The Effect of Intelligence Test Feedback Upon Self-Concept as Measured by the EPPS

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Gregory D.

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THE EFFECT OF INTELLIGENCE TEST FEEDBACK
UPON SELF-CONCEPT AS MEASURED BY THE EPPS

A Thesis
Presented to
the Faculty of the Department of Psychology
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Gregory D. Heeter
May 1980
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THE EFFECT OF INTELLIGENCE TEST FEEDBACK
UPON SELF-CONCEPT AS MEASURED BY THE EPPS

Recommended

April 25, 1980

(Date)

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Director of Thesis

Approved

5-14-80

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Dean of the Graduate College
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And, finally, I deserve some credit. It's my name on the cover. Thanks, Greg, for taking the time and finishing this work, meager though it may be and painful though it was.

Sincerely,

[Signature]
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THE EFFECT OF INTELLIGENCE TEST FEEDBACK
UPON SELF-CONCEPT AS MEASURED BY THE EPPS

Gregory D. Heeter May 1980 55 pages

Directed by: Harry R. Robe, Sam G. McFarland, and
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Previous research on the nature of the self-concept generally suggests that this particular construct is broad, stable, and not easily altered. Yet, current practice regarding the feedback of information concerning one's intelligence quotient remains restrictive and unresponsive to this evidence. Individuals are protected from the knowledge of their test results ostensibly to prevent harmful effects upon their self-images. The present study focused on the impact of learning one's assessed intelligence quotient upon needs taken from a measure of self-report. It was predicted that subjects who had received feedback accurately specifying their intelligence quotients and who had reported discrepancies between this score and the quotient they had expected to receive would score no differently from persons in control groups who had not been given their IQ scores. The Stanford-Binet Intelligence Scale was administered to twenty-seven college males and fifty college females, while the Edwards Personal Preference Schedule was administered to all of these subjects and to an additional control group of twenty-one. A Hotelling's $T^2$ test was performed to assess differences between the mean raw scores of the experimental and control groups on ten EPPS scales.
The results of this analysis did not indicate a significant alteration in self-concept following IQ feedback. This occurred even though the feedback was subjectively reported to be discrepant from the subject's own earlier estimates.
Chapter I

OVERVIEW OF THE LITERATURE

Introduction

The standardized intelligence test is a valuable and widely used instrument in the professional's repertoire of psychological services and, as such, yields extensively quoted results. It is not the intent of this study to examine the use of those results, but aspects of their effect upon the self-concepts of the persons to whom they are reported.

In a preliminary examination of the pertinent literature, Sattler (1974) acknowledges the issue with the question "how is an individual affected by the knowledge of his own IQ test scores?" (p. 403). Goslin (1967) explores the implications of this question with more detail and asks "[does] 'objective' information about an individual's abilities have any special effect on the opinion the individual holds about himself?" (p. 677) and "[if] the information is different from the individual's own estimate, what are the factors that will influence whether it will result in a change in the individual's self image?" (p. 681).
Before discussing the consequences of intelligence quotient feedback, the attitudes and beliefs of Americans toward intelligence tests (and, subsequently, the impact of intelligence test scores) will be examined. In questioning a representative sample of 1500 adults, Brim (1965) found that intelligence tests were considered to be less important than school or work success as an indication of a person's abilities, although the majority thought the tests were accurate. In addition, when a test was viewed as having had an impact in a respondent's life, the effect tended to be positive in nature. In explanation of this finding, Brim suggested that it may be easier to associate taking tests and positive consequences rather than taking tests and negative consequences simply because the positive consequences are generally more concrete, defined occurrences in contrast to the surrounding events. Conversely, negative consequences may not be as specific or clear-cut and only perceived through their absence. Finally, on Brim's questionnaire the respondents indicated that intelligence tests were seen as measures of innate capacities as opposed to tests of skills and conceptualization abilities that have been learned during the individual's development.

Anastasi (1967) addresses the difficulty concerning beliefs about IQ tests when she states:

... even total scores, referred to appropriate norms and accompanied by a suitable margin of error, can be misleading when perceived in terms of prevalent
misconceptions about the nature of certain tests. Suppose, for example, that an IQ is regarded as a broad indicator of the individual's total intelligence, which is fixed and unchanging and of genetic origin. Under these circumstances, releasing the IQs of individuals to teachers, parents, the individuals themselves, or anyone else is likely to have a deleterious effect on the subsequent development of many children. (p. 298)

It is pointed out that misperceptions associated with the tests are further aggravated by the "global connotations" of the names of the tests when, in fact, the resultant scores represent a small sample, a composite of several functions.

Anastasi (1968) proposed guidelines to be followed in the transmission of information so that the nature of intelligence and IQ tests may be clarified and erroneous assumptions avoided. First, the concept of intelligence should be employed in a descriptive capacity as opposed to an explanation for the manifestation of certain behaviors. Secondly, it should be carefully explained to the examinee that the IQ is not fixed and unchanging and that through intervention there is a possibility of modification. Lastly, the belief that an IQ is a measure of a "single, unitary ability" must be overcome. Until these factors are made widely known, and the myths refuted, there will continue to be the possibility of misperceptions and inappropriate actions taken on the basis of intelligence test feedback.
Before stating the problem under consideration in this work, an additional variable, self-concept, must be briefly discussed and defined. In an article by Calhoun and Morse (1977), the terms self-concept and self-esteem are delineated and a plethora of definitions are presented in an attempt at clarification. Early researchers in self-theory included James (1890), Cooley (1902), Freud (1920), and Mead (1934), although the term "self-concept" is generally credited to Raimy (1943) while working at the University of Ohio under Carl Rogers. With these investigations naturally arose differing views on the construct and, consequently, differing definitions and measures.

For the purposes of this investigation, the interpretation of self-concept that has been adopted is a composite of the more applicable parts of several broad definitions. Webster and Sobieszek (1974) suggest that self-concept refers simply to "who an individual thinks he is and the unique traits he believes himself to possess" (p. 7). In his 1967 publication, Jourard delineates the self-concept as being one of three integral parts of the "self-structure" or more broadly, "everything that a person can say about his own experiencing" (p. 161). Specifically according to Jourard the self-concept is the person's beliefs about himself and conclusions about his characteristic reaction patterns to circumstances encountered in everyday life. He further postulates that although these beliefs are not entirely defined and categorized, they may be fairly easily
and accurately tapped by merely asking the person to describe himself. This description may be in the form of a personality inventory in which the person is asked to choose statements that most correctly describe himself and his behavior. Finally, Rogers (1951a) discusses the elements of self-concept and, in addition to one's perceptions of abilities, describes the "self in relation to others and the environment" and "value qualities which are perceived as associated with experience and objects" (p. 136). So, the definition of the construct of self-concept as employed in this study is made up of the general definitions previously described and the qualifying elements proposed as being necessary for more accurate use and generalization of the results of research.

