sex, school grades and socioeconomic level found no interactions. The only effect found was that girls scored higher than boys in acceptance of internal responsibility for positive outcome. A finding similar to McGhee and Crandall (1968).

It is also significant to note that within the McGhee and Crandall (1968) study, stronger results were obtained with grades than with achievement test scores. In explanation, McGhee and Crandall (1968) comment: "The internal child should display greater initiative, effort and persistence in the attempt to acquire intellectual academic goals. It appears that the best prediction is obtained to behaviors such as persistence, attempts to participate in class discussions, and willingness to work on extra credit assignments which may constitute intentional or unintentional direct criteria for teachers' grades" (p.97).

James (1965) found internals among 90 female student nurses on the Rotter scale to manifest more persistence and staying power at a complex logical puzzle than externals. Katz (1967) after a scholarly review of the many theoretical orientations toward the cognitive and personality characteristics necessary for school success, cogently argued that scholastic outcome is reducible to a kind of staying power or self-control. These studies suggest the relationship of persistence to
academic achievement to internality.

In a study deriving from the sociological emphasis on alienation, Seaman and Evans (1962) found internally oriented hospitalized T.B., male patients to have more objective knowledge about their own conditions. They questioned their doctors and nurses more than the externals as well as being found to be less satisfied about the amount of information received.

Butterfield (1964) in an extensive correlational study found that the internal individual claims that he reacts in a more problem solving direction despite frustration, wasting less time on guilty rumination and self-accusatory gestures that detract from problem solving efforts than the external individuals. The findings suggest that internal subjects depict themselves as goal directed workers who strive to overcome hardships, whereas external subjects portray themselves as suffering, anxious and less concerned with achievement per se than with their affective responses to failure.

**I.E. and Teacher Evaluations**

Morrison (1967) investigated the reactions of internal and external pupils to different patterns of teacher reinforcements. He gave 910 6th graders the Children's I.E. test along with the Metropolitan Achievement test battery. Results indicated that internal children learned more than external children, and had more positive perceptions of their teachers than did external children. In a related study, Snider (1965) found that pupils who liked their teacher learned more than those who
disliked him. Miller (1970) also found that internally oriented students tended to have more positive attitudes toward their teachers. It would seem feasible on the basis of past research to expect internally oriented subjects to learn more and thus get better grades. And secondly we would expect that these better students would not only give more positive teacher ratings, but would receive more positive ratings from their teachers on the basis of their performance than would the external subjects.

In summary, the relationship of internality to achievement is well documented. We have seen that internals spend more time doing homework (Franklin, 1963) while watching less television (Baker, 1971). Internality has been correlated with academic achievement, (Cellura, 1963; Chance, 1965) although the results have been more consistent for boys than for girls. We have seen internality related to a staying persistence at a task (James, 1965), and the manifestation of more objective knowledge about their illness (Seaman & Evans, 1962). Finally, internals have been found to react in a more problem solving direction despite frustration. Thus we would expect our male subjects who are internal to manifest a greater academic achievement and thus have higher grade point averages than external subjects.
Predictions

On the basis of past research and the theoretical implications of Rotter's Social Learning Theory (1954), the following predictions are made for the present study.

Teacher Evaluations

1. High nApp subjects will receive more positive teacher ratings than low nApp subjects.
2. There will be no significant difference on teaching ratings between internals and externals.
3. Within high nApp subjects, internals will receive higher teacher ratings than externals.
4. High nApp externals will receive more positive teacher ratings than low nApp internals and externals.
5. Within low nApp subjects, internals and externals will not differ significantly from each other on teacher ratings.

Grade Point Averages

1. High nApp subjects will have higher GPA's than low nApp subjects.
2. Internals will have higher GPA's than externals.
3. Within high nApp subjects, internals will receive higher GPA's than externals.
4. Within low nApp subjects, internals will receive higher GPA's than externals.

Peer Approval Ratings

1. High nApp subjects will receive less approval from their student peers than low nApp subjects.
Chapter II - Method

Subjects: The subjects were 110 male students enrolled in the U.S. History and Sociology classes at Oak Park River Forest High School. Nine classes in all were tested, all were Juniors or Seniors. The experiment was run during seventh week of class to allow enough time for the students to get to know each other while the teacher got to know his students.

