

EGO IMPAIRMENT AND ACADEMIC DEFICIENCY:  
A CLINICAL STUDY OF MALE ADOLESCENT UNDERACHIEVERS

by  
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## ABSTRACT

This study was designed to test the hypothesis that academic deficiency (underachieving) in some adolescent males who have adequate intellectual resources is a function of an impairment of their ego structures, specifically, identity diffusion, as posited by Erik H. Erikson.

The study was based on a clinical model, in that a total of 20 detailed case studies composed of ten underachievers and ten controls were drawn from a typical high school population. The case studies included verbatim individual psychological test protocols, group test data, and clinical interviews with the subject and both of his parents.

A rating scale was derived from Erikson's crisis stage model of ego development with which to operationally define identity diffusion and order the clinical information. It is known that behavioral manifestations of dynamic psychological relationships can be quite different across subjects. It was felt that a global, clinical approach was the best way to deal with this factor. This global approach, combined with the Erikson-based rating scale, proved a viable technique.

Three experienced psychologists were asked to judge each of the case studies on this rating scale. These scaled judgments were consolidated and compared initially with the Mann-Whitney U Test and, later, with an Analysis of Variance.

On the basis of both of these procedures, it was significantly demonstrated ( $>.001$  via both the Mann-Whitney and the AOV) that academic deficiency is related to ego impairment.

Several secondary hypotheses were explored which did not prove significant. These tested the relationship of parental education, birth order, and family mobility. Separation from father, particularly before the age of four, and the experience of parent surrogates were factors found more frequently among the underachievers than the controls.

This study also demonstrated that ego impairment and academic deficiency are a function of the identity-distorting influences of neurotic family interaction.

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THE PROBLEM

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## INTRODUCTION

This study was prompted by the number of adolescents with learning difficulties who were referred to a psychiatric clinic in which the author was the psychologist. These adolescents, with adequate intellectual resources and no significant overt psychiatric pathology, presented a very frustrating dilemma to their parents, their teachers, to our clinical team, and to themselves. Their problems could not readily be circumscribed as specific learning deficits, i.e., reading, math, etc., though such deficits were often involved.

These youngsters have been called "underachievers" (Kornrich, 1965), since they present a generalized academic deficiency manifested by a chronically poor school performance record, even though they consistently demonstrate adequate potential in a variety of psychological measurements (WISC, CTMM, Otis, and others). Underachievers pose a more serious diagnostic and treatment problem than is often realized. There is a need for systematic research on the nature and etiology of the underachieving symptom, so that appropriate educational and/or psychotherapeutic techniques can be devised, tested and applied. They seem to be personable youngsters and present themselves verbally and socially to teachers, parents, and therapists in such a fashion that they give the general impression of having adequate resources and the potential to benefit from help. Such a self-presentation tends to motivate others to help the underachiever. When the underachiever does not or cannot

respond to the well-intentioned, sometimes Gargantuan efforts of others, the helpers respond with frustration, rejection, and often, in the case of parents and teachers, rage.

These acute reactions notwithstanding, the tragedy is the apparently crippled, self-limiting, even subtly self-destructive adolescent who for some reason cannot utilize his resources for appropriate growth and development.

In our clinic, learning difficulty was the most frequent child referral problem, and the vast majority of those referrals were preadolescent and adolescent boys. This pattern was not unique to our setting (Hall, 1966). Dr. I. D. Harris (1966), in a study done at the Institute of Juvenile Research in Chicago, writes:

From this opportunity to view a number of children with learning problems, [this clinician] has been provided with two impressive statistics. First, that difficulty in learning was the most commonly encountered symptom in this clinic, which sees almost one thousand children a year; second, that this symptom occurred almost seven times more frequently in boys than in girls (pp. 2-3).

Chronic underachieving is so widespread and generally considered a function of emotional factors that, as noted above, it is often considered a symptom of emotional disturbance (Harris, 1966; Grunebaum, 1962). It is the purpose of this research to study that symptom. This research does not deal directly with whether the underachiever is emotionally disturbed, but rather it posits that the kind of disturbance manifest in the underachieving symptom is an impairment of the ego, specifically identity diffusion.

Many writers (de Hirsch, 1963; Hall, 1966; Sperry et al, 1958), particularly those that are psychoanalytically oriented, discuss

"ego impairment" as the primary malfunction in underachieving. There is little controlled research to support this premise generally accepted by practicing clinicians. The main purpose of this study is to provide a systematic demonstration of the relationship between identity diffusion, a form of ego impairment, and academic deficiency.

The research model for this study is a clinical one in which detailed case studies were presented to experienced clinical judges. The clinicians were given a rating scale with which to judge each case unit so that their judgments could be systematically compared. The theory of ego development as presented by Erikson (1959) is utilized as the unifying frame of reference for this research. The rating scale noted above is derived directly from his conceptualization of "phase-specific psychosocial crises," that occur in the evolution of personality from infancy to mature age. Erikson's theory is discussed in detail in Chapter III.

The term "identity diffusion," used in this context comes from Erikson (pp. 88-94). He notes that individuals develop various forms of maladaptive behavior as a function of inadequate resolution of the major conflicts or crises that accompany the eight biological and emotional stages of development that the personality evolves through from infancy to adulthood and maturity. The crisis that must be resolved at the fifth stage of development, or the task of adolescence, is to achieve an adequate ego identity. An adequate ego identity is the necessary prerequisite to achieving the independence and emotional freedom necessary to healthy adulthood and

maturity. If an adequate ego identity is not achieved, various degrees of identity diffusion result. The psychological struggles which result from an identity diffusion are seen in the various defenses or maladaptive behavior that the ego must utilize to sustain some degree of integrity, even if that adaptation is self-limiting or unhealthy. Erikson refers to this as "a sense of health" versus a "sense of not being well" (p. 56), that is, "health" versus "ill-health." Viewing health and ill-health on a continuum, Erikson posits that the healthy ego is a function of the degree of ego identity achieved and is manifested by continuing ego development and adaptive behavior. Ill-health is manifested by varying degrees of identity diffusion and is reflected in various forms of maladaptive behavior, e.g., academic deficiency.

Though other writers have not integrated the concept of identity into an overall theory of ego development as thoroughly as Erikson, many have posited that academic deficiency in adolescence is related to identity problems (Grunebaum, 1962; Heilbrun, 1965; Shaw & White, 1965). These can readily be incorporated under Erikson's term "identity diffusion."

In our clinic, before this study was undertaken, the following preliminary observation was made: In a number of cases of academic deficiency it was noted that the parents of the sex opposite that of the adolescent referred had achieved academic superiority over the parent of the same sex. In our evaluation of these children, part of the problem seemed to be the adolescent's inability to resolve his identification difficulty with these



divergent parents, and he was therefore unable to achieve an adequate, appropriate identity or self-concept. Empirically some of the dynamic relationships seemed to operate in the following fashion: It is assumed that a young male evolves much of his self-concept through identification with his father. In certain instances it may be difficult to become a man (i.e., like father who is not academically proficient) and also be like mother (i.e., academically proficient). The self image becomes distorted, the adolescent manifests identity diffusion, and ego identity is weakened. The ego is impaired. This formulation is an hypothesis to account for the observed behavior.

The bulk of the clinical literature related to academic deficiency is empirical. It represents the sophisticated, clinical intuition, derived from the treatment experiences and observations of such authorities on adolescents as Blos (1941, 1962), Pearson (1954), Derek Miller (1964), Harris (1966), and A. Freud (1958). The author therefore decided to take a systematic look at the relationship between identity diffusion, a form of ego impairment, and academic deficiency.

#### THE CLINICAL MODEL

Since this study arose from a concern with the task of treating adolescents, it was felt that the results could be more meaningfully applied if they were derived from a clinical setting. It was also felt that the state of knowledge and the lack of precision of the psychological instruments available justify a more global clinical approach.

Personality is viewed as the product of the dynamic interaction of an individual's total experiences - biological, cultural, social, inter- and intrapersonal. Sometimes when the effort to understand personality functioning is fractionated or too delineated, the effects of the dynamic relationships are lost or, at best, obscured.

For example, some research on the Rorschach focuses on the number of responses in various categories such as the number of M (human movement), FM (animal movement), F (form), W or D (area) responses. Any human movement response must be scored an M. However, the value and meaning of that M is dependent upon its context, the details with which it is perceived, the fantasy that may or may not be projected with it and whether or not it is appropriately integrated with other aspects of the stimuli. Therefore, when Rorschach scores are fractionated, several M's (or W's or FM's) must be given essentially the same value, even though their individual values, within the context of the same Rorschach or across several Rorschachs, can be vastly different. This is essentially true of the interpretation of any Rorschach score element and of any other procedure subject to the projective hypothesis (Rapaport, 1946). The same is true of all contributions to the clinical diagnostic process -- clinical interviews and psychological tests.

Our conception of the role of clinical testing is similar to that described by Rapaport in his book, Diagnostic Psychological Testing:

The aim was not to attribute to a person a percentile rank in the population or any other numerical measure allegedly representative of him. The aim was rather to understand the individual: to give him a chance to express himself in a sufficient number and variety of controlled situations, the nature of which has been well enough explored to enable the psychologist to infer, out of the subject's reactions, the gross outlines of his personality makeup (p. 10).

The clinical model or case study approach in which detailed clinical data are organized and presented for global clinical judgments is certainly not unique to Rapaport or daily clinical practice. Rohrer and Edmonson made extensive use of the model as reported in their book, The Eighth Generation: Cultures and Personalities of New Orleans Negroes (1960). Kornhauser utilized the technique in studying the mental health of industrial workers (1965). He also used a rating scale to integrate and compare the judgments of a number of clinicians. These are applications to research in social and industrial psychology. Blos (1962), Harris (1966), Kimball (1953) and de Hirsch (1963) represent just four of many publications in the literature using a clinical approach to learning problems. The critical factor in this approach is the selection of the clinicians as the judges of the data. They must necessarily be well-trained, experienced people. Strupp (1955) demonstrated that the more experience the clinicians had, the more likely they were to form similar judgments from case study data, demonstrating that reliability of judgment within and across cases is quite possible.