Review of the Literature

Conclusions of similar research. The basic question as to whether feedback regarding intelligence test results has an impact upon subsequent cognition and behavior of the individual was examined in a study by Goode (1972). He cited as a cause for the controversy surrounding public testing the "presumed harmful effects" of feedback and proceeded to investigate those effects upon a sample of sixth-grade students.

The specific focal point of Goode's study was the suggestion that knowledge of intelligence test results may reduce one's motivation to learn and have deleterious consequences upon subsequent achievement levels. Each of 280
children was given the self-estimate ranking list (SERL), specially constructed for that study, and a comparison was made with their rank on the School and College Ability (SCAT), a group intelligence test. Feedback was given in one of three ways: extensive verbal and visual feedback of IQ test results, a printed profile of scores, or no feedback at all. The Reading and Mathematics subtests of the STEP achievement test were administered six weeks later as the dependent variable, also given was a second form of the SERL.

In the analysis, a determination was made as to whether ability estimates change after feedback and the results indicated no significant differences for the experimental and control groups for any level of the independent variable. This data led Goode to conclude that there is no apparent basis for the concern over possible harmful effects of intelligence test feedback and that withholding of intelligence test results for these reasons is unwarranted.

The effects of feedback and factors involved. Eagly and Acksen (1971) explored the willingness of a person to accept information, favorable and unfavorable, about himself and the direction in which the information departs from the individual's established self-concept. Research discussed by Steiner (1968) indicated that there is a higher probability of accepting favorable information and Eagly (1967) found more change in subsequent responding when favorable information about oneself is compared to information about the performance of others.
Eagly and Acksen concluded that, because of risks to the self-concept, overestimating one's abilities is disagreeable due to possible social ridicule by others, whereas underestimating the same abilities produces inconclusive results - neither clearly positive nor negative. Public self-evaluation is only seen as a risk when there is the possibility of evaluation and feedback by others in the near future thus proving to be a significant factor in the individual's acceptance of feedback. Eagly and Acksen hypothesize that the self-concept is affected by evaluation and feedback when a person expects such evaluation; it occurs in such a manner that the (a) individual is less receptive to favorable information than would normally be expected and (b) little change is noted toward unfavorable information due to the uncertainty of underestimation. Therefore, expectancy of evaluation and feedback results in greater receptivity to unfavorable information. Acceptance and assimilation of an evaluation that differs from one's own is thought to be a function of: (a) whether the individual experiences a raised or lowered self-concept and (b) whether his was an overestimation or underestimation of his abilities.

In summary, it was proposed that changes in self-concept are a function of the expectancies involved in the evaluation, that is, whether the feedback occurred publicly (with another person, such as the experimenter, present) or privately and whether further evaluation will take place to affect the
perceived accuracy of one's self-evaluation. It was suggested that adoption of a more favorable self-concept can be facilitated by private evaluative feedback.

The relationship between the person administering the test and providing feedback and the person taking the test was the focus of a study by Fisher (1970). She proposed that if, when discussing the results of the test, the subject perceived himself to be in the inferior role, assuming the attitude of "the crazy one, or the hostile one," then he is, indeed, those people. The variable in question is not the specific conclusions of testing but the manner in which the feedback is conducted which affects the subject in a way that might persuade him to adopt the characteristics, negative or positive, that are being discussed or experienced during the feedback. She assumes the results of the test will have an effect on the future behavior of the examinee, but it is not as much the objective scores eliciting this effect as the relationship and the attitude of the examiner.

Raising and lowering self-concept and confidence following success or failure. The possibility exists that it is not feedback itself which results in subsequent change in personality or behavior but that the feedback may have the effect of altering an individual's confidence in his abilities which, in turn, may act to change the subject's subsequent view of his capabilities. In his dissertation on the alteration of self-confidence, however, Frank (1974)
concluded that "...confidence change, or at least a change in state self-confidence, did not have a pronounced effect on personality or cognitive performance," (p. 2427). The conclusions reached by den Broeder (1976) in his study of success feedback and its effect upon low academic self-concept were somewhat contradictory to Frank's. In examining the research, the proposal was made that such academic success feedback can result in a subsequent increase in the academic self-concept of formerly low self-concept students with the qualification that "... it is provided under the proper conditions" (p. 1475). Proper conditions are defined as providing academic success feedback "incrementally as a function of luck." A similar stance was taken by Ahuja (1974) in his examination of the effects of positive feedback upon self-esteem. He reported that the self-approval and self-esteem of the 4th and 5th grade students used in his study was improved by increasing the frequency and quality of positive feedback given by teachers.

If IQ feedback that one's intelligence is lower than expected is perceived by the individual as being somewhat of a personal failure (and that scoring higher than expected is perceived as a success), then research on the subject by N. T. Feather becomes relevant. In his article of 1968, Feather confirmed his prediction that "...
subsequent performance was lower following initial failure than following initial success," (p. 43). He hypothesizes that initial success on a task may have had a motivational effect that increased later performance or, in the case of initial failure, interfered with later performance. This motivation effect was related to the change in confidence following uniform success or failure.

A similar study of positive and negative test feedback was conducted by Callison (1974) and dealt more closely with the variable of self-concept. When the elementary school children were given positive feedback on test results, 66% of the group's scores on the self-concept measure also became more positive. Conversely, 75% of the students receiving negative test feedback exhibited reduced self-concept scores. The final analysis of the results in this case indicated that the increased level of self-concept was not statistically significant leading the author to conclude that positive feedback did not change the children's self-concept but that negative test feedback did result in an alteration of self-concept, though relatively little.

Callison cited Ludwig and Mahr (1967) as reporting that "...the disapproval of significant others resulted in a lowered self-rating," (p. 1238). As a result of her study, she expanded upon this statement by suggesting that negative feedback, even from a person with whom there had been no previous contact, can result in a decrease in self-concept but that positive feedback failed to produce the hypothesized
consequences. Callison concluded with the idea that, because a single instance of negative feedback produced small yet significant negative results, a series of such encounters with negative evaluation may have a serious detrimental effect upon the child's self-concept.