Materials: The Marlowe-Crowne Social Desirability Scale and the Rotter Internal-External Locus of Control were given to all the students within their regular class periods. A sociometric peer evaluation form was also presented to the students on which they were asked to rank order ten of their male classmates on the basis of either of two descriptions, (See App.A). Description A described a person as one who spends a great deal of time with other people, is quite conversational, acts friendly, and goes out of his way to make friends. Description B described a person as one who spends much of his time alone rather than with other people, is not very conversational, does not act friendly, and does not go out of his way to make friends. The measure is considered to be one of likability or popularity (Marlowe & Crowne, 1964). Finally each of the teachers rated each of their pupils on an Osgood Semantic Differential scale. The first five scales of the teacher evaluation form load very high on the evaluative dimension (Factor I). Fishbein and Raven (1964) refer to these first five scales (harmful-beneficial, wise-foolish, dirty-clean, bad-good, and sick-healthy) as the A factor. Scores from these first five
scales were summed with the total score taken to indicate the degree of positive or negative evaluation the teacher had for each of the students. Thirteen other individual scales were used that also loaded high on the evaluative dimension (see App. B). 

Procedure: The subjects were told by their teacher that they would have an opportunity to participate in a psychological survey. The subjects stayed in their classrooms during their regular class periods. The girls within the classroom were also given the scales in an effort to maintain as normal a class situation as possible. The day of the experiment, the Examiner introduced himself as a teacher at Oak Park High who was completing work on his Master's degree with a psychological survey. The Examiner took some time to ensure proper rapport and understanding of the task. The Examiner then reassured all subjects of the confidential nature of the research.

The subjects were given the Rotter I.E. Scale, the M-C Scale, and the peer evaluation scale to complete. The instructions accompanying each of the scales were read aloud. The subjects were also instructed on how to use their answer sheets. The names of their fellow classmates were presented to them so that they would have some idea of all the students in their class. Finally each teacher rated each of his students on the Osgood Semantic Differentials described above.

Design: A 2 x 2 design was used with high and low nApp and internal-external groups as the variables of interest. The nApp and the I-E groups were determined by splitting
the two scales at their respective medians and then making adjustments where necessary in order to equate respective group scores. A total of 100 subjects were used with 25 in each cell. This design was applied to both grade point average and teacher evaluations.

The scoring of the peer nomination technique was as follows:

<table>
<thead>
<tr>
<th>Rank</th>
<th>A Nomination Score</th>
<th>Rank</th>
<th>B Nomination Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>+5</td>
<td>1.</td>
<td>-5</td>
</tr>
<tr>
<td>2.</td>
<td>+4</td>
<td>2.</td>
<td>-4</td>
</tr>
<tr>
<td>3.</td>
<td>+3</td>
<td>3.</td>
<td>-3</td>
</tr>
<tr>
<td>4.</td>
<td>+2</td>
<td>4.</td>
<td>-2</td>
</tr>
<tr>
<td>5.</td>
<td>+1</td>
<td>5.</td>
<td>-1</td>
</tr>
</tbody>
</table>

Thus, high positive scores indicated peer acceptance and approval. All subjects who were nominated were rank ordered according to their total nomination scores. These subjects' Marlowe-Crowne scores were also rank ordered and a Spearman rank order correlation was computed.
Chapter III - Results

Performance on Scales: The means for the Marlowe-Crowne and Rotter I.E. scales are reported in Table 1. Table 1 reports the group and the total means for the Marlowe-Crowne and Rotter scales.

Grade Point Average: Results of the analysis of variance of grade point average (GPA) are reported in Table 2. Inspection of this table reveals that the only significant difference was the interaction ($F=8.29$, $df=1,96$, $p<.02$). Probing with the Duncan's New Multiple Range Test revealed the following: the GPA of high nApp internals ($X=2.2$) was significantly higher than the GPA of low nApp internals ($X=1.7$; $p<.05$); and the GPA of low nApp externals ($X=2.3$) was significantly higher than low nApp internals ($X=1.7$; $p<.01$).

Teacher Evaluations: Analysis of variance results indicate that there were no significant main effects or interactions on any of the semantic differential scales. This analysis was performed on each of the scales separately and on the A factor described by Fishbein and Raven (1964). The means for all the scales are reported in Table 3.