#### THE FOCUS ON ADOLESCENTS

Apart from the frequency of adolescent referrals for learning

problems, there are imperative reasons for the study of the problems of this phase of development. The greater frequency of adolescent referrals and the predominance of papers on the under-achieving adolescent seems to be a function of several factors:

- (1) The threat to social and economic success becomes more acute as the hopeful rationalization that "Johnny will grow out of it," becomes less and less tenable as the youngster approaches adulthood.
- (2) The adolescent moves into that phase of life where the way schools are organized, the demand for more independent functioning, and the beginning of a more interpersonal, heterosexual phase of growth tends to exacerbate intrapersonal weaknesses.
- (3) The resurgence of earlier unresolved psychosexual conflicts which may have been repressed through latency, now begin to generate more stress intrapersonally, socially, and within the adolescent's family.

In some respects, the treatment of adolescents, particularly those with learning problems, has a "last ditch stand" quality about it. Dr. Derek Miller, head of Tavistock's Adolescent Unit, notes in the preface of his book, Growth to Freedom (1964):

Our society is so constructed that in effect adolescence provides a last chance for self-realization. If this is lost, it is difficult, if not impossible, either to find new opportunities or, even if they are found, for human beings to be sufficiently plastic to make them. This is particularly pertinent for the maladjusted adolescent; it almost appears with some people, that if help is not given during adolescence, its application thereafter becomes fruitless (p. ix).

Other writers feel that since adolescence is a period of change and plasticity it is a most advantageous point at which to intervene

therapeutically to help the change take place in the desired direction. If internal conflicts and self-limiting defenses are not resolved at this point, they may become fixated and permanent maladaptive defense mechanisms may result. As Blanchard (1944) notes:

--in spite of the impetus toward normal personality development, there may be less desirable outcomes for adolescent personality conflicts. There is the possibility of the adolescent's renouncing the drives toward more mature emotional satisfaction with such personality losses as damage to the capacity for flexible adjustments to reality. There are also the possibilities of such outcomes of adolescent experience as delinquency, neurosis, psychosis, or even suicide (p. 710).

Fenichel (1945) presents a similar concept that describes adolescence as a period of change in which some aspects of the personality may become crystallized:

Experience in puberty may solve conflicts or shift conflicts into a final direction; moreover, they may give older and oscillating constellations a final and definitive form (p. 113).

#### DEFINITION OF MAJOR TERMS

The following definitions will be the operational concepts for this research:

Adolescent: Generally the term adolescence refers to the period during which the growing person makes the transition from childhood to adulthood (Jersild, 1961). Specifically for the purpose of this study, the adolescent subject is a male student not younger than 14 years of age nor older than 15 years and 11 months.

Underachiever (UA): An experimental subject. An adolescent who demonstrates average to above average intellectual resources and

whose school records show a consistent grade point average below that which might reasonably be expected from his measured intelligence. The objective judgment of potential is supplemented by anecdotal information from previous teachers, which is noted in his school record and by the opinions of current teachers. Other criteria for the selection of these subjects were as follows:

(1) There should be no previous history of major illness, trauma or psychiatric treatment. (2) He must have been in his present school at least one and a half academic years to allow for experience with a number of teachers and school subjects and to acquire sufficient grades in a single school so that they might be realistically compared with controls from the same setting. See "Selection of Subjects," Chapter IV, for specific details on the selection of underachievers.

Achiever (A): A control subject. An adolescent whose records demonstrate average to above average intellectual resources and academic performance that is adequate for his age, grade, and measured intelligence. This objective judgment of potential is supplemented by anecdotal information from previous teachers, which are noted in his school record, and by the opinions of current teachers. He must have been in his school at least one and a half academic years to allow for experience with a number of teachers and school subjects and to accumulate sufficient grades in a single school so that they might be realistically compared with the experimental group from the same setting. See "Selection of Subjects," Chapter IV for specific details on the selection of Achiever, control group subjects.

Ego: In his book, The Quest for Identity, Wheelis (1958) gives the following summary definition:

The executive department of the personality is known as the ego. It is a cohesive and more or less integrated group of functions; it is the locus of perception, evaluation, anticipation and decision; it is largely, but not altogether, conscious. Impelled by basic needs and heedful of the strictures of conscience, it is the function of the ego to remain in touch with reality, to take note of changing conditions, to seek opportunities for gratification and security and to initiate change in order to facilitate gratification and security (p. 97).

Ego-Identity: The conscious feeling of a "personal identity" - a realistic, adequate self-concept built on the successful integration of the stages or crises that are coincident with psycho-physiological development. As described by Erikson (1959):

Ego-identity . . . in its subjective aspect is the awareness of the fact that there is a self-sameness and continuity to the ego's synthesizing methods and that these methods are effective in safeguarding the sameness and continuity of one's meaning for others (p. 23).

The emerging ego-identity (of the adolescent) bridges the early childhood stages, when the body and the parent images were given their specific meanings, and the later stages, when a variety of social roles becomes available and increasingly coercive. A lasting ego identity cannot begin to exist without the trust of the first oral stage; it cannot be completed without a promise of fulfillment which from the dominant image of adulthood reaches down into the baby's beginnings and which creates at every step an accruing sense of ego strength (p. 91).

Ego Impairment/Identity Diffusion: For the purpose of this research, ego impairment and identity diffusion will be considered synonymous. Identity diffusion is the opposite of ego identity. "In identity diffusion a distortion of the self-image is suggested, a loss of centrality, a sense of dispersion and confusion and a fear of dissolution" (pp. 122-123). All adolescents manifest subtle evidences

of identity diffusion to some degree. However, healthy adolescents are able to develop an adequate ego identity, because they have acquired sufficient confidence in themselves and their existence (ego strength) not to demonstrate the behavioral manifestations of identity diffusion listed below to a pathological degree.

1. The Problem of Intimacy - This is manifest by a limited capacity for intimate relationships with others. Closeness to others carries with it the threat of being absorbed in their identity. This threatened loss of identity requires a "tense inner reservation, a caution of commitment" (p. 125), resulting in distancing behavior.
2. Diffusion of Time Perspective - This is seen in the adolescent's sense of urgency, his limited ability to delay gratification and a "loss of consideration of time as a dimension of living" (p. 126).
3. Diffusion of Industry - The inability to sustain concentration on required or suggested tasks, or a self-limiting over-preoccupation with some one-sided activity and an excessive awareness and avoidance of competition, contributes to an inability to complete tasks or gain any satisfaction from the anticipation of work, thus "an acute upset in the sense of workmanship" (pp. 127-128).
4. The Choice of a Negative Identity - The adolescent predisposition to reject the things that are considered right and proper by one's family and community can lead to an over-idealization; e.g., the investment in a cause - being a missionary, that in effect criticizes the roles and values of his immediate milieu and provides personal external controls and values to compensate for the internal depreciated identity.



This is a choice of identity perversely based on all those identifications and roles which, at critical stages of development, had been presented to the individual as most undesirable or dangerous, and yet also as most real . . . Sometimes the negative identity is dictated by the necessity of finding and defending a niche of one's own against the excessive ideals either demanded by morbidly ambitious parents or seemingly already realized by actually superior ones. In both cases the parents' weaknesses and unexpressed wishes are recognized by the child with catastrophic clarity (p. 131).

The concept of identity diffusion is discussed in more detail in Chapter III, Review and Application of Erikson's Theory.

#### HYPOTHESES

The primary hypothesis of this research is that academic deficiency or underachieving in adolescent males with adequate intellectual resources is associated with or is a function of the impairment of their ego structure, specifically identity diffusion.

Secondarily, the following hypotheses are also considered:

1. That adolescents who manifest underachieving have mothers who have achieved more academically than their fathers.
2. That birth order or younger sibling position is positively associated with underachieving.
3. That high mobility of the family is positively associated with underachieving.
4. That separations from parents are positively associated with underachieving.
5. That experience with parent surrogates is positively associated with underachieving.

Supplementary purposes of this study are:

1. To demonstrate the consensual validity of Erikson's psychosocial theory of ego development.
2. To refine systematic methods of using case study and trained clinical judgment for the purposes of controlled clinical research.

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## INTRODUCTION

Academic deficiency is the single most common cause of referral to the clinics offering psychological services to children (Rabinovitch, 1959, p. 857; Harris, 1966, p. 3). More than 500 articles and research studies concerning academic deficiency have appeared in the educational, psychological, and psychiatric literature in the past ten years. These two facts reflect the seriousness and increased awareness of the problem which is more commonly called underachieving. Both the importance of the problem and increasing concern about it have generated not only a great deal of investigation but also a re-evaluation of the mutual relationships between education and personality development.

Advances in group testing, and electronic scoring and tabulating procedures have made it possible to establish nationwide age and grade standards. Through group testing, personality can be conceptualized into meaningful but gross categories. These two advances have made it possible to identify academic deficiencies and correlate them more easily with certain measurable personality factors. The development of psychoanalytic theory and projective techniques have made it possible to advance from the identification of group factors to the conceptualization of highly individual variables and relationships. The steady accrual of evidence that academic deficiency may be an early sign

of personality maladjustment has drawn the attention of psychologists and educators.

Various social pressures have helped focus attention on the problem of academic deficiency. The increased demand for higher education has made parents and adolescents alike conscious of the intensified competition for the limited number of university places. The importance of cumulative grade point averages and class standings as admission criteria has forced an almost obsessive concern with these factors before a youngster should have to seriously concern himself with specific collegiate goals. The advent of "Sputnik" stimulated considerable introspection and re-evaluation of American educational processes. The somewhat hysterical reaction to this advance added pressure to the problems young people already had in academic achievement.

Taken together, these forces have resulted in the identification of greater numbers of underachievers and in an increased demand for research on which to base educational and psychotherapeutic remedial procedures. This research is intended to be a contribution to that need.

Originally the literature reviewed here included all of the relevant referances in Psychological Abstracts, Volumes 31 - 40 and some of those issues in Volume 41 which became available during the process of writing this chapter. As one reference often leads to others, this review actually encompasses more than ten years. In the interest of parsimony, and because there is much overlap

among the studies, only references which were considered representative in quality and scope were noted to record or substantiate a particular point, conclusion, or idea.