As an explanation for the possibility of variation between individuals in response to feedback, it is believed by Weiner (1970) that success and failure in all situations tends to be attributed to one of four factors: ability, effort, task difficulty, or luck (p. 146). Further, success and failure, when ascribed internally (to ability or effort), result in greater feelings of self-pride or self-deprecation, whereas success or failure attributed to external factors such as task difficulty or luck, result in much less self-enhancement or deprecation. In an extension of this theory, Iso-Ahola (1976) reported that: "The results supported the self-enhancement hypothesis in that causal trait attributions of internal factors were greater following success than following failure, and trait attributions of task difficulty were greater under failure than under success," (p. 2571). In addition, the tendency was noted by Iso-Ahola that when the individual experienced what he felt was a success or received positive feedback following performance on a task, the attribution for the success was more likely to be credited to internal factors or traits. However, this was true only in cases of actual performance of a task (referred to as "high ego-involvement"). Therefore, if the
receipt of IQ feedback were to have an effect upon self-concept, this likelihood would be increased by the subject's motivation to ascribe success to internal traits.

The role of ego-involvement in the subsequent effect of feedback upon the recipient was further explored by Aronson et al (1963) and Zimbardo (1960). They proposed that "...to understand the effect upon attitudes even oneself of a persuasive communciation, it is necessary to consider the motivation which the communication arouses and also outlets for that motivation besides or in addition to attitude change," (p. 178). Rhine and Severance (1970) in reviewing these authors, Sherif et al (1965), and Festiger (1957) reported that there was very little attitude change for highly ego-involved subjects. Neither credibility of the source providing feedback nor the discrepancy between the information (persuasive communication) and the subject's own attitudes toward himself contributed toward attitude change. The conclusions reached by Rhine and Severence were: "Since an individual's personality interpretation or, presumably, IQ score feedback concerns attitudes that are highly ego-involving for him, little post-feedback attitude change should be expected regardless of experimenter prestige or discrepancy of the personality feedback from that individual's own self-concept," (p. 190).

Another variable in receptivity to evaluative feedback was introduced by Eagly and Whitehead (1972). In their research, they hypothesized that when a person is given no choice as to whether he wishes to receive feedback, his
reaction to that feedback may differ from the response to information he has chosen to receive and for which he is, therefore, responsible. The authors assume for the purpose of their study that unfavorable feedback results in "negative consequences (e.g. embarrassment, disappointment, lowered self-concept)" and, as such, the subject is placed in the situation of being responsible for the things that harm him. The acceptance of feedback, positive or negative, is then proposed to result from an interaction effect between the degree of choice in receiving feedback and the amount of discrepancy between the feedback and the subject's own self-concept. It was thought that change would be greater toward favorable than unfavorable information if the subject could not refuse the feedback, whereas more receptivity to the feedback would result from the opportunity to choose to receive it.

The results of the study of 158 Introductory Psychology students indicated that "favorable feedback raised self-evaluations and negative feedback lowered self-evaluation," (Eagly and Whitehead, 1972, p. 227). This was qualified, though, with the finding that choice in receiving feedback significantly decreased the upward change toward favorable feedback and showed some tendency to increase the downward change to unfavorable evaluative information. The conclusions that resulted from the study were as follows: "(a) that people who are responsible for receiving an outcome are under more pressure to realign their cognitions if the outcome
is negative than if it is positive and (b) that people avoid lowering their self-concept," (p. 229).

**Self-ideal discrepancy, inconsistency, and social comparison.** Irwin Silverman (1967) in his discussion of the work of Stotland and Hillmer (1962) reviewed the tendency for subjects with both high and low self-estees to restrict their cognitive input to feedback which is congruent to their already established view of their functioning. He proposed that persons with a low self-esteem have become adjusted to their environment, have chosen a pattern of behavior consistent with that level of adjustment, and, consequently, continue in their low self-evaluation.

Wylie (1961), in her extensive review of the literature on self-concept, reports that subjects attempt to maintain a consistent, basic self-concept and will, therefore, reject or defend against any information with which they are confronted that contradicts this established concept. In addition to rejecting failure feedback, the theory proposes that success feedback is likewise abandoned or interpreted in such a manner so as to fit into the total, long-standing pattern. Little effect is hypothesized to result, especially when it is confronted in a single instance.

Attempts to preserve the self-concept may take many forms, including devaluation of the source of the information, placing the blame for failure upon others or external events, or by increasing behaviors in the past which have consistently resulted in a raise in self-esteem, (Wylie, 1960).
Stotland, Thorley, Thomas, Cohen, and Zander (1957) hypothesized that general self-esteem was "too enduring a characteristic" to be altered by failure on a single task.

Another researcher (Sharma, 1956) asserted very generalized effects upon the self-esteem by assuming that failure on tests of "reasoning ability and insight" would result in an alteration in the total self-esteem as measured by Brown-fain's test of mostly non-intellectual abilities. Because this study culminated in inconclusive results, support was only given to the notion that varying personality characteristics may be associated with willingness to change self-concept following failure.

In summarizing fifteen studies upon aspects of knowledge of failure or success, Wylie (1961) arrived at the general conclusions discussed below. Subjects will, indeed, alter their self-evaluations after experimentally induced success or failure but primarily in the area of the experimental task alone. That is, "global self-regard" exhibits the least amount of change following reports of negative or positive performance in a specific task. Also, in contradiction to the findings of some researchers, an increase in self-ratings following success occurs more frequently than a decrease in self-ratings after failure.

Wylie indicated the interpretation of the null results of many studies of self-concept may be questioned and there is a definite lack of replication even though these results are consistent with earlier self-concept theory. Finally,
Wylie allowed that alterations in self-concept ratings may be affected by any one of a number of variables. There is limited evidence to suggest that the following may be found to be associated with changes in self-evaluation: $S$'s personality characteristics, such as his basic, global level of self-regard; $S$'s test anxiety; the particular characteristics which have been devalued in the experiment; the degree to which $S$ values the source of his information and feels the source is well-informed, (Wylie, 1961, p. 199).

A statement by Rogers appears congruent with those by Wylie previously discussed: "He may have some experiences which are inconsistent with this perception of his self, but he either denies these experiences to awareness or symbolizes them in such a way that they are consistent with his general picture," (Rogers, 1951b, p. 321).