Peer Evaluations: Results of the Spearman correlation between the Marlowe-Crowne scores and peer evaluation for all 110 Ss is low but significant negative correlation ($r=-.19$, $p<.026$). This suggests a slight tendency for high nApp students to be rated more negatively by their peers than low nApp students.
Table 1

Marlowe-Crowne and Rotter I.E. Scale Means

<table>
<thead>
<tr>
<th></th>
<th>Marlowe-Crowne Scale</th>
<th>N</th>
<th>Rotter I.E. Scale</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High nApp</strong></td>
<td>15.74</td>
<td>50</td>
<td>Internal</td>
<td>8.68</td>
</tr>
<tr>
<td><strong>Low nApp</strong></td>
<td>9.18</td>
<td>50</td>
<td>External</td>
<td>13.74</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>12.46</td>
<td>100</td>
<td>Total</td>
<td>11.21</td>
</tr>
</tbody>
</table>


Table 2

Analysis of Variance Comparing Grade Point Average with Need Approval and Internality

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need Approval</td>
<td>1</td>
<td>.05</td>
<td>-</td>
<td>NS.</td>
</tr>
<tr>
<td>Internality</td>
<td>1</td>
<td>.72</td>
<td>1.24</td>
<td>NS.</td>
</tr>
<tr>
<td>Need Approval x Internality</td>
<td>1</td>
<td>4.81</td>
<td>8.29</td>
<td>p&lt;.02</td>
</tr>
<tr>
<td>Error</td>
<td>96</td>
<td>55.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>99</td>
<td>61.11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3
Teacher Evaluation Means for Semantic Differential A Factor and for each Individual Scale

<table>
<thead>
<tr>
<th>Semantic Differential Scale</th>
<th>Internals HnApp</th>
<th>Internals LnApp</th>
<th>Externals HnApp</th>
<th>Externals LnApp</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Factor</td>
<td>25.4</td>
<td>26.04</td>
<td>24.96</td>
<td>25.64</td>
</tr>
<tr>
<td>Harmful - Beneficial</td>
<td>4.64</td>
<td>4.96</td>
<td>4.52</td>
<td>4.64</td>
</tr>
<tr>
<td>Wise - Foolish</td>
<td>4.28</td>
<td>4.48</td>
<td>4.04</td>
<td>4.36</td>
</tr>
<tr>
<td>Dirty - Clean</td>
<td>5.40</td>
<td>5.24</td>
<td>5.44</td>
<td>5.32</td>
</tr>
<tr>
<td>Bad - Good</td>
<td>5.40</td>
<td>5.52</td>
<td>5.44</td>
<td>5.36</td>
</tr>
<tr>
<td>Sick - Healthy</td>
<td>5.68</td>
<td>5.84</td>
<td>5.60</td>
<td>5.88</td>
</tr>
<tr>
<td>Sociable - Unsociable</td>
<td>5.36</td>
<td>5.16</td>
<td>5.16</td>
<td>5.28</td>
</tr>
<tr>
<td>Kind - Cruel</td>
<td>4.92</td>
<td>4.64</td>
<td>4.84</td>
<td>4.80</td>
</tr>
<tr>
<td>Grateful - Ungrateful</td>
<td>4.12</td>
<td>4.52</td>
<td>4.48</td>
<td>4.68</td>
</tr>
<tr>
<td>Harmonious - Dissonant</td>
<td>4.64</td>
<td>4.76</td>
<td>4.64</td>
<td>5.20</td>
</tr>
<tr>
<td>Beautiful - Ugly</td>
<td>4.52</td>
<td>4.28</td>
<td>4.48</td>
<td>4.20</td>
</tr>
<tr>
<td>Successful - Unsuccessful</td>
<td>4.24</td>
<td>4.88</td>
<td>4.28</td>
<td>4.88</td>
</tr>
<tr>
<td>Positive - Negative</td>
<td>4.64</td>
<td>4.96</td>
<td>4.56</td>
<td>4.76</td>
</tr>
<tr>
<td>Reputable - Disreputable</td>
<td>4.84</td>
<td>4.88</td>
<td>4.80</td>
<td>5.00</td>
</tr>
<tr>
<td>Wise - Foolish</td>
<td>4.20</td>
<td>4.72</td>
<td>3.96</td>
<td>4.36</td>
</tr>
<tr>
<td>Hard - Soft</td>
<td>4.12</td>
<td>3.88</td>
<td>3.68</td>
<td>3.96</td>
</tr>
<tr>
<td>Masculine - Feminine</td>
<td>5.32</td>
<td>5.52</td>
<td>5.20</td>
<td>5.36</td>
</tr>
<tr>
<td>Severe - Lenient</td>
<td>3.76</td>
<td>3.92</td>
<td>3.84</td>
<td>3.84</td>
</tr>
<tr>
<td>Active - Passive</td>
<td>4.92</td>
<td>4.64</td>
<td>4.76</td>
<td>4.88</td>
</tr>
</tbody>
</table>