The vast majority of published work in this area is of the group-survey correlation type. In such studies social, historical and personality factors have been tallied with the hope of demonstrating significant relevant differences. A variety of paper and pencil instruments have been administered, correlated or factored. This particular approach is most popular because it is conducive to large numbers of subjects, easy operational definitions and statistical analysis. While correlational group studies often yield reliable findings, the findings are difficult to apply directly to the understanding and treatment of a particular adolescent (Robey and Cody, 1966).

However, such survey research yields a surprisingly consistent gross description of the underachiever as a class. Similar factors and traits are repeatedly reported which differentiate the UA from his more successful peers at an acceptable level of significance (.01 to .05). These similarities are apparent despite differing frames of reference, semantics and wide variation in the quality or rigor of experimental design. Unfortunately, these findings rarely yield etiological information; they contribute demographic and epidemiological data - e.g., definitions, descriptions, parameters, and frequency of occurrence.

As the review of research moves from socio-environmental concepts to trait concepts, to identity and self-concepts, there begins to emerge more evidence of possible cause and effect relationships. This evidence, in turn, leads to the consideration of the individual personality; of self-concept, identity and ego-formation, and, ultimately, to the consideration of academic deficiency as a syndrome or symptom complex of maladjustment. From the viewpoint of ego psychology and the organization of individual defense systems, the group data seem to fall into a more meaningful, pragmatic framework. One can begin to understand the logic, function, and meaning of specific variables when they are seen from the vantage of ego psychology.

#### THE CONCEPT OF ACADEMIC DEFICIENCY

Definitions of academic deficiency or the underachiever vary in scope (Shaw, 1961, p. 461; Gowan, 1957, p. 98) and precision (Borislow, 1962, p. 27; Duff and Siegel, 1960, p. 44; Edgington, 1964; Rowland and Smith, 1966).

The principal term varies with the semantics of the writer's particular frame of reference. The term "underachieving" is frequently found in the educational literature. Other terms, such as "academic deficiency" (de Hirsch, 1963), "learning inhibition" (Hall, 1966), "learning impotence" (Rubenstein et al, 1959), "non-learners" (Harris, 1966), and "deteriorators" (Dale and Griffith, 1965), are used in the psychological and clinical

literature. Although each term carries with it special connotations, they are, as Kornrich (1965, p. 459) points out, "similar in that they respond to discrepancies between actual and predicted performance." The consensus is that academic deficiency or the label "underachiever" means that an individual is performing academically at a level which is significantly below that which might reasonably be expected from the reliable measurement of his general ability and/or his past performance. With the addition of the clinical perspective, it has also come to mean that the underachiever is likely to be suffering a constricting emotional illness.

The variety of terms used, the conditions and ramifications they imply and the difficulties they impose on comparability and generalization, emphasize the need for agreement on a more precise, universal definition (Farquhar and Payne, 1964).

However, it does not appear that the lack of a generally accepted procedural definition has limited research. Most published studies, especially those dealing with personality factors, seem to demonstrate significant differences between achiever and underachievers on similar variables, even though the studies might not be directly comparable. It would seem that this gross consistency among diverse studies adds reliability to the overall description of the underachiever, even in the absence of agreed upon procedural and measurement techniques.



Some writers challenge the legitimacy of the concept of underachieving because of the inconsistencies among studies, the variations in the size of the discrepancies between performance and expectancy used to define the underachiever, and the different variables that are encompassed by procedural differences (Thorndike, 1963; and Schwitzgebel, 1965). Willingham (1964) raises the issue, "underachievement or overprediction." Kowitz (1965) calls attention to environmental factors within the school and the realistic limitations of measurement tools.

Schwitzgebel (1965) says that we might better focus on a "rigorous analysis of the actual process" of environmental variables in the relationships between students and teachers that are alterable rather than "try to alter discrepancies, whatever they might be called, between a person's estimated learning capacity and his academic marks" (pp. 486-487).

However, alterable environmental variables must be found and tested. It would seem that there is little real difference between aiding the underachiever to become less crippled, less self-limiting, by finding and altering relevant environmental variables, and helping him by finding factors, variables, and techniques that would lead to closing a discrepancy between test scores and actual performance. Whatever the measurements used or whatever the level or aspect that is attacked by one research project or another, the problem remains the same: Why is it

that some people cannot utilize their demonstrated potential in certain significant situations? Schwitzgebel does not really present an alternative for consideration. He only points to another area to be explored and put in appropriate perspective within the overall problem of academic deficiency.

Kowitz (1965) questions the philosophy of our moral right to expect, and thereby demand, that a child reach and maintain a particular skill level in any area. He says that ". . . few reports give much thought to the problem of individual rights and freedom . . . each individual [has the right] to determine his own destiny . . . the school cannot ethically decide either the future vocation of the child or level of skill in that vocation which he shall acquire. The school should suggest and inspire; it cannot decide or force" (p. 464).

Certainly philosophical considerations are important. Respect for the basic rights and dignity of the individual are important. Precision and clear, consistent definitions and parameters are undeniably necessary goals in the scientific and philosophical search for all truths. However, life must go on even in the absence of high levels of purity in science. Whether it is called underachieving or overprediction, or even if one views the child as exercising his right to limit his success, all this readily becomes academic when the issue is reduced to a specific child whose differences or limitations must be assessed and understood, respected and dealt with in some positive fashion.

There is little doubt that underachieving is more than a consistently poor grade point average or discrepancy score in the adolescent with average or superior potential. As Shaw and Brown (1957) point out after their study of adolescents, "Underachieving is not a surface phenomenon which is easily modifiable, but rather is related to the personality matrix of the individual."

#### DEMOGRAPHY

##### Socio-economic Status

The broad survey and review papers by Frankel (1960), Gowan (1960), Harris (1966) and Impellizzeri et al (1965) in the United States, and Dale and Griffith (1965) in Great Britain, statistically establish a relationship between several non-intellectual, sociological variables and the problem of academic deficiency. The work referenced includes both the respective writers' own surveys and the integration of demographic factors reported by others, e.g., Terman, The National Foundation for Educational Research.

The consensus is that a significantly greater portion of underachievers come from lower-middle and lower-class families. Coincident with this fact are such factors as limited cultural and intellectual stimulation, limited or negative attitudes toward learning, and the other secondary forces associated with the perpetuation of limiting social circumstances from one generation to the next, common to lower-class and poverty-bound individuals.

### Educational Level of Parents

The overview is that underachievers tend to have parents with less education than the parents of achievers. Impellizzeri (p. 166) says, "In general, education of parents appeared to be a statistically reliable prediction of the child's achievement." More underachievers' parents in his survey had not completed high school. Harris (p. 186) comments on only the fathers' educational level, noting that the fathers of his non-learners "tend to be less well educated." In his discussion he says:

We found evidence suggesting that when the father is ambitious and secures achievement, the son is less likely to have a learning problem . . . he has a model for productive achievement. It is difficult to separate the effects of the father's ambitiousness from those of the mother's, for ambitious mothers tend to choose husbands who have had education, are ambitious, and seek upper-middle class status (pp. 39-40).

Dale and Griffith (p. 17) report significant association between academic deterioration and both parents not having had a grammar school education or the mother not having gone as far as grammar school. In contrast, the level of the father's education did not appear as significant in his survey.

### Size of Family

Underachieving is consistently associated with larger families. Pierce and Bowman (1960, p. 251) found that small families produced proportionately more high achievers than did large families. Both Harris (pp. 22-23) and Dale and Griffith (pp. 18-21) report four or more siblings appear significantly

more often in the families of underachievers. Harris (p. 187) presents his figures in such a fashion as to suggest that larger families have a dampening effect on measured IQ. More youngsters in both his non-learner and control groups (75% and 77% respectively) had IQ's of above 105 and came from families of no more than three children. Of those with IQ scores of below 105, 56% of the control group and 71% of the non-learners came from families with more than three children. He also refers to two other surveys he made on 2700 children and 500 adult male psychiatric patients which substantiate the point that comparatively lower intelligence scores were more often seen in individuals who had three or more siblings. He suggests (p. 23), as do Dale and Griffith (p. 53), that this may be a function of the fact that the number of children limits the amount of parental energy and "intellectually stimulating adult-child communication" that any one child can receive.

#### Birth Order

Harris (p. 177) and Dale and Griffith (p. 20) report that first-born subjects are found almost twice as frequently in their control groups. Harris adds that "last-born boys were found twice as frequently in the group with learning problems." Dale and Griffith's findings are similar. In Pierce and Bowman's survey (p. 214) also, the eldest child has the achievement advantage. Harris develops the point by demonstrating that there are greater expectations for maturity of a first child and that parents have

a different emotional relationship with their first child than they do with their last. Teachers and mothers both described eldest children more often as "bright" and "serious," and as having better impulse control. They referred to youngest children as "carefree," "charming," "needing to win support," and demonstrating poor impulse control. Harris draws support for the significance of being first born from the historical work of Galton, Cattell, Terman, and the more recent work of MacArthur and Schacter (pp. 178-183).

A variation on birth order is the sex sequence of siblings. Miller (1965) says that he often finds that the underachieving male is followed by a sister, and that the underachiever interprets this as a rejection of him and his masculinity.

Schoonover's (1959) longitudinal data show that either males or females with brothers consistently had higher mental and achievement ages than did siblings with sisters. She found no significant relationships between ordinal position, age or spacing of siblings.

Since ordinal position is apparently associated with different emotional relationships and expectancies between parents and siblings and siblings with each other, it is reasonable to conclude that birth order can have a significant influence on ego formation. In his study "Birth Order, Need Achievement, and Conformity," Sampson (1962) demonstrates that first-born males have a greater need for achievement than later-born persons. He

associates this with the fact that they apparently "exhibit less resistance to influence and more willingness to conform" (p. 159).