Glenn and Janda, in their 1977 article on the effects of false personality interpretations upon self-ideal discrepancy, reported that the mechanism employed by individuals in maintaining a consistent self-image appeared to be selective attention to the information. Because those subjects in the "Low Discrepancy" cell in the experiment were more inclined to accept favorable personality interpretations and likely to reject neutral and unfavorable ones, the authors concluded that subjects were only responsive to information already congruent with their established self-concept. These results were similar to those reported earlier
by Silverman (1964) and Weisberg (1970) and generally suggested that assimilation of information about oneself is most easily accomplished for both high and low discrepancy subjects when that feedback is consistent with the self-image. Finally, distortion of incoming information was seen as an additional mechanism in the assimilation of feedback data (Glenn and Janda, 1977).

In his book entitled **Self-consistency: A Theory of Personality**, Lecky (1961) described the issue of assimilating discrepant information into one's conception of self. Lecky believes that the individual must, at once, maintain a consistency between his interpretations and experience and "organize his interpretations to form a system which is internally consistent" (p. 155). It is the circumstances which make their way past defences to the unique experience of the individual which become significant parts of the personality and self-concept.

**Characteristics of the Edwards Personal Preference Schedule as a Measure of Self-concept.** The Edwards Personal Preference Schedule (EPPS) itself was designed to eliminate the social desirability factor in choice decisions by pairing as closely as possible two statements with equivalent social desirability values. Edwards (1957) states that the correlation between the matched pairs of statements on the social desirability variable is .85. For 76% of the statements, their scale separation on the SD continuum is within this range; and for the remaining pairs, the SD of one statement exceeds the other by .5 scale units. Additionally,
Kelleher (1958) computed point-biserial correlations between the EPPS and the Edwards Social Desirability Scale and concluded that "...it was felt that social desirability played an insignificant role in the item responses on the EPPS." (p. 100).

A factor analysis of the EPPS was conducted by Edwards, Abbott, and Klockars (1972) where eleven factors were discovered for which the EPPS had at least one scale which identified that factor. It was concluded that "...the EPPS would appear to provide reasonable measures of the 11 factors obtained in this study." (p. 29). For a more complete discussion of the factor analysis and resultant data, refer to Edwards, Abbott, and Klockars (1972).

For the purposes of this research, the definition of self-concept previously adopted (p. 5) specified that a person's beliefs about himself and his characteristic reaction patterns could be assessed by asking the person to describe himself. This technique, termed "self-report," often assumes the form of a personality inventory where the individual chooses statements most accurately descriptive of himself.

Though the EPPS was originally designed for the purpose of measuring the relative strength of individual needs as postulated by H. A. Murray (1938), Horrocks (1964) maintains that the relationship between the two is not firmly established. In his research, Horrocks does concede that "... intervariable correlations tend to be low, the internal
consistency correlations are adequate, and the schedule does have face validity " (p. 169). However, more recently, the EPPS has taken on a use as a measure of self-report. Mann (1958) compared the fifteen EPPS variables with a series of self-ratings on the same variables. He also reported test-retest reliability coefficients which were slightly lower overall than those reported by Edwards, ranging from .55 on Affiliation to .87 on Deference, but noted that this discrepancy was possibly due to a longer interval between test administrations (three weeks as opposed to one week). The data from that study indicated that ten of the fifteen coefficients between EPPS variables and self-ratings were significant; this in itself was highly significant. Mann summarizes by reporting that: "The findings of the present study support the conclusions that: (a) the EPPS has satisfactory test-retest reliability; (b) the EPPS correlates with self-ratings on the variables which it purports to measure; (c) the EPPS does not correlate with ideal self-ratings on the variables which it purports to measure " (p. 268). Due to the overall high correlations between the EPPS scales and self-ratings, the instrument is taken to be an acceptable measure of the self-concept as perceived and reported by the examinee.

Statement of the Problem

The current study was designed to determine the effects, if any, of intelligence test feedback upon self-concept (as previously defined and as measured by the Edwards Personal
Preference Schedule). Additionally, because the dependent variable is made up of measures of the relative strength of ten traits (actually fifteen, but the number was limited to those traits thought more responsive to IQ feedback and also for reasons of brevity) the direction of expected change will be indicated in those traits. The presence or absence of IQ test feedback is the independent variable with different levels being designated on the basis of the subjective interpretation of those persons participating in the experiment as to whether their reported IQ was Lower than Expected (LE), Higher than Expected (HE), or Exactly what Expected (EE). Two control groups were constructed with which to compare the levels of the experimental group (Knowledge of Results - KR). The first was designated the Norm Group (NG) and was made up of randomly-chosen university students taking a Freshman History class. The second control group experienced the test administration and feedback sequence in reversed order and was, therefore, labelled the Reversed Feedback group (RF).

Following are the research hypotheses to be investigated:

1. There will be no significant difference in the mean scores obtained on a standardized measure of personality variables between the experimental group receiving feedback and indicating that their IQs are Higher than Expected and the group receiving feedback and indicating their IQs are Lower than Expected. This statement is true for both the male and female samples.
2. There will be no significant difference in the mean scores obtained on the measure of personality between each of the three levels of the experimental groups (HE, EE, and LE) and its corresponding control group - the Norm Group or the Reversed Feedback Group.

3. There will be no significant alteration (increase or decrease) of the relative strength of the individual variables. For example, in the experimental group indicating that their reported IQs are Higher than Expected, the anticipated direction of change in the variable (based upon a description of variables found in the test manual) would be as follows (Appendix A):

- Achievement (ach) - increase
- Deference (def) - decrease
- Exhibition (exh) - increase
- Autonomy (aut) - increase
- Succorance (suc) - decrease
- Dominance (dom) - increase
- Abasement (aba) - decrease
- Nuturance (nur) - increase
- Endurance (end) - increase
- Aggression (agg) - increase

Conversely, if the subject indicated that the reported IQ was Lower than Expected, the anticipated change in the variable would be in the opposite direction of those shown above. The group reporting that their IQs were Exactly what Expected should show no change in any case.
Chapter II
METHODS AND PROCEDURE

Subjects

The subjects employed in this study were fifty-nine undergraduate college females and thirty-nine undergraduate college males who were volunteers attending Introductory Psychology courses and a Freshman History course. Test administration and feedback procedures were conducted during the latter half of the Fall Semester, 1978, and the first half of the Spring Semester, 1979, at Western Kentucky University. To preclude the presence of those personality characteristics sometimes found in volunteers to research projects and to encourage broader student participation, the instructors of the psychology classes offered extra credit in the form of added points to the students' grades.