1 One most positive; Seven most negative
Correlations between Scales  Results of a Spearmen correlation between teacher evaluations as measured by the A factor of the semantic differential scales (Fishbein & Raven, 1964) and student peer evaluations, and a Pearson correlation between the teacher's evaluations and student GPA's are reported in Table 4. Inspection of the Table reveals a significant correlation between teacher evaluations and GPAs (r = .55, p < .001) while there was no correlation between teacher and peer evaluations (r = .03, p = N.S.).
Table 4

Correlations of Teacher Evaluations with Student Peer Evaluations, and Teacher Evaluations with GPA's

<table>
<thead>
<tr>
<th>Type of r</th>
<th>N</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Evaluations and Peer Evaluations</td>
<td>Spearman</td>
<td>100</td>
</tr>
<tr>
<td>Teacher Evaluations and GPA's</td>
<td>Pearson</td>
<td>100</td>
</tr>
</tbody>
</table>
Chapter IV - Discussion

The single most obvious and yet disappointing result of the study is the complete lack of differences between the groups on teacher evaluations and grade point average. The rationale establishing the experiment stated that 1) school provides a setting wherein individuals could seek approval from significant others and that individuals high on need for approval would get better grades and teacher evaluations as a result of their need for approval and 2) that internal individuals who feel a greater control over the social reinforcements of the school setting would get higher grades while those individuals who were also high on need for approval would get more positive teacher evaluations based upon their feeling of control over the dispensers of the academic reinforcers (i.e., teachers).

Comparability of the Groups

Before considering each of the hypotheses, it is necessary to look at the comparability of the groups called High and Low nApp and Internal or External. Were these groups really high on need for approval and more internally oriented in comparison with other studies which provided the rationale for this experiment? Table 5 presents the comparison means for studies using Rotter's I.E. Scale. It is obvious from the table that the internal group in this present study is much more external than similar sample populations cited by Rotter (1966). In fact, the internal group mean for this study ($X=8.68; N=50$) is higher (i.e., more external) than the total means for the other studies listed ($X=6.06; 8.46; 8.50$). These studies along with others
Table 5

Comparable Means from Studies Using Similar Sample Populations with the Rotter I.E. Scale

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample Description</th>
<th>Rotter I.E. Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present Study</td>
<td>110 11th and 12th grade males</td>
<td>11.21</td>
</tr>
<tr>
<td>Rotter, 1966</td>
<td>122 Male Peace Corp trainees.</td>
<td>6.06</td>
</tr>
<tr>
<td>Stack, 1963</td>
<td>41 12th grade college bound males</td>
<td>8.46</td>
</tr>
<tr>
<td>Franklin, 1963</td>
<td>1000 Male and Female 10th, 11th, and 12th graders</td>
<td>8.50</td>
</tr>
</tbody>
</table>
done with the Marlowe-Crowne Scale indicate that little has been done using high school student populations with the Locus of Control and Need for Approval variables. Rotter (1966, p.16) in his discussion of the normative data obtained commented that: "higher external scores would be characteristic of unselected high school students given the I.E. scale under experimental conditions by an E who does not have an authority relationship to them." Thus our internal group is not comparable to previous research, and herein perhaps lies a possible explanation for the lack of differences obtainable to the groups.

Table 6 presents the comparison means for studies using the Marlowe Crowne Scale. Again we can see that our experimental group is much lower on need for approval than comparable sample populations. The group we called high on need for approval ($X = 15.74$) was not as high as some total sample means in previous research. Here as with the locus of control variable, little research with a high school population was found. Marlowe and Crowne (1964) report no normative data for any high school population.