#### The Working Mother

The working mother is found more often among the underachievers than the achievers in two studies by Frankel (1960 and 1964), but Impellizzeri (p. 166) found no such relationship. Harris (p. 21), on the other hand, noted that working mothers were associated with low average intelligence scores among both his non-learners and controls. He combines working mothers and marital discord under the title "Family Disorganization" and demonstrates that these circumstances, particularly the latter, impaired the actual thinking processes of both his learner and non-learner groups. The non-learners, however, more frequently had working mothers and more frequently were subjected to marital discord. Though the actual absence of the mother from the home limits the child's physical support, the presence of marital incompatibility adds the loss of emotional support, resulting in considerable anxiety and uncertainty. Harris feels that his case studies demonstrate that the working mother, regardless of her "logical" reason for working, is rejecting her femininity and her role as a homemaker. This ambivalence about homemaking and the maternal role is also noted by Davids and Hainsworth (1967, p. 35). It follows, then, that this feeling of the working mother has an effect on attitudes toward the father and the children, and on the stability and

clarity of sources of security and identification of the child.

#### Marital Discord

This area is somewhat enigmatic. It is easy to count the frequency when discord flares regularly and openly, when divorce occurs or families break up. It is more difficult to note, much less assess, the chronic discord between some parents whose denial and social controls help them present a positive facade to the community (Sperry et al, 1958). Their muted struggles, however, cannot be hidden from their children.

Marital discord is more frequently found among the parents of underachievers (Harris, p. 28; Dale and Griffith, pp. 26-28; Sperry et al, 1958; Hall, 1966). As will be noted below, some surveys find no relationship, but this is felt to be a sampling artifact. In the section on clinical studies which reports detailed family interaction, we are faced with evidence that there is open discord in some families, while in others, marital "harmony" is based on the parents' neurotic needs for the same mutually depreciating factors but which, in this case, helps them avoid gross discord in order to maintain a chronic attitude of dissatisfaction and subtle conflict.

It seems reasonable to conclude that academic deficiency in an able youngster necessarily implies a disturbed family or at least significant distortion in the intra-family relationships.



Comment

Frankel (1960, pp. 93-94) and Impellizzeri (1965, p. 166) report no correlation between size of family, birth order or family disorganization. This may be an artifact of the narrow urban population that they drew their subjects from (specialized high schools in New York City). Impellizzeri points out that 76 per cent of all of his subjects come from families of one or two siblings and 14 per cent were only children. He also notes that 90 per cent of his subjects were living with their natural parents, unrealistically implying that, therefore, their family life was stable. Morrow and Wilson (1961, p. 509) also find no support for the hypotheses that underachievers' families show more parental disharmony, are influenced by the occupation of either parent or the number of siblings.

These apparently contradictory findings actually do not rule each other out. They are in some respects the function of the kind or depth of the study they come from. The figures presented by Harris and Dale and Griffith are from detailed work on individual cases. Harris' population were all patients - 100 non-learners and 100 learner, but sick, controls. Pierce and Bowman drew their subjects from the public school system of an entire midwestern American community. Their findings in regard to socio-economic class, birth order, and size of family are similar to those of Harris. Frankel, Impellizzeri et al, based most of

their figures on questionnaire research which necessarily represents a minimum of direct evaluation of family and social factors.

It would seem reasonable to draw the following two conclusions:

(1) That underachieving can be related to factors such as socio-economic level, birth order, the working mother, and family disorganization. These are relevant factors but not necessary ones.

(2) That these factors provide a milieu that seems to exacerbate the formation and expression of the psychological factors that contribute to academic deficiency. These are, after all, the factors commonly associated with the manifestation of most personality problems from delinquency to alcoholism.

A reasonable integration of social and environmental factors is described by Kimball (1953) in her discussion of individual case studies of underachieving adolescents:

We found that if we studied the interaction between the unique personality structure of the subject and the conditions in the existing environment, we gained a fairly adequate understanding of the reasons for scholastic failure. If we worked with either the personality factors or the environmental factors alone, we tended to oversimplify the problem (p. 377).

#### ONSET

The probable early onset and chronicity of underachieving is demonstrated in a study by Shaw and McCuen (1960). They compared the school records of a group of underachievers and

achieving controls who had been in the same school system from grade 1 (age 5-6) through grade 11 (age 16-17). They were classified into one group or the other on the basis of their cumulative performance in grades 9, 10, and 11. They found that the underachievers tended to receive lower grades than their controls in the first year of school. This difference reached the .01 level of significance at the third year of school, and the difference remained statistically significant through the eleventh year.

Chance (1961) points to the relevance of preschool independence training on academic performance in the first grade. She found that the earlier the training, the more likely the child was to make less adequate academic progress relative to his intellectual ability. She also called attention to the fact that one must be cognizant of not only the maternal attitudes favoring early independence but also the mother's motivation for desiring that independence.

Levy and Cuddy (1956), commenting on the fact that the "familial interpersonal constellation" and the child's early history play a significant role in the manifestation of academic deficiency, conclude that:

It would be reasonable to assume that these children have by the time they reach school age, already developed the pattern of behavior which will result in underachievement (p. 447).

Therefore, they suggest that we can hope to find measurable factors predictive of academic deficiency by the time children

reach school age.

Although these references indicate the likelihood of the very early onset of conditions predisposing to academic deficiency, most interest seems focused on the adolescent and late adolescent, young adult, college student. One reason for this, no doubt, is the greater availability of group measures for this age group and the captive populations for this kind of group research that high school and undergraduate classes provide. This convenience notwithstanding, it seems that certain aspects of adolescence itself call particular attention to the problem, namely:

(1) By the time a boy is well into adolescence, parents begin to lose the denying hope that he will soon grow out of his difficulty. There is more concern about the imminence of qualifying for college or having skills for a "good" job. There is the threatening confrontation of independence manifest by being near the end of school. With this comes the need to select, however vaguely, a vocational identity. Schooling to high school is usually an end in itself. Education in and beyond high school is usually directed at "becoming something". This is one aspect of the identity crisis of adolescence.

(2) The psychological upheavals related to the developmental processes of adolescence (the resurgence of instinctual drives and increased individuation), often bring interpersonal conflicts closer to the surface. These make for more direct

confrontation between internal feelings and the expectancies of parents, the school, and even the community.

(3) Adolescence is the time when underachieving is theoretically most likely to be manifest. This is the point, in Erikson's stages of development, where the individual demonstrates the degree of resolution of Crisis Stage IV, School Age, equivalent to latency. If the adolescent has successfully turned outward from the family, to peer group recognition, to adequate identification with teachers and other significant adults, he will demonstrate a sense of industry, a sense of satisfaction from achievement. If the resolutions of latency are predominantly negative, he will manifest a greater sense of inferiority than industry and avoid competing, doing, achieving. Therefore, adolescence is the period during which underachieving, theoretically, is both most likely to appear and to be most significant.

#### PREDICTION

Cohen (1963) reports a study predicting underachievement in kindergarten children which substantiates Shaw and McCuen's evidence of an early developmental pattern of underachievement and indicates the possibility of early diagnosis. This study also demonstrates the efficacy of clinical prediction. The kindergarten teacher, a clinical psychologist, and a child psychiatrist predicted which of 56 kindergarten children would not perform up to "their IQ potential" in first grade. Each judge

used a combination of observation and intuition. The teacher judged from her observation and experiences with the child over the school year, the psychologist from test performance (WISC, House-Tree-Person, Bender-Gestalt, and the Rorschach), the psychiatrist from a standard play situation. The individual psychological tests were administered during kindergarten, as was the psychiatrist's play situation. The predictions were made at the end of kindergarten. Achievement measures were taken with the Metropolitan Achievement Test (MAT) after about 70 per cent of the first grade was completed. Children were then divided into underachieving, achieving, and overachieving groups, depending upon a discrepancy formula derived from the WISC IQ, and their MAT score. An improvement score was derived by readministering the MAT a year later after approximately 70 per cent of the school year was completed. This re-test demonstrated improvement in all three groups, but the underachievers, though improved, remained underachievers.

It is interesting to note that the teacher's prediction was best,  $p = >.0005$ ; the psychologist was next with a  $p = >.005$ ; and the psychiatrist was third with a larger but respectable level of significance of  $p = >.05$ .

Attempts to develop scales as predictors of underachievement are encouraging. McQuary and Truax (1955) found twenty-four items of the MMPI which differentiated between the underachiever and achiever. When they used these items in combination with a

student's percentile rank on the ACE (American Council of Education Psychological Examination - a college aptitude measure), they were able to predict underachieving in 77.2% of their subjects. De Sena (1964) reports similar results with the same twenty-four items and, referring to supporting studies, suggests that the items have promise as a scale.

Other studies failed to establish an underachiever profile from the MMPI. The experience of Wilson et al (1967) is typical. The MMPI's of their underachieving subjects were "more deviant than those usually produced by an average group of college underclassmen" (p. 181). Stone and Ganung (1956) report that underachievers had an abnormally high score on one or more of the MMPI scales. These indicate maladjustment but are far from predictive profiles for underachievement.

Fink's (1962b) extensive item analysis of the California Personality Inventory (CPI), yielded forty-eight items which discriminated between the underachiever and the achiever at the .05 level of confidence or better. He reports that these items can be related directly to adequacy or inadequacy of the self-concept. He refers to other research which supports the use of the CPI, Ac (Achievement via conformance) and So (Socialization) scales as "achievement discriminators."

In another study of 14-15 year olds, Fink (1963) found sixty-nine items of the CPI which differentiated between known achievers and underachievers, "at confidence levels of .10 or better. Only seven items discriminated at a level below .05."

(p. 150). This finding is hardly conclusive but it is encouraging.

Though these and similar personality inventories have been used to describe the personality of the underachiever as compared to that of the achiever, they are not often submitted to predictive cross-validation.

Payne (1962) tried to predict achievement from responses to an academic self-concept word rating list. He achieved "significant and concurrent predictive correlations with grade point averages" - of all his subjects except the underachievers.

A relationship between subtest patterns and scale scores of the Wechsler Intelligence Scale for Children (WISC) and achievement has been demonstrated which carries with it the implication that intelligence test performance and personality variables can be dealt with in a single theoretical framework.

Stroud et al (1957) ran correlations on the WISC, Stanford-Binet and academic achievement. Not surprisingly, the WISC Full Scale score (IQ) was found to be the most predictive of achievement. The subtests that correlated best with school achievement were Arithmetic, Vocabulary, Block Design and Object Assembly.