From the lists of volunteers, names were chosen at random to be called to schedule appointments for the test administration. The Stanford-Binet Intelligence Scale was administered to each subject in the experimental group by a graduate student in either School or Clinical Psychology.

Instruments

The two assessment instruments used in this study were the Stanford-Binet Intelligence Scale (1972 Norms Edition) and the Edwards Personal Preference Schedule. The reasons
for choosing the Stanford-Binet were two-fold. First, this test is a widely-known, well-standardized and accepted measure of the concept of intelligence. A second important reason for its use was that the Binet yields a single, numerical score (and accompanying nominal classification) of intelligence. It was felt that, because those people in the general population who are only vaguely familiar with intelligence measures appear to interpret them as providing a single, all-encompassing score, any additional subdivisions of test results might overly complicate the feedback procedure and merely act to significantly confuse the subjects. As can be seen from the Standard IQ Feedback Form used in this study (Appendix C), standard errors of the measure are routinely provided for the reported IQ. If, for example, the Wechsler Adult Intelligence Scale had been employed, it would have been necessary to report to each subject not only this "Full Scale" IQ, but the IQ scores obtained in the subdivisions of "Verbal" and "Performance." It was believed that these references accompanied by the appropriate standard errors might overwhelm or confuse the subject and, consequently, reduce the desired impact of the IQ feedback. Therefore, the Binet was seen as the instrument of choice.

Because the Stanford-Binet has been extremely well-researched and documented, questions as to its validity and reliability are referred to the very complete discussions included in the test manual (Terman and Merrill, 1973).

Although the Edwards Personal Preference Schedule is also a widely-used assessment instrument, the author felt
that further explanation and discussion of the nature of the test was warranted. The EPPS was designed by Allen L. Edwards and the current edition published by the Psychological Corporation (copyright 1959). The test itself consists of 225 matched pairs of statements of which the examinee is instructed to choose the one "more characteristic of what he likes" (Edwards, 1959).

In the test manual, Edwards (1959) reports both split-half and test-retest reliability coefficients obtained for each variable from the 1509 subjects comprising the college normative sample. The split-half or internal consistency coefficients range from .60 on Deference to .87 on Heterosexuality. The test-retest or stability coefficients were obtained from 89 students who took the test on two occasions, one week apart. These coefficients ranged from a low of .74 on Achievement and Exhibition to a high of .88 on Abasement.

To establish the validity of the EPPS, a study was conducted to determine the correlation coefficients of the test with the Guilford-Martin Personnel Inventory (G-MPI) and the Taylor Manifest Anxiety Scale (TMAS). According to Edwards (1959), the results indicated that "these correlations are, in general, in the expected directions..." (p. 22). Correlations significant at the five percent level occurred between the Taylor Manifest Anxiety Scale and the Succorance (.22) and Endurance (-22) scales of the EPPS. On the G-MPI, the subscale entitled Cooperativeness
was correlated significantly in the expected direction with four of the EPPS scales. The G-MPI subscales of Agreeableness and Objectivity achieved significant correlations with eleven and two EPPS scales, respectively.

Procedure

The subjects for this experiment were contacted individually by the School or Clinical Psychology graduate students who were to administer the Stanford-Binet Intelligence Scale and the dependent variable measure. In addition to the EPPS, the subjects were asked to complete the Academic Choices Questionnaire following the IQ test. The results of that study were reported in a separate research paper (Piispanen, 1979).

At the beginning of the first testing session, the subjects were asked to read and sign an "Informed Consent" form (see Appendix B). Also on this form were provisions for the subjects to estimate their IQs based upon previous information that they had or upon their personal opinions of their abilities. The Stanford-Binet was then administered in its standard form. Following the initial session, a feedback appointment was arranged and the time was recorded in a scheduling book. In this scheduling book the author would randomly choose subjects to be included in the reversed feedback group and indicate this beside their appointment times.

The feedback sessions were conducted in one of two ways. Those subjects in the KR group were given a standard
intelligence test feedback form used with IQ tests administered in the Psychological Clinic at Western Kentucky University (see Appendix C). On this form, the subjects were made aware of their level of intellectual functioning from a variety of reference points (actual IQ test score with appropriate standard errors of the measure, classification, percentile rank) in addition to a judgement of the quality of the testing environment. In effect, they were not merely told a simple score but were provided an accurate and extensive explanation of their current level of intellectual functioning based upon the Stanford-Binet.

Immediately after the feedback session (which usually lasted about fifteen minutes), the subjects were taken to a room down the hall where they completed the EPPS and Academic Choices Questionnaire.

When the graduate student checked the scheduling book and found the author had indicated that the upcoming feedback was to be reversed, the procedure was altered and noted on that subject’s Binet protocol. In this case, the subject was first administered the EPPS and ACQ, and then given the standard IQ test feedback. Therefore, the experimental (KR) and reversed feedback (RF) groups experienced identical test sessions only in slightly altered sequence.

To obtain the norm group sample, the EPPS was administered to twenty-five students enrolled in an introductory-level history class. Feedback as to their EPPS scores was provided at a later date.
Each EPPS protocol was hand-scored and marked at the top with that individual's actual IQ score, his prior estimate of his score, and his subjective judgment as to whether the true score was Higher than Expected, Lower than Expected, or Exactly what Expected. Based upon the subject's sex and subjective interpretation of the scores, the data were divided into levels for analysis. The raw scores for each variable, as opposed to percentiles or standard scores, were used in the analysis.

**Design**

In this study, a posttest-only control group design (Campbell and Stanley, 1963) was employed. Randomization was used in the selection of subjects from the lists of volunteers and in the assignment to experimental or control groups. This was done in an attempt to reduce initial biases between groups. Because Edwards, in the manual for the EPPS, illustrated that there had occurred significant differences between male and female scores for the same variable (Edwards, 1959), the experimental, control, and norm group samples were divided based upon the sex of the subject. Additionally, the experimental group was broken down into three levels of the independent variable for each sex. As noted earlier, placement in one of these three levels, Lower than Expected (LE), Higher than Expected (HE), or Exactly what Expected (EE), was based upon the subjective judgment of the individual participant upon receipt of his intelligence test feedback. This placement into subgroup enacted
by the subject and based upon his personal interpretation of the standardized IQ feedback became the independent variable. The dependent variable, measure of self-concept, was the Edwards Personal Preference Schedule—specifically, ten out of the original fifteen personality variables (see Appendix A).