The present experiment points out some specific dangers in methodology in research going on with the locus of control and need for approval measures. First of all the median split method of dividing groups can change the meaning of high on need for approval and internally oriented. For example, a subject called internal on the basis of his I.E. score in the present study might well have been external in another study.
Table 6

Comparison Means of Studies Using the Marlowe-Crowne Scale

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample Description</th>
<th>Marlowe-Crowne Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present Study</td>
<td>110 Male 11th and 12th Graders</td>
<td>12.46</td>
</tr>
<tr>
<td>Marlowe and Crowne, 1964</td>
<td>110 Male California Prisoners</td>
<td>16.73</td>
</tr>
<tr>
<td>Marlowe and Crowne, 1964</td>
<td>666 Male Undergraduates Ohio State</td>
<td>15.06</td>
</tr>
</tbody>
</table>
While somebody called high on need for approval in this study would be low on need for approval in another study. The discriminative value of both scales would be increased if future research excluded the middle 30% of the sample and then defined the groups. Further with the enormous amount of research with the locus of control variable (25-30 studies per month), the normative data obtainable from these studies ought to be organized and made available to researchers.

Teacher Evaluation Hypotheses: None of the expected differences was obtained. The only hypotheses supported were those which predicted no significant differences which, of course, is statistically a weak conclusion. Perhaps, as was mentioned previously, the high nApp group was not as typical as other groups with which research has been done. The present sample of high school students reflects a lower need for approval than other reported sample populations. In addition, the teachers' evaluations themselves were consistently positive thus possibly reducing the discriminatory ability of the evaluative scale. Further this is the first time teacher evaluations were used with either the M-C or the Rotter scale. Maybe teacher evaluations are too restrictive. Perhaps teachers see a "grade getter" rather than the total person. Partial support for this idea is suggested by the significant correlation obtained between teacher evaluations and GPA's \((r = .55, p < .001)\). Finally, perhaps the most parsimonious possibility, there simply may be no connection between need for approval and teacher evaluations. A high
school student high on need for approval may not consider a teacher a significant enough other to court his intentions. The present sample does contain a good number of failing students (49 of 100 GPA's below passing). These individuals are perhaps not very endeared to teachers as significant others because of their past failures. Perhaps part of the problem is the changing role of the teacher as viewed by a student growing up. In the elementary grades children see teachers as significant others and seek their approval in obvious ways, while the high school upperclassman is basically seeking peer approval rather than teacher approval. This would be especially evident in an individual with a high rate of academic failure. Teachers to these individuals are poor risks at best for any approval seeking behavior.

**Grade Point Average Hypotheses:** The first hypotheses stated that: High nApp subjects would have higher GPA's than low nApp subjects. No significant difference was found. Here again there exists the possibility that our high nApp group is not discriminative enough; that is, the high nApp group is not high enough in need for approval. Even if it were, the question again occurs whether or not these students would consider a teacher significant enough to please. The final part of the discussion under teacher evaluations would also apply to GPA. Finally there is the possibility that need for approval may be more predictive to academic success for females than for males. This is a possible inference suggested by the rather complex and still unclear nature
of sex differences and need for approval.

The second hypothesis stated that internals would have higher GPAs than externals. No main effect difference was found. There exists the possibility that our internal group was not as internally oriented as other groups with which other research had been done. In the documentation of what seemed to be a clear cut connection between internality and achievement, Franklin's (1963) study was cited. Franklin's mean for his 1,000 male and female 10th, 11th, and 12th graders was 8.50 while the present study was 11.21. From this it is evident that Franklin's internals were much more internal than the present group. In fact only 19 of the 50 subjects within this study considered internal as a result of the median split would have been considered internal in Franklin's study. Furthermore, the link between academic achievement and internality has been primarily obtained through research with grade school age children. (Cellura, 1963; Chance, 1965). More research is necessary with the high school student population. Studies using high school students as subjects are few and far between.

The third hypothesis stated that within high nApp subjects, internals would receive higher GPAs than externals. No significant difference was found although the means were in the direction predicted. (High nApp-Internals = 2.22; High nApp-Externals = 1.93) Furthermore, probing revealed that within internals, high nApp subjects had significantly higher GPAs than low nApp subjects (p < .05). This result suggests that need for
approval may make a positive prediction to academic success, if an individual is internally oriented. The problem of interpreting this hypothesis is further complicated by the fact that the high nApp internal subjects in this study were more low nApp and external than the other studies cited.