Similarly, in a more sophisticated study, Coleman and Rasof (1963) found that underachievers made lower scores on those subtests whose factor analyses showed them to be heavily loaded with "school-type" learning (Information and Arithmetic), sustained concentration (Digit Span) and memory (Coding, Arithmetic,



and Digit Span). Underachievers functioned better on subtests loaded with "perceptual organization" (Block Design) and informal or incidental learning (Comprehension and Picture Completion).

Spivak and his group (1959) offer a partial explanation for WISC subtest differences in their study on test performance and the delay function of the ego. They refer to Rapaport's discussion of the function of delay. Rapaport contended that the inevitable delay of gratification in childhood helped develop cognition and "that further development of thinking (abstraction, problem solving, etc.) supports increased delay or inhibition of the expression of impulses in consideration of reality demands" (p. 428). Therefore, they reasoned that it should be possible to demonstrate a relationship between general intelligence and measures of ability to delay. They administered the Wechsler, a Rorschach M-tendency measure, the Stroop Color Word Test and time estimation tasks to 123 adolescents living in a residential treatment center. The results support the hypothesis that ego delay function, as measured by Rorschach M, time estimation, and the Stroop Test, is correlated with IQ. Performance on the Wechsler Digit Span subtest was related to time estimation and to the Stroop Test independently of general intellectual level.

The WISC patterns of underachievers described by both Coleman and Stroud can be seen on an ego-delay continuum. The

underachiever is known to be impulsive and to have a limited ability to delay gratification. The subtests on which he does poorly (Arithmetic, Digit Span, Coding, Information and Vocabulary) demand more impulse control, greater ego delay function to sort out competing response tendencies, for a good score and more efficient intellectual functioning.

Although there might be a WISC subtest pattern common to underachievers, which would suggest that the condition could be predicted from the appearance of that pattern, to date no one has submitted one to cross-validation.

Achievement and ability scores and the discrepancies between them are predictive in the sense that past performance is generally considered to provide the most reliable data upon which to base prognoses. These scores and discrepancies are not actually predictive because they represent the current manifestation of the problem. Although when the self-concept, identity and clinical studies are added it becomes possible to increase the reliability of the prognoses, they do not seem reliable enough at this point to be considered actually predictive. Sufficiently specific longitudinal studies have not yet appeared in the literature. There is also the problem of symptom choice. Some individuals seem to respond to similar self-limiting psychodynamics by "choosing" other behavioral manifestations or psychosomatic syndromes as opposed to "selecting" underachieving. We cannot, at this point, say with sufficient confidence which of Cohen's and Chance's underachievers, for example, will be adolescent underachievers

or which of their controls will later manifest academic deficiency, though it does seem, given a broad enough range of information, that we should be able to make some reasonable prognoses.

#### ACHIEVEMENT NEED

Closely associated with the development and prediction of underachieving are considerations related to the individual's need to achieve and factors associated with the development or limitations of that need. The evidence on the importance of early training to need-achievement contributes also to understanding the early onset of underachieving. The implied motivational elements in need-achievement are related to prediction of underachievement. The concept of need-achievement (n-achievement) was presented by H. A. Murray (1938). N-achievement is probably the most widely studied of the needs of Murray's list (Stagner, 1961, pp. 346-347). Much of the more recent data are based on the work of McClelland and his group (1953) and corroborates the early findings to the effect that early independence training is positively related to need-achievement.

Chance (1961), referred to above in the section concerning the onset of underachieving, qualified McClelland's hypothesis that early independence training (based on Winterbottom's study of 8-year-old boys) is directly related to higher n-achievement.

How early and the attitude that motivated the early training are relevant qualifications added by Chance. As noted above, she demonstrated that the mothers of 6- and 7-year-old underachievers (in reading and arithmetic) favored earlier independence training (p. 154).

Rosen and D'Andrade (1959), following the lead of McClelland and Chance, differentiated between two kinds of early child training practices, one relating to achievement training, that is, emphasis on doing things well; and the other independence training where the emphasis was on doing things without help. They found that mothers seemed to have contributed more to achievement training and both parents, but mostly the fathers, to independence training. They also demonstrated that the need for achievement in boys, as manifested in later school performance, is a function of early independence and achievement training.

Both Sampson (1962) and Pierce and Bowman (1960) show a relationship between birth order and need for achievement. First-born males were shown to have a higher need for achievement and conformity.

Pierce and Bowman (1960) measured the n-achievement level of 15- and 17-year-old achievers and underachievers with McClelland's Thematic Apperception Test procedure. They found that achievers have a greater need for achievement than underachievers. They also reported an unusual finding for this kind of study: Their

underachievers demonstrated significantly lower scores on items related to "involvement" categories. They seemed less able to become really "self-engaged" in achievement tasks. Self-engagement or involvement items were differentiated from items that were considered more likely to be influenced by "socially accepted types of responses" (pp. 224-226). This limited involvement seems akin to the limited investment, poor object relations, passivity and denial discussed in the individual case studies described by Wallach et al (1960), Kimball (1953) and Harris (1966).

To assess the relationship of cultural and ethnic backgrounds to social mobility and achievement, Rosen (1959) combined achievement motivation, value orientation and educational-vocational aspiration levels in a complex called the "Achievement Syndrome." Rosen and his students accomplished a testing and interview survey of 427 pairs of boys and their mothers in 62 communities in northeastern United States. They found that the achievement syndrome was related to the achievement values and needs thought to be held by various religious, ethnic, and racial groups. Rosen related these differences to the historical, cultural and theological backgrounds of his subjects. He also briefly related these socio-cultural variables to parent-child interaction and the way they were distorted to meet individual needs that, in turn, distorted parental identity models and ultimately modified the community meaning of

achievement in the context of a particular Jewish, Negro, or Greek family.

N-achievement seems such an obvious concept. Its measurement by means of fantasy with Murray's TAT technique has given considerable support to its use. In contrast, Kagan and Moss (1959) present results that suggest that further clarification of the concept is necessary. In a limited longitudinal study they found that n-achievement is not sufficiently stable over time to warrant the confidence implied by the predominantly supporting literature. They compared n-achievement scores of 86 children at ages 8, 11, and 14 and got correlations of +.32, +.22 and +.16 respectively. This is sufficient to indicate some reliability but low enough to suggest that n-achievement may not be a stable feature of personality. This has implications for the stability and long-term effect of early independence and achievement training. This finding also emphasizes the point made by Chance (1961), Rosen (1959), Rosen and D'Andrade (1959) as to the differential effect of the various attitudes and needs of parents to impose early independence and achievement training and the apparent role of the parent-child interaction on the meaning and form n-achievement takes in the context of specific socio-cultural values and specific parental needs.

## LABORATORY FINDINGS

Underachievement and concepts related to ego functioning have not, as a rule, been subjected to the rigor of laboratory research. This is partially due to both the conceptual and technical difficulties of translating the theoretical constructs to appropriate operational procedures. However, a small group of studies with a more classical laboratory orientation has been published.

Van de Riet (1964) tested the hypothesis that underachievers avoid success because they have a "need to fail." He selected 45 underachievers and 45 controls matched with respect to ability and had them learn two equated lists of paired associates. Between learning list 1 and list 2 a third of his subjects were praised, another third reproved, and the remaining third left alone. The group of "praised" underachievers responded with a decrement in the subsequent learning of the second list, apparently demonstrating their need to fail.

A relationship between achievement and the Zeigarnik effect was demonstrated by Martin and Davidson (1964). They had groups of underachievers and achieving controls perform twelve paper and pencil tasks, half of which were interrupted. The achievers recalled more incompleting tasks, thereby showing a greater Zeigarnik effect.

To test the comparative concept learning rate of the educationally retarded child of normal intelligence, Levy and

Cuddy (1956) used a variation of Harlow's "Oddity Problem." Twenty-three pairs of subjects who fell within a 98 to 103 IQ range were matched for age and socio-economic status. They were given a maximum of 50 trials within which to reach the criteria of 11 consecutive correct choices and then asked to verbalize their solutions. Using a combination of the number of errors, the number of trials to criterion, and correct verbalization of the oddity principle as the measure of learning rate, Levy and Cuddy found that their underachievers had a slower rate of concept learning. They suggested that something like this be applied to preschool children to predict underachievement.

Operating from a selective-perception model, Wells and Bell (1962) tested the comparative perceptual discrimination of authority and peer group figures of over-, equal-, and under-achievers. Photographs of authority, peer and neutral figures were presented binocularly with a stereoptic device in six different stimulus presentations. There were no significant differences between equal- and underachievers. The overachievers gave the largest number of distorted responses, particularly in their perceptions of the authority and neutral stimuli.

Keogh and Benson (1964) hypothesized that underachievers were deficient in motor skills. They administered tests of body control, strength and speed to forty-three 10- to 14-year-old boys who were enrolled in a special school for underachievers. They noted that some boys in the 10- to 12-year-old group showed limitations in motor skills, but all the 13- to 14-year olds



performed adequately, suggesting that the deficiencies were a function of the tasks and their subjects' relative stage of development and not related to underachieving.

Coleman (1962) explored the differential effect of the method of presenting new words to be learned by underachievers. He used visual, phonetic and kinesthetic methods singly and in combination. No method of presentation actually proved superior to another, though visual and combination methods seemed more efficient for some subjects. He was able to conclude, however, that method of presentation was a "relevant variable in learning disorders in relation to the ability of given underachievers to profit from given treatment procedures" (p. 268). He found that specific underachievers were able to increase their learning efficiency with a presentation method or combination of methods that was somehow idiosyncratic to their individual needs and abilities.

These differences, to the effect that the underachiever neither recalls as well nor learns as fast as the achiever and that at times praise or his need to fail limits his learning efficiency, can be seen as a function of the emotional factors discussed by Rapaport et al (1946) and Spivak et al (1959), referred to above, which are thought to impair attention, concentration, and integrative abilities.