In addition to the experimental group (KR) with its six levels (three for male, three for female), there were two control groups, each broken down only according to sex. The first control group most closely approximated the experimental group, differing only in the sequence of test feedback. The experimental group was told the results of their IQ test prior to administration of the EPPS while the first control group was administered the EPPS and were informed of their scores immediately following. For this reason, the control group was labelled Reversed Feedback or RF.

To achieve a wider sample of norms with which the experimental group could be compared, the EPPS was administered to a Freshman History class. Because this class was required, it was thought that a more representative sample of the responding of university students might be gained. The resulting scores were used as the second control group, the Norm Group or NG. For the mean scores on the EPPS variables of the KR, RF, and NG groups, refer to Table 1.

The EPPS provides a Consistency Score which allows the examiner to check for random responding and, consequently, possible invalid profiles. As a precaution that the subjects
were not making choices by chance alone, a score of 10 was used as a cutoff point. The probability of 10 or more identical choices occurring by chance is approximately .15 \( (p < .15) \) (Edwards, 1959). Therefore, due to the elimination of incomplete protocols and those with unsatisfactory Consistency Scores, the sample sizes actually used in this study were as follows:

- Knowledge of Results: 56 (16 males, 40 females)
- Reversed Feedback: 21 (11 males, 10 females)
- Norm Group: 21 (12 males, 9 females)

Below are listed the mean ages for each group of subjects:

- Experimental Group (KR): Males 20.0 years, Females 19.1
- Reversed Feedback (RF): Males 18.7, Females 18.5
- "History" Norm Group (NG): Males 19.3, Females 18.9

**Statistical Treatment of the Data**

The simplest statistic appropriate to measure possible differences between two group means is the \( t \) test. However, because of the nature of the scores resulting from the EPPS, a simple \( t \) test was not appropriate. The EPPS does not yield a score descriptive of the absolute strength of each variable but instead assesses the relative strength of each of these needs in comparison to the others as they manifest themselves in the respondent's personality. With
this restriction, it was necessary to use Hotelling's $T^2$ test for the equality of means which only requires that the populations have multivariate normal distributions. Thus, it was possible to compare not one variable with its corresponding score in the control group, but the relative strength of all ten variables simultaneously and compare the resultant value with the appropriate control. The results of this group comparison yielded an $F$ statistic which, when tabled for the appropriate degrees of freedom, was used to determine the possible significant differences between the groups of variables. If the $F$ statistic was equal to or less than a probability of .05 ($p \leq .05$), the group differences were considered significant and a simple $t$ test would be employed to determine which individual scales contributed to the difference.
Chapter III

RESULTS

The purpose of this study was to investigate the effects, if any, of knowledge of IQ test results upon self-concept as measured by the Edwards Personal Preference Schedule. Three null hypotheses were proposed: (a) that there would be no significant difference in the mean scores between the experimental group receiving IQ feedback and indicating that their IQs were Higher than Expected and the group receiving feedback and indicating that their IQs were Lower than Expected, (b) that there would be no significant difference in the mean scores between each of the three levels of the independent variable (HE, LE, and EE) and its corresponding control group, and (c) that there would be no significant alteration (increase or decrease) in the relative strength of the individual EPPS scales across groups. In the event of non-significant results in the first two cases, the third null hypothesis (c) would not be tested. Means for all groups were computed so that statistical comparisons could be made between the levels of the experimental group and the control groups (see Table 1).

The null hypotheses were accepted since none of the F ratios for the appropriate df were found to be significant (p < .05) (see Table 2). The analysis would indicate that
knowledge of one's IQ test results has no effect upon self-concept as assessed by the personality variables of the EPPS. The results were similarly nonsignificant for both male and female subjects and across all levels of the independent variable. Because of the nonsignificant $F$ in each comparison, the Hotelling's $T^2$ value would have necessarily been nonsignificant but was computed as part of the analysis. Further breakdown for variable significance was not performed.

Due to small sample size, the assumptions for the use of the $F$ ratio could not be met in the comparison of LE and HE subjects for the male, KR group.
Table 1

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group</th>
<th></th>
<th>Reversed Group</th>
<th></th>
<th>Norm Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males Lower</td>
<td>Males Exact</td>
<td>Males Higher</td>
<td>Females Lower</td>
<td>Females Exact</td>
</tr>
<tr>
<td>deference</td>
<td>15.00</td>
<td>10.29</td>
<td>13.00</td>
<td>8.13</td>
<td>11.00</td>
</tr>
<tr>
<td>exhibition</td>
<td>12.50</td>
<td>15.43</td>
<td>12.71</td>
<td>14.88</td>
<td>14.14</td>
</tr>
<tr>
<td>succorance</td>
<td>9.50</td>
<td>13.43</td>
<td>8.43</td>
<td>14.00</td>
<td>11.29</td>
</tr>
<tr>
<td>dominance</td>
<td>11.00</td>
<td>15.57</td>
<td>9.71</td>
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<td>12.57</td>
</tr>
<tr>
<td>abasement</td>
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<td>12.71</td>
<td>17.14</td>
<td>15.13</td>
<td>18.00</td>
</tr>
<tr>
<td>nurturance</td>
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<td>18.43</td>
<td>14.38</td>
<td>18.29</td>
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<td>endurance</td>
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<td>15.71</td>
<td>12.63</td>
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</tr>
<tr>
<td>aggression</td>
<td>8.50</td>
<td>10.43</td>
<td>9.43</td>
<td>13.75</td>
<td>10.29</td>
</tr>
</tbody>
</table>

n size for each group = 2 7 7 8 7 25 11 10 12 9
TABLE 2

HOTELLING'S $T^2$, $F$ VALUE AND DEGREES OF FREEDOM IN COMPARISONS OF LEVELS OF THE EXPERIMENTAL GROUP WITH CONTROLS

<table>
<thead>
<tr>
<th>MALES</th>
<th>EXPERIMENTAL GROUP:</th>
<th>LE</th>
<th>KNOWLEDGE OF RESULTS</th>
<th>REVERSED FEEDBACK:</th>
<th>Control Group #1</th>
<th>NORM GROUP:</th>
<th>Control Group #2</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$T^2 = 75.94^a$</td>
<td></td>
<td>74.99</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$F = 1.38^b (10,2)^c$</td>
<td></td>
<td>1.87 (10,3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>EE</td>
<td></td>
<td>18.75</td>
<td>15.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.82 (10,7)</td>
<td>0.75 (10,8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>HE</td>
<td></td>
<td>17.29</td>
<td>54.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.76 (10,7)</td>
<td>2.55 (10,8)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FEMALES</th>
<th>EXPERIMENTAL GROUP:</th>
<th>LE</th>
<th>KNOWLEDGE OF RESULTS</th>
<th>REVERSED FEEDBACK:</th>
<th>Control Group #1</th>
<th>NORM GROUP:</th>
<th>Control Group #2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$T^2 = 15.94^a$</td>
<td></td>
<td>56.81</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$F = 0.70^b (10,7)^c$</td>
<td></td>
<td>2.27 (10,5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>EE</td>
<td></td>
<td>8.20</td>
<td>22.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.38 (10,6)</td>
<td>0.80 (10,5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>HE</td>
<td></td>
<td>9.76</td>
<td>12.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.71 (10,24)</td>
<td>0.92 (10,23)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: $^a$Hotelling's $T^2$ Value