The fourth and final hypothesis stated that within low n-App subjects, internals will receive higher GPAs than externals. The opposite was found. External low nApp subjects were significantly higher than internal low nApp subjects in GPA. (2.3 - 1.7; p < .01). The possibility exists that these students have a realistically external interpretation of their past learning experiences. Perhaps subjective and chance determined teacher evaluations have made these students "grade wise" and "teacher cautious." Their external orientation may function as a defense mechanism against possible failures while they go about their claswork without actively seeking teacher approval. The low need for approval may reflect a positive work orientation within the classroom. These students may get this academic job done without seeking teacher approval which may in fact alienate some teachers.

Peer Approval Ratings Hypothesis It was hypothesized that high nApp subjects would receive less approval from their student peers than low nApp subjects. A small but significant negative relationship was found between the need for approval and the degree of positive peer evaluations. (r = -.19, p < .026). The approval dependent individual tends to be less liked by his peers than an individual low on need for approval. These results add
support to earlier studies (Barthel, 1963; Marlowe, 1964) which indicated that high nApp subjects elicit more unfavorable evaluations from their peers than low nApp subjects. Perhaps the competitive nature of school contributes to this effect, that is, an individual high on need for approval while seeking teacher approval and good grades has an alienating effect upon his peers.
Chapter V - Summary

The purpose of this thesis was to investigate the relationship of approval motivation and internal-external locus of control to certain classroom behaviors and achievements. The present experiment utilized the Marlowe-Crowne Social Desirability Scale (M-C) and the Rotter Internal - External Locus of Control Scale (I.E.) as independent variables. The M-C scale was indicative of a student's relative value of approval and affectional reinforcements while the I.E. scale was considered a measure of a student's generalized expectancy of success as a result of one's own abilities to attain these reinforcements. These two variables sum to predict behavior potential in Rotter's Social Learning theory. That is, behavior potential is a function of the sum of the relative value of certain reinforcements and the expectancy of one to attain these reinforcements. Within the framework of recent research linking approval motivation and academic achievement (Petzel, 1972) and the Rotter's Social Learning Theory, this experiment sought to refine possible predictions concerning specific behaviors within the classroom. It was reasoned that the interpersonal nature of the classroom provided an opportunity for a high need approval student to seek the needed approval from the appropriate significant other (i.e., the teacher). Thus it was hypothesized that students high on need approval would receive higher grades and more positive teacher evaluations than low need approved students. Further, since internally oriented
students within this situation would feel that they have a greater degree of control over these social reinforcements, they would try to influence teachers by behaving in socially acceptable ways. Thus it was hypothesized that students, high on approval who are internally oriented would receive more positive teacher evaluations and better grades than either high need approval (high nApp) students who were external or low need approval (low nApp) students.

In terms of the individual measure of locus of control, it was reasoned that internality (i.e., the degree to which a student believes that his own behavior is responsible for his academic successes and failures) would effect his instrumental effort to attain these goals. Thus it was hypothesized that internal students would have higher grade point averages (GPA) than external students.

The present study also attempted to assess the relationship of student's peer evaluations to need for approval. Some previous research of rather tenuous nature suggested that high nApp persons elicit more unfavorable evaluation from their peers than low nApp individuals (Barthel, 1963; Marlowe 1964). Thus it was hypothesized that high nApp students would receive more negative peer evaluations than low nApp students.

Nine classes utilizing 110 male high school students were administered the M-C, I.E., and peer evaluation form, while teacher evaluations were obtained by means of a Semantic Differential scale (Fishbein and Raven, 1964). Academic
achievement was operationally defined as each student's grade point average. A 2 x 2 analysis of variance design was applied to both GPA and teacher evaluations with the high and low nApp and internal-external groups as the variables of interest. Every student nominated on the peer evaluation form received a total nomination score which was then rank ordered along with his M-C score and a Spearman rank order correlation was computed.

The single most obvious and yet disappointing results were the complete lack of differences between the groups on teacher evaluations and grade point averages. The comparability of the groups called high and low nApp and internal and external to the past research which provided the rationale for present experiment was questioned. It became obvious that the groups called internal and high on need for approval in this study were much more external and lower on need for approval than previous research had reported. This lack of comparability to previous research provides a possible explanation for the lack of differences obtained with the present study.

This study pointed out some specific changes in the prevalent median split methodology being utilized with the M-C and I.E. measures. It was observed that the median split method of dividing groups can change the meaning of variables under study. For example, a subject called internal on the basis of his I.E. score in the present study might well have been external in another study. While a subject called high
on need for approval in this study would be low on need for approval in another study. It was suggested that the discriminative value of both scales would be increased if future research excluded the middle 30% of the sample and then defined the groups. It was further suggested that future researchers would profit through a collation of the normative data being obtained from the enormous volume of research using the I.E. and M-C scales (25 - 30 studies per month).