## THE UNDERACHIEVER

## AN ACTUARIAL DESCRIPTION

A description of the underachiever can be drawn from organizing the studies which report "measurable" factors or dimensions of the personality of the underachiever into the following loose but integrating framework. This list of published research suggests that the underachiever is most often a male with a comparatively high inventory of deficits. When compared with his adequately performing peers he demonstrates:

1. Less need to achieve and lower educational and occupational aspirations.

Rosen, D'Andrade (1959)

Reitman (1961)

Todd et al (1962)

Davids (1966)

McBee and Duke (1960)

2. Negative attitudes toward school and teachers.

Carter (1961)

Wilson and Morrow (1962)

Gowan (1957)

3. Poor study habits, greater distractability and impulsivity.

Carter (1961)

Wilson and Morrow (1962)

McKenzie (1964)

4. Poorer social and emotional adjustment or less favorable personality characteristics.

Pierce (1961)

Stone and Ganung (1956)

Snider and Linton (1964)

Sandefur and Bigge (1966)

5. Less peer and/or social acceptance.

Semler (1960)

Teigland et al (1966)

Lloyd (1956)

Middleton and Guthrie (1959)

Angelino and Hall (1960)

6. Vaguely or poorly defined academic and occupational goals.

Gowan (1957)

Todd et al (1962)

McKenzie (1964)

Roth and Meyersburg (1963)

7. Limited sense of personal and social responsibility.

Narayana (1964)

Easton (1959)

Gowan (1957)

Pierce (1961)

8. Less satisfactory relationships with parents and predominant identification with his mother.

Easton (1959)

Morrow and Wilson (1961)

Rosen, D'Andrade (1959)

Shaw (1964)

Roth and Meyersburg (1963)

Shaw and Dutton (1962)

9. A more negative self-concept.

Shaw and Alves (1963)

Bruck and Bodwin (1962)

Shaw, Edson, and Bell (1960)

Fink (1962a and b)

Roth and Meyersburg (1963)

10. Poor control and integration of hostility and aggression.

Gill and Spilka (1962)

Middleton and Guthrie (1959)

McKenzie (1964)

Gowan (1960) has presented a similar organization of research studies dealing with measured social and personality factors of achievement and underachievement. His reference to underachievement, however, is somewhat limited since his emphasis in this and other papers (1955, 1957) is on those relationships which contribute to achievement in the superior or very bright student. He groups the research into three major categories: measures of input, process, and results. Input covers socio-economic and value concept variables. Process encompasses those studies that deal with behavioral-level personality factors

such as motivation, self-concept, authoritarianism, maturity, and general personal integration. Under results he lists those studies which report on development and acculturation, e.g., peer socialization, economic or vocational adjustment, independence, aggression and conformity. All of these factors can be read positively for the achiever and essentially negatively for the underachiever. In his summary he calls attention to the factor analytic evidence which emphasizes the importance of acculturation, as demonstrated by Bishton and Middleton. But he nevertheless seems to feel that the roots of the problem lie in the parent-child interrelationships. He describes the development of achievement in psychoanalytic terms:

. . . achievement is an indication that the individual has successfully transferred a large portion of his basic libidinal drives to areas of cultural accomplishment so that he derives a significant portion of his gratifications from them. We need always to consider how an individual is to receive psychological pay for tasks accomplished. The art of education consists of making a new task palatable "until the id catches up" (p. 118).

#### Self-Concept and Identification

Self-concept and the process of identification are seen as two concepts which integrate the socio-cultural and intrapersonal variables often associated with emotionally-based learning inhibitions and academic deficiency. They have been selected as specific topics for discussion in this section because they seem especially significant to personality formation and because the research which supports their significance has been

more actuarial, in the nature of group administered scales, etc., than individual or clinical.

As noted above, underachievers generally present an essentially negative self-concept. There is the logical argument as to whether this is a cause or an effect of academic deficiency. The references reviewed suggest that it is more likely a causative factor. First, the association between academic deficiency and a negative or depreciated self-concept has been demonstrated by Fink (1962a and b), Bruck and Bodwin (1962), Shaw and Alves (1963), and Shaw et al (1960). Second, a variation of the self-concept approach is the discrepancy between self-concept and ideal self-concept. Carl Rogers (1951) and Rogers and Dymond (1954) formulated current self-concept theory and inspired the extensive research in this area. They postulated that there is a direct relationship between the size of the self, ideal-self discrepancy and the degree of personality maladjustment. A number of other workers have provided considerable support for this premise (Block and Thomas, 1955; Smith, 1958; Butler and Haigh, 1954). Borislow (1962) and others have shown that a relationship exists between underachieving and a discrepancy between the ideal-self and the self-concept.

This perceptual discrepancy concept extends beyond the self, ideal-self comparisons to the mutual perception of parents and children. Davids and Hainsworth (1967), comparing attitudes avowed by mothers with those perceived by underachieving and achieving sons, found significant agreement between achievers and their mothers and ". . . no significant association between

attitudes ascribed to their mothers and actual attitudes avowed by mothers of the underachievers" (p. 29).

Closely associated with an individual self-concept is the sense of identity. It sheds some light on both a source of a negative self-concept and the rationale for the syndrome of academic deficiency. The identity studies point directly to parent-child interaction as the primary source of academic deficiency.

Similar to self-concept, identity is the sense of who and what you are - a positive, negative, or diffuse sense of individuality. Identification is the interpersonal process through which this comes about. It is an acquired cognitive response whose content is such that some of the attributes, motives, characteristics, and affective states of the model are part of the subject's psychological organization (Kagan, 1958).

This definition is quite similar to the psychoanalytic concept of introjection (Hinsie and Schatzky, 1953, pp. 277 and 303) and conceptually bridges the phenomenological, existential frames of reference of Rogers and the psychoanalytic orientation of Murray (1938) and Erikson (1959).

The general assumption is that healthy male adolescents take the same sex parent as their model (Kagan, 1961; Heilbrun, 1965). If for some reason the boy's father provides a weak or distorted model then the adequacy of his own identity will necessarily suffer. Should the child associate academic achievement with the goals and attributes of the opposite sex

parent, the consequent anxiety that can arise over sex-role identity can injure the learning and intellectual effort (Pearson, 1952; Blanchard, 1946).

For example, Heilbrun (1965) measured identification with parents as "perceived child-parent similarity." He administered Gough's Adjective Checklist to 427 students divided into adjusted and maladjusted groups. Their adjective choices were scored for 15 Murray-type needs, e.g., dominance, abasement, aggression. The subjects were then given summary behavioral descriptions of these 15 needs and asked to judge whether the behaviors were more characteristic of their fathers or mothers. The subject scores and the parental judgments were combined to form an "index of parent-child similarity." At a significance level greater than .01, "the adjusted males described themselves as more similar to their fathers; maladjusted males tended to endorse behaviors more like their mothers" (p. 188). Heilbrun considers academic underachievement one aspect of maladjustment (p. 190).

In a study of underachieving in adolescents, Shaw and White (1965) also examined the relationship between parent-child identification. They administered an adjective checklist to underachievers and achieving controls and their respective parents. Each parent completed two adjective checklists, one representing his perception of himself and the other his perception of his child. Each subject completed three lists, his perception of himself, his mother, and his father. There was significant agreement between the members of the achiever families in both their self-perceptions



and the perceptions of them reported by other members of their family. This was not the case between the members of the underachiever families. Male achievers identified with their fathers. Male underachievers did not. Their conclusion that "an appropriate sex-role identification is characteristic of the achiever group, but not of the underachiever group," is suggestive of the identity diffusion concept upon which this ego impairment study is based.

#### Summary of Actuarial Findings

To summarize, the following composite might be drawn from the data referred to above:

The underachiever, in contrast to his achieving peers, is an individual whose achievement motivation is related to the socio-economic and educational level of his parents and the values of his immediate cultural milieu as communicated to him through them and modified by their needs and associated personal distortions. His need to achieve is a function of early independence and achievement training, which is, again, modified by the parental motivations which underlie that training.

There are greater perceptual discrepancies in the individual and in the mutual perceptions of his parents and himself. There is more intrafamily friction. There is less motivating parental interest and involvement with his experiences.

He comes from a mother-dominated family. He experiences more distance from his father and feels less identification with

him than does the achiever, which, in turn, leads to some confusion of sex-role factors and less clear sense of personal identity. His self-concept and feelings of personal worth are essentially negative. He demonstrates greater feelings of inadequacy, more limited educational and occupational aspirations. His immediate and future goals are more vague, since he finds involvement and investment in tasks and people more difficult. He has greater difficulty accepting and integrating his hostility and aggression and, accordingly, has more interpersonal problems with both authority figures and peers. His peer relations are more often marginal.

He manifests greater impulsivity and less tolerance for delayed satisfactions and long-term goals.

In general, he shows more negative maladaptive personality traits.

Though these factors and variables are often statistically independent, they lose a logical independence when we look at the clinical evidence that provides a rationale for an individual's need to manifest, or an individual's susceptibility to, the various emotional factors and interpersonal variables that have been shown to differentiate the underachiever from the achiever.

#### THE UNDERACHIEVER

#### A CLINICAL DESCRIPTION

The research that takes us from the essentially actuarial,

demographic descriptions of the underachiever to concepts of individual interrelationships that seem to offer a causal rationale for the manifestation of the descriptive factors and their relationship to the impairment of learning is theoretically based on contemporary ego psychology.

Two papers form the cornerstones of this clinically-oriented tangent of research into the delineation of emotional or personality relationships and the learning difficulties of able adolescents. These classics are Melanie Klein's "A Contribution to a Theory of Intellectual Inhibition" (1945) and Anna Freud's "Aggression in Relation to Emotional Development: Normal and Pathological" (1949).

Hall (1966) effectively reduces and updates these two contributions, considered basic by many writers in this area, in the following summaries:

From the Freud paper:

The main function of the developing ego is to reconcile the demands for gratification made by instinctive urges with the conditions existing in the child's environment.