$^b$Obtained $F$ Value

$^c$Degrees of Freedom (df)
Chapter IV
DISCUSSION AND CONCLUSIONS

The results of this study are not considered to be at variance with the majority of past and current research on the self-concept and its resistance to change. In analyzing the data and considering the results in light of the pertinent literature, it was found that the self-concept is a relatively stable and enduring construct. As such, it is believed that the procedure of reporting an individual's true intelligence quotient, replete with a detailed description of his performance in relation to others in his age group, will not, in the majority of instances, result in a significant alteration in that person's cognitions of himself or his personal characteristics. Therefore, the author concurs with Goode's (1972) conclusions that there exists no apparent basis for concern over the harmful effects of IQ test feedback, and it is not generally necessary to withhold individual's scores for fear of deleterious consequences.

It is theorized that the addition (or intrusion) of a single, relatively small bit of information concerning one's abilities does not carry the weight necessary to significantly alter one's existing, well-entrenched beliefs. As with the
population sampled, the subjects had on the average of twenty years' confirmation of their standings among their peers in the areas of intellectual status, perceptual-motor skills, memory, and fund of information. It is felt that intervention not totaling more than two hours would be unlikely to persuade an individual to alter these conceptions. This conclusion would appear true despite the examiner's perceived status as an "expert."

As with Wylie's (1961) contention, the results of this research indicated that subjects tend to maintain a basic consistent self-concept through tasks. Rejection or defense against intrusion of discrepant information, especially the occurrence of a single instance, appeared to be the norm. According to Eagly and Acksen (1971), the situation most conducive to long-term personality change as a result of this type of feedback would necessarily have to occur in a private feedback mode. Additionally, in the event that change did occur, it would be slightly greater toward favorable rather than unfavorable information, especially if the subject had made the conscious decision to enter the feedback situation and was responsible himself for receiving that information (Eagly and Whitehead, 1972). The hypotheses in this case would be that, since the subjects volunteered to participate in the study and actively engaged in the tasks required to the extent of returning for the feedback, they would be under additional pressure to re-align their cognitions in response to the data presented. Such was not the
case, however. Though the subjects met the stipulations of the hypothesis according to Eagly and Whitehead, no significant change became apparent.

The present study intended to assess changes in self-concept as a function of feedback discrepant to the individual's existing view of his personal characteristics. Wylie (1961) would have anticipated no change in the assessment of "global self-regard." However, if the personal characteristics measured had been directly and closely related to the construct of intelligence, some change in the person's perceptions of his abilities and expectancies of his level of functioning might have been anticipated. Feedback was offered regarding a single, though weighty, aspect of that person's being and dependent measures of the broadest kind were instituted in an attempt to assess the effects.

Possible sources of contamination have been proposed. It was initially noticed that subjects generally refrained from placing their estimates of intellectual functioning in the Lower than Expected group. It is possible that the participants did not wish to admit a feeling of failure or disappointment and, therefore, expressed the attitude that this IQ feedback was higher than they expected. This may have been an attempt to "save face" in front of the examiner.

Present procedure in most of our schools and learning institutes dictates that the results of intelligence tests be withheld from the scrutiny of students and, in a pure form, from their parents also. This study, though it employed
only college students, added further support to the literature which suggests that this secrecy is not entirely justified. It would appear that we have been overly cautious in reporting IQ scores, possibly to the point of developing myths regarding the vast capabilities inherent in intelligence tests. The IQ simply fails to live up to its image as the burdensome indicator and academic and vocational determinant which, once discovered, is the primary influence in personal and social decision-making. The populace appears to take it with a grain of salt. This leaves educators and psychological theorists to debate the potential good any IQ score serves in tailoring educational programs and the potential harm if released to the subject.

This conclusion must be tempered, though, in light of the limited sample from which the data was taken and the interpretations made. The circumstances examined were necessarily restricted, in this case to a specified strata of a college population, and judgments or generalizations to the entire field of test feedback would be inappropriate. An additional factor to be taken into consideration in drawing conclusions is the short time lapse between feedback and assessment by the dependent variable. Perhaps more significant changes actually do occur following feedback but require more time to ferment and build to the proportions necessary to alter self-concept. If this is the case, a follow-up study at a later date might, indeed, detect changes in self-concept that appear directly attributable to intelligence test feedback.
It is not advocated that exact scores be released routinely to the test-taker but that the over-concern for the stability of a person's self-concept be relaxed to the point of enabling an open, uncomplicated exchange of information. As opposed to training in methods of maintaining a closed file on a person's measured intelligence, more wise and, ultimately, more beneficial procedures might be found. Perhaps a desirable alternative would entail researching and promoting effective, empathic methods of reporting intelligence test results to examinees. Instead of making decisions about students' futures based upon information gleaned from them with an aura of mystery, feedback procedures might be developed to help explain the information honestly and clearly. An attempt should be made to help the subject understand the material so that he may participate in the academic decision-making process himself. It is anticipated that the positive consequences of IQ feedback in which the student is a respected, trusted participant would far outweigh the probability of damage to the self-concept through release of actual scores.

The advent of completely revised feedback procedures would necessitate research into the most appropriate methods of reporting information and dealing with subjects' responses. It is proposed that those persons dealing with material concerning important aspects of other's personalities (particularly IQ) receive, as part of their formal training, instruction on the reporting of results back to the examinees. In any
event, the withholding of intelligence test scores for the purpose of protecting the individual's self-perceptions and total self-concept is considered generally unnecessary.