Possible explanations for the lack of differences obtained from the teacher evaluations hypotheses were discussed. In addition to the lack of comparability of the groups, the teacher's evaluations were consistently positive themselves, thus possibly reducing the discriminative ability of the evaluative scale. Perhaps teachers' evaluations of students are too narrow, being based almost entirely on academic performance rather than the total person. Finally it was suggested that there simply may be no connection between need for approval and teacher evaluation, at least for the present sample, which contained a high number of failing students (49 of 100). It may be true that these students do not consider a teacher a significant enough other to court his intentions. Such a student may be basically peer approval motivated rather than teacher approval motivated.

In terms of the grade point average hypotheses, again the lack of comparability of groups was discussed. In addition the link between academic achievement and internality has been primarily obtained through research with grade school age children (Cellura, 1963; Chance, 1965). More research with high school
Finally, the only hypothesis that received any support concerned the peer evaluations. It was hypothesized that high nApp students would receive less approval from their student peers than low nApp students. A small but significant relationship was found: \( r = -0.19; p < 0.026 \). This result supports earlier studies (Barthel, 1963; Marlowe, 1964) which indicated that high nApp subjects elicited more unfavorable evaluations from their peers than low nApp subjects. It was suggested that the competitive nature of school contributes to this effect, that an individual high on need for approval while seeking good grades and teacher approval may indeed have an alienating effect upon his peers.

In summary, although the experiment failed for the most part to obtain results to any of the hypotheses, the rationale for the experiment utilizing the Marlowe-Crowne and Rotter scale within Rotter's Social Learning theory needs more testing. Methodologically the median split was questioned and a procedure eliminating the middle 30% was suggested. It was pointed out that much more work needs to be done with high school groups and that a collection of the normative data from other research would be useful. Finally, possible explanations for the lack of results were discussed.
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Appendix A

Sociometric Peer Evaluation Form

Student Evaluations

Read each of the two descriptions below and rate five of your fellow classmates as the most representative of each of these two descriptions. When you have finished, you should have ranked a total of ten of your classmates, five on description A, and five on description B. Rank order your ratings so that the individual ranked number one most typifies the description, with number two the next most typical of the description, number three the next most typical, and so on.

DESCRIPTION A
People of this type spend much time with other people rather than alone. They are quite conversational and act friendly to the point of going out of their way to make friends.

1.__________________________
2.__________________________
3.__________________________
4.__________________________
5.__________________________

DESCRIPTION B
People of this type spend much time alone rather than with other people. They are not very conversational and do not act very friendly most of the time. They do not go out of their way to make friends.

1.__________________________
2.__________________________
3.__________________________
4.__________________________
5.__________________________

I liked this experiment. ___ Yes ___ No

I cooperated as well as I could in the experiment ___ Yes ___ No
Appendix B
Teacher Evaluation Form

<table>
<thead>
<tr>
<th>STUDENT:</th>
<th>RATER:</th>
</tr>
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| HARMFUL | LIKE VERY MUCH | BENEFICIAL |
| WISE | LIKE MUCH | FOOLISH |
| DIRTY | LIKE A LITTLE | CLEAN |
| BAD | LIKE VERY LITTLE | GOOD |
| SICK | LIKE NOT AT ALL | HEALTHY |
| SOCIABLE | | UNSOCIABLE |
| KIND | | CRUEL |
| GRATFUL | | UNGRATEFUL |
| HARMONIOUS | | DISSONANT |
| BEAUTIFUL | | UGLY |
| SUCCESSFUL | | UNSUCCESSFUL |
| POSITIVE | | NEGATIVE |
| REPUTABLE | | DISREPUTABLE |
| WISE | | FOOLISH |
| HARD | | SOFT |
| MASCLINE | | FEMININE |
| SEVERE | | LENIENT |
| ACTIVE | | PASSIVE |

Please indicate how much you like the individual you are rating by circling one of the below:

Like very much
Like much
Like a little
Like very little
Like not at all
The thesis submitted by Thomas J. Graziano has been read and approved by members of the Department of Psychology.

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

1/12/73
Date

Signature of Advisor