When the ego is faced by dangers, such as painful tensions from within, or threat of injury, punishment, or loss of love from without, it reacts with outbreaks of anxiety. One way of handling this anxiety is for the ego to renounce those functions proper to it in order not to have to undertake a fresh effort of repression or in order to subserve a desire for self-punishment. The constant vigilance entailed in this conflict results in impoverishment of the ego and the necessity to restrict expenditure of energy normally available for ego functions. In the normal instance, when the latency period sets in, a

truce is called in this defensive warfare. The development of new capacities and feelings of autonomy, the introjection of the values of parents and teachers, and a growing sense of ego-identity mark the latency period (p. 176).

From Klein's theory of intellectual inhibition:

In cases of learning inhibition, the assumption is that the pre-latency solutions to conflicts between inner demands and pressures from the environment have been unsatisfactory. Consequently, the child is not prepared for the "breathing space" of latency, for the successful identification of the self, and diminished dependence upon parents. Nor is he ready to substitute an internalized superego for the earlier oedipal ties to his parents. He uses his sensory apparatus in primitive forms - touching, seeing, feeling, in order to inhibit the dangerous "taking-in" of "food for the mind," and to inhibit holding and giving out of information, and to inhibit the exploratory function and aggressive curiosity about pregnancy, birth, death, and the differences between the sexes. For him, looking is dangerous, . . . and knowledge is forbidden (pp. 176-177).

In this theoretical context one cannot separate the underachiever from his family. The symptom is seen as directly related to the ongoing parent-child interaction, the constant mutual adaptation of the family members to and for each other.

The premise that an underachieving youngster necessarily implies a disturbed family or at least a distortion in intra-family relations is also suggested by the frequency with which underachieving is accompanied by family disturbance noted in the demographic figures above. It becomes a universal factor in the review and studies of individual relationships. Underachieving is seen as an "adjustment" reaction required of the

child for his family. The family in this frame of reference is seen as a dynamic organization in its own right and that elements in that organization maneuver or respond to each other in order to maintain a kind of homeostasis (Ackerman, 1958, pp. 68-79). This is analogous to an individual's emotional homeostasis and the idea that neurotic or even psychotic behavior is an "adjustment" - a sick, limiting, perhaps even an unrealistic adjustment to maintain a balance between internal and external forces.

Put another way, some families, like some individuals, seem to need a certain amount of chaos or conflict in their existence (perhaps to meet various kinds of sado-masochistic needs). They act in such a fashion as to perpetuate the condition (Chance, 1961, p. 154; Grunebaum, 1962, p. 465). The underachiever in this context becomes the one chosen to manifest the intra-familial struggle and maintain the distorted balance of the marriage (Wallach et al, 1960). The idea of the "chosen one" gains some support from the fact that rarely does more than one child in a family constellation manifest the underachieving symptom. As Sperry et al (1958) put it:

These boys have responded, for various reasons to a family pattern in which they were most eligible for the role of the unsuccessful one . . . the turning of events, the specific sources of parental resentment and the psychological fitness of the school to represent conflicts at home have contributed to the choice of the school as the area in which failure occurs (p. 111).

In this regard Derek Miller (1965) also points out that the

adolescent's underachieving may fulfill a real family need. A great deal of psychopathology focuses on the underachiever. One commonly finds, that when you help the underachiever, that is, when he responds to treatment, you also get decompensation in other members of the family. Evaluation of the underachieving adolescent must also include some understanding of the function his symptom fulfills in the family organization.

The dynamic parent-child interactions of the underachiever are described in the case studies reported by Kimball (1952 and 1953), Sperry et al (1958), Rubenstein et al (1959), Wallach et al (1960), Grunebaum et al (1962), Buxbaum (1964), Wilson et al (1967) and confirmed in a more systematically controlled research project published by Marion D. Hall (1966).

Sperry and her group (1958), reviewing the case studies of seven boys, found that:

- (1) The primary pattern of defense within the underachiever's family is renunciation and denial. They avoid confronting internal conflict by repression and external threat by denial. Repression of affect, secretiveness, pseudologia and actual deception dominate intra-family relationships, their communication with each other and with those outside the family circle.
- (2) The parents are oversolicitous, sensitive to the needs of others but deny their own needs and hesitate to protect their own feelings. They avoid competition, deny aggression and sexuality, and approve of self-sacrifice and self-effacement.

(3) Fathers see their underachieving sons as failures like themselves.

(4) Mothers are overprotective, ambivalent about their own femininity, and covertly hostile toward males.

Their observations are summarized in the following paragraph:

Though parents' defensive patterns influence all the children in a family . . . factors have come together to make the one we are studying the one to have severe learning difficulty. All of the children in this study are boys in families where mothers' covert hostility toward males, and the depreciated identification model offered by the father are factors that together discourage active striving for solution of the Oedipal situation and encourage retreat to a primarily pregenital dependent role in which certain genital satisfactions are also hidden (p. 103).

Grunebaum et al (1962), in a clinical study of eighteen underachievers, also finds the fathers of underachievers self-depreciating even in the face of demonstrated educational and occupational adequacy. They accept a self-derogatory role with an attitude of helpless resignation. They maintain a subtly dependent and helpless relationship to their wives, and their wives, in turn, seem to make this an unconscious condition for accepting their husbands. These fathers were thought to be in oedipal competition with their sons and could, accordingly, take neither pleasure from their sons' accomplishments nor provide approving support. They were "subject to infantile temper outbursts" toward both their sons and their wives.

Grunebaum outlines two kinds of parental interaction that they

associated with underachieving. In one kind, the mother holds the position of leadership and authority. Her husband and children see her as superior, and the husband agrees with her attitude that he is, indeed, inferior. They are joined in mutual denial. These women are ambivalent about their roles as wives and mothers, are threatened by masculinity, and need to compete with men as a constant denial of this threat. In order to maintain this defensive position, they select men who can be dependent and ineffectual, and, of course, the needs of this kind of woman meet the dependency needs of this kind of man. They strike a neurotic balance. These mothers, threatened by mature masculinity, cannot afford to let their sons become sexually mature, adequate men. They must necessarily overprotect and infantilize their sons.

In the second kind of parental interaction, the father apparently is authoritative and controlling. Underneath he is not much different than the passive father described above. However, he denies his passive dependency needs by being aggressive and overcontrolling in a rather infantile, demanding fashion. The wives are often capable people, but they see their husbands' assertions to masculinity as powerful and very dangerous. They act in danger of constant attack which they frequently, subtly, provoke. They apparently have a masochistic need to suffer the sadism of their husbands' immature aggression. Again, a neurotic "balance" is achieved. In the course of maintaining this balance, the mother again overprotects and



infantilizes her son. In the context of this relationship, assertion and aggression are shown to the son as dangerous and destructive. This view is encouraged by his mother's "fear and suffering." Thus he assumes a more acceptable, passive, nonachieving role.

In both instances it is evident that the families tend to confuse aggression as it refers to hostile, hurting impulses with the aggressive activity that goes into learning, achievement, and success. This confusion leads to the unconscious equation that "to achieve is to hurt." The usual distribution of parental authority between both parents is strikingly amiss in these families (p. 466).

Dr. Derek Miller (1965), head of the Tavistock Clinic Adolescent Unit, in a lengthy personal discussion, described similar family interaction patterns among both the British and American families he had treated. He adds an additional interpretation to Grunebaum's second kind of parental interaction. That is, the underachievers' mothers have been found to be using their sons as a weapon with which to attack the father. Her subtle use of the boy "as the barb of her spear" is not only a reflection of her problems with masculinity in general but also is seen as a direct attack on the father when his son, the projection of his own being, is encouraged to reject his own masculinity and thereby his father's. Miller also found that the underachieving behavior of the adolescent son is often a passive and very hostile counter-attack on both parents and, in extension, extra-family authority figures

such as teachers, etc. He noted rather severe psychosexual disturbances among his underachievers. They presented considerable homosexual concern. They seemed to have to de-sexualize heterosexual relationships with extensive intellectualization and were often very hostile toward the girls they dated.

Hall (1966, pp. 182-191) accomplished a more systematic and controlled study than the clinical observations surveyed in the preceding papers. She used a structured interviewing technique with the parents of 20 "learning-inhibition" (LI) boys and the parents of 20 matched controls. Her operational definition of learning inhibition makes it essentially synonymous with underachieving. Both parents were interviewed separately but simultaneously in their own homes. All interviews were tape recorded. The children whose parents were the subjects of this research were matched for age, intelligence, socio-economic status, and classroom environment. The interview responses were analyzed in two ways, empirically examining individual items and by restructuring the data utilizing Becker's factor structuring technique. Predictions were made for each item and each factor on the basis of hypotheses drawn from contemporary ego psychology.

The LI mothers were more overprotective, displayed less affectional warmth than the control mothers; they expressed lower esteem for their husbands; were more severe regarding

punishment and aggression, and expressed more dissatisfaction with their own role. They were more often presented as the authority figure in the family and displayed more child-rearing anxiety.

LI fathers described less warmth and more hostility than the control fathers. They were more readily punitive and were also more anxious about their own child-rearing roles. They reflected extremely low self-esteem and feelings of inadequacy. Their relationships to their wives were conflictual and disapproving. The LI fathers also expressed greater disapproval of the mother's relationship to her son, which was characterized as overprotective, dependency-fostering, and basically narcissistic rather than child centered.

Both LI parents evidenced the discontent and discord within the marriage, but the LI mothers were much more direct and open about it. As noted in the other studies, the LI father presents a negative evaluation of his wife and an even lower evaluation of his own worth. The LI mother has low self-esteem but has even less esteem for her husband. In contrast, the control mothers and fathers express high self-esteem and respect for each other. Hall calls attention to the fact that both theory and research in child psychology have neglected the father's role. The greatest emphasis is most often placed on the mother, both in theory and in clinical practice (Harris, 1966, p. 9), minimizing the fact that the LI father provides a very poor model for his son in terms of competency, masculine role-effectiveness,

and ego-integration. She points to the concurrence of factors that produce the underachiever:

The LI son, at this point in his development, faces the specific and essential tasks of identification with a masculine model, introjection of parental values and incorporation of a sense of industry and achievement. It would appear that the occurrence of emotionally based learning inhibition symptoms so prominent among . . . clinic referrals is related to this concurrence of specific need in the child and specific inadequacies in the parent model at a crucial stage in the child's development (p. 184).