Further research, then, might entail comparisons of several forms of feedback procedures (and no feedback at all) to determine the ultimate effect of each upon self-concept. Several changes in procedure would be recommended in a replication of this research. First, an attempt should be made to employ cell sizes of an equal number to permit more valid comparison. Secondly, it is believed that the use of a pre-test, post-test design or, possible, a single measure split into two equivalent halves with half administered before intervention and half after would be more appropriate. Results of a relatively small sample of subjects compared with a norm group after intervention has taken place may be suspect. Before and after measures would be anticipated to be more sensitive to individual changes.

If specific effects of IQ feedback are sought, perhaps a measure of one's attitudes toward abilities on intellectual and academic tasks would be most appropriate. However, if it is still the general, "global" effects of IQ feedback which are of interest, a measure of self-concept with independent scales purporting to measure "who an individual thinks he is and the unique traits he believes himself to possess" (Webster and Sobieszek, p. 7) would be effective. An adjective checklist specifically constructed for the study is another alternative.
In summary, it would seem from this study and a review of the research that the self-concept as assessed by measures of self-report is much more resistant to substantial and permanent alteration when presented with new data than generally suspected. Even when the information presented is clearly discrepant from earlier personal assumptions, the self-concept proves heartingly that it is capable of enduring and assimilating the data. Even the controversial intelligence quotient actually results in relatively minor or short-term changes, if any.
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Appendix A

The Manifest Needs Associated with Each of the 10 EPPS Variables Used in this Study

**ach Achievement:** To do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something of great significance, to do a difficult job well, to solve difficult problems and puzzles, to be able to do things better than others, to write a great novel or play.

**def Deference:** To get suggestions from others, to find out what others think, to follow instructions and do what is expected, to praise others, to tell others that they have done a good job, to accept the leadership of others, to read about great men, to conform to custom and avoid the unconventional, to let others make decisions.

**exh Exhibition:** To say witty and clever things, to tell amusing jokes and stories, to talk about personal adventures and experiences, to have others notice and comment upon one's appearance, to say things just to see what effect it will have on others, to talk about personal achievements, to be the center of attention, to use words that others do not know the meaning of, to ask questions others cannot answer.

**aut Autonomy:** To be able to come and go as desired, to say what one thinks about things, to be independent of others in making decisions, to feel free to do what one wants, to do things that are unconventional, to avoid situations where one is expected to conform, to do things without regard to
what others may think, to criticize those in positions of authority, to avoid responsibilities and obligations.

**Suc Succorance:** To have others provide help when in trouble, to seek encouragement from others, to have others be kindly, to have others be sympathetic and understanding about personal problems, to receive a great deal of affection from others, to have others do favors cheerfully, to be helped by others when depressed, to have others feel sorry when one is sick, to have a fuss made over one when hurt.

**dom Dominance:** To argue for one's point of view, to be a leader in groups to which one belongs, to be regarded by others as a leader, to be elected or appointed chairman of committees, to make group decisions, to settle arguments and disputes between others, to persuade and influence others to do what one wants, to supervise and direct the actions of others, to tell others how to do their jobs.

**aba Abasement:** To feel guilty when one does something wrong, to accept blame when things do not go right, to feel that personal pain and misery suffered does more good than harm, to feel the need for punishment for wrong doing, to feel better when giving in and avoiding a fight than when having one's own way, to feel the need for confession of errors, to feel depressed by inability to handle situations, to feel timid in the presence of superiors, to feel inferior to others in most respects.

**nur Nurtrance:** To help friends when they are in trouble,
to assist others less fortunate, to treat others with kindness and sympathy, to forgive others, to do small favors for others, to be generous with others, to sympathize with others who are hurt or sick, to show a great deal of affection toward others, to have others confide in one about personal problems.

Endurance: To keep at a job until it is finished, to complete any job undertaken, to work hard at a task, to keep at a puzzle or problem until it is solved, to work at a single job before taking on others, to stay up late working in order to get a job done, to put in long hours of work without distraction, to stick at a problem even though it may seem as if no progress is being made, to avoid being interrupted while at work.

Aggression: To attack contrary points of view, to tell others what one thinks about them, to criticize others publicly, to make fun of others, to tell others off when disagreeing with them, to get revenge for insults, to become angry, to blame others when things go wrong, to read newspaper accounts of violence. (Edwards, 1959)
Appendix B

INFORMED CONSENT

You are about to take an intelligence test which is widely used by psychologists. The purpose of this testing session is practice for the psychologist-in-training in administering this test. We will be happy to share the results with you. The results of this test will be seen by the instructor in the course and by other psychologists-in-training. The name of the psychologist-in-training who will administer the test and provide feedback is ____________________.

Signature

Social Security Number

The above "normal" curve is a representation of how the scores from this intelligence test would be distributed if everyone in the general population were to take it. The average score is 100 with the majority of people (approximately 68% of the population) receiving scores between 84 and 116. With this in mind, which of the ranges of IQs
listed below do you feel would contain your score? Circle one.

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Score Range</th>
</tr>
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<tbody>
<tr>
<td>95-99</td>
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</tr>
<tr>
<td>120-127</td>
<td>110-114</td>
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<tr>
<td>115-119</td>
<td>above 140</td>
</tr>
<tr>
<td>below 79</td>
<td>100-104</td>
</tr>
<tr>
<td>125-129</td>
<td>90-94</td>
</tr>
<tr>
<td>105-109</td>
<td>130-134</td>
</tr>
</tbody>
</table>
The Stanford-Binet Intelligence Scale was given as an assessment of current level of intellectual functioning. The estimate of intellectual functioning which was obtained would classify him/her as __________ when compared to the U. S. population.

Based upon the score of __________ which was obtained on this particular administration of the Stanford-Binet, it would be expected that a true score would fall within the range of from ___ to ___ 68% of the time on repeated administrations of the test and from ___ to ___ 95% of the times. A score in this range would exceed ___% of the general population.

An examination of performance on the various items which make up the tests would suggest that __________ is a strength and that __________ is possibly an area of weakness.

The testing environment would be classified as __________ and these results should be considered as __________ estimate of __________ general intellectual functioning.
Appendix D

Subjective Interpretation of IQ Feedback

Where does the estimate of your IQ you have just been given fall in relation to the score you expected to receive? Based upon your feelings, place an "X" at the appropriate point on the line below.

"This estimate was........than I expected."

Much Lower Slightly Lower Exactly What I Expected Slightly Higher Much Higher

Name ___________________