The results read very much like those of Sperry and Grunebaum, detailed above. Hall's research supports their observations. Since her hypotheses were derived directly from the theoretical formulations of contemporary ego psychology and subjected to controlled investigation, they also add experimental (as opposed to clinical) support to the construct validity of the theory.

#### Summary of Clinical Findings

A general description of the adolescent male with emotionally based academic deficiency drawn from the clinical literature yields the following composite.

He is an adolescent with strong feelings of inferiority, passivity and prominent dependency needs. He often has a high level of free floating anxiety, associated with guilt and aggression. He denies and inhibits the direct expression of aggression though the fantasies presented in projectives represent considerable hostility and aggression particularly

toward parental figures. He experiences a distant or dominating father figure who discourages positive identification. His oedipal struggles are largely unresolved. He avoids competition, especially with father. In a sense, being a boy and becoming a man is unconsciously perceived as competition with father. There is a primary feminine identification. This problem in sex-role identification is underscored by his limited, age-appropriate, heterosexual activity and by the degree of homosexual conflict and concern he presents. His dependency needs place him on the horns of a dilemma, generating a great deal of hostility and anxiety over fear of loss and abandonment and threat of destruction. On the one hand, he feels he must refuse to be a man in order to both keep and protect mother and to protect himself from the dangers of competing with father, while, on the other hand, his developing physiology and culture demand that he try to become a man. His relationships to other people, to objects and, in a way, even to himself and his future are characterized by a lack of depth, feeling and involvement. He makes a limited investment in the present and can conceive of his future only in very vague general terms.

The intensity of these conflicts contributes to poor impulse control and low frustration tolerance. To underachieve is not only a way to avoid the threat of competing successfully but also gives the underachiever a kind of negative control of his vague existence.

The underachiever is defensive about his abilities and often has a magical denying sense of superiority that he needs to maintain. It is less anxiety-producing not to invest in learning or even in the non-intellectual aspects of his interpersonal world, his social milieu. By not trying, the underachiever can at least "control" his failure and maintain his belief in his superiority. Failure after trying is more anxiety-producing than failure because of a rationalized refusal to invest. If one tries and does not succeed, his feelings of inferiority are necessarily intensified by the direct confrontation with failure, and it is also more difficult to maintain the belief in a magical sense of superiority.

His mother is a woman who has difficulty accepting her feminine role. She expresses her conflicts through her son. He is a neurotic extension of herself; therefore, she must hold on to him, limit his individuation, keep him passive or risk the anxiety of losing what has become an integral part of her own identity. Thus, she inhibits his growth and is particularly threatened by his developing erotic and aggressive drives. She depreciates early achievement, exploration and masculinity. His dependency needs are exacerbated by the threatened loss of her love and fear of abandonment. She may consciously deny this constriction by going to the opposite extreme, forcing curiosity and exploration, which results in excessive stimulation and increases the threat of internal and erotic aggressive impulses. She selects a passive,

depreciated husband and assumes the dominant leadership role in the family. From this distorted model, the underachiever experiences aggression, dominance, learning and achievement as essentially feminine characteristics.

The underachiever is presented with an equally distorted model of masculinity. His father is either too weak a masculine figure or is in oedipal competition with him, making adequate resolution of oedipal struggles through latency and adolescence difficult if not impossible. The underachiever is in a constant state of ambivalence over the wish to be better than his father, and the fear of destroying or losing him by excelling him. Thus, the manifestation of fear of success or the need to fail. The associated mutual anxiety and guilt in both father and son generates a host of neurotic defenses. The underachiever is threatened with the loss of love and abandonment by the opposite-sex parent, and deprived of love and support by the parent of the same sex. He is unable to deal with the pressures of his internal conflicts. He resorts to denial, repression, and other constricting defense mechanisms that result in ego impairment.

As noted above, the theoretical framework of contemporary ego psychology, from which the conceptualizations of emotionally-based learning problems are derived, is based on the early theoretical formulations of Melanie Klein (1945) and Anna Freud (1949). Their applications have been expanded and discussed by Liss (1950) and Pearson (1952). Hartman (1958), White (1963), and Erikson (1959) have further refined and elaborated the theoretical constructs.

It is the particular elaboration of Erik Erikson that provides the conceptual framework for this research. Review and application of Erikson's conceptualizations are taken up in the next chapter.

#### COMMENT

The literature establishes that there are emotional relationships underlying the problem of academic deficiency. These findings add to the description and etiology of the underachieving syndrome. They contribute to better understanding of the problem, but there is a gap between this understanding and its application to the individual adolescent in both the educational and clinical settings.

Group variables such as anxiety, guilt-proneness, tough and tender-mindedness, and negative self-concepts are difficult to apply in a classroom. Family interaction variables not only cannot be dealt with in the classroom but are extremely difficult to treat in the clinic. The inference is that the clinician must deal with parents who have deep-seated character neuroses, and that the basic stability or the homeostasis of the family organization is in some way dependent upon the adolescent's underachieving syndrome. This seriously limits their motivation for change. Established group and individual therapeutic techniques leave a lot to be desired because of the great deal of time and expense they usually require, as well as the fact that each technique carries with it significant theoretical and



practical limitations. There is also the very real problem of the limited availability of professionally qualified personnel to accomplish any therapy that may be prescribed.

If academic deficiency is indeed a function of ego impairment, efforts can be made to make treatment more specific. Methods applicable in either the academic or clinical setting which do not directly involve reticent parents and which can take advantage of the adolescent's developmental need to function more independently of his parents may be found to treat or at least limit the effects of ego impairment.

If the applicability of Erikson's developmental conceptualizations can be demonstrated, developmental, phase or stage-specific, preventive or compensating procedures might be developed for application in the academic setting. Treatment could also be enhanced by taking advantage of both stage-specific developmental goals and by greater awareness of stage-specific basic conflicts or crises as manifested within the individual adolescent underachiever.

The research to date emphasizes group findings and parent-child interaction. There is a need for better understanding of the intra-individual processes that result in ego impairment and are subsequently manifested in academic deficiency.

It is hoped that this research will add to the understanding of academic deficiency and that it will contribute to bridging the gap between etiology and the pragmatic need

for the application of knowledge and skills to encourage personality change and emotional health.

## CHAPTER III

## REVIEW AND APPLICATION OF ERIKSON'S THEORY

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## ERIKSON

Every scientific discipline develops its own concepts and language, and evolves a unique frame of reference. This is often necessary for precision of thought and meaning. However, varied and independent observations of the same object not only fractionate the perception of the observed object, but also isolate the observers into jealous communities (or university departments), with little communication with or understanding of each other's roles and contributions. Sometimes the techniques and specific languages of respective disciplines become so elaborate that the object studied becomes obscured. Nowhere does this seem more frequent than in the many disciplines organized for the study of man.

Occasionally an editor with a broad perspective (e.g., J. Mc. V. Hunt and Gardner Murphy) can unify or systematize the contributions of different disciplines. More rare is the scientist with originality whose integration becomes a significant innovation. In the study of human behavior, Erik H. Erikson is such a man. He has combined the facts of biological development with the broad cultural, immediate social, and familial contexts in which the person must grow. Many writers feel that he successfully integrates the contributions of individual and social psychology, psychoanalysis and cultural anthropology into a lucid, pragmatic bio-social theory of personality development (Inkeles and Levinson, 1956; White, 1963; Friedenberg, 1966).

Robert White (1963), in the monograph "Ego and Reality in Psychoanalytic Theory," says:

Erikson's account is the first one to do justice in more than a schematic way to both the processes of inner development and the influence of social and cultural surroundings. . . His well known eight stages, presented first in Childhood and Society (1950) and amplified in "Identity in the Life Cycle" (1946 to 1956) are the result of a searching attempt to establish the part played by the surrounding culture in individual growth. Erikson sees parents not only as individuals with their own traits but also as transmitters of cultural expectations. In both capacities they undertake to regulate the child's behavior, but in view of the interactive nature of all human relations, this is seen as a process of "mutual regulation" to which the child's activity makes a significant contribution. In the back of the parents' minds there may be a cultural time-table of what to expect of a child at each stage, but the child's developing behavior plays an indispensable part in evoking the success of expectations. The stages in the growth of an 8-year-old are thus determined from the child's side by his evolving sensorimotor capacities and cognitive grasp as well as by the instinctual developments postulated by Freud. Once more, we find the facts of sensorimotor development being summoned to assist in building psychoanalytic ego psychology (p. 19).

Erikson arrived at this theoretical formulation through a rather broad, historical view of the development of man and the social, cultural and psychological context in which he grows. He is a man with roots in many disciplines. Initially he was an artist (which he refers to as a "European euphemism for a young man with some talent and nowhere to go") with an artist's broad and sensitive awareness of the cognitive forms and expressions of people and an artist's sensitivity to the "context and backgrounds" of observation (White, 1963, p. 20).

He draws on personal experience and research in cultural

anthropology (1945), social psychology (1954c, 1960, 1964b), human development (1951, 1958a), child and adult psychopathology (1954b, 1958b) and psychoanalysis (1954a, 1956). He integrates the observations from these often divergent areas into a theoretical conceptualization of "healthy" personality (ego) development with what is recently referred to in his book, Insight and Responsibility (1964a), as "psychoanalytic insight."

For Erikson, personality development is directly related to physical growth, which provides the organism with progressively more differentiated individual capacities. With the more highly developed sensory modalities, intellect and physical capacities which accompany advancing age, the individual is faced with an expanding radius of social demands and expectancies which lead to opportunities as well as limitations imposed by both himself and the culture. Although his theory is psychoanalytic, Erikson broadens the Freudian concept of pleasure seeking for erogenous zones with what he calls "modes." Modes refer to generalized patterns of behavior in the motor and cognitive spheres. The individual's development from oral to anal to phallic stages is determined by the physiological development of his sensorimotor potential, supplemented by changes in his overall sensitivity to himself and the world about him.

As noted in Chapter I and detailed below in Figure I, "Diagram of Erikson's Conceptualization of the Development of Ego Identity," Erikson divides his concept of development into eight stages, each with its own physical prerequisites and emotional precursors, each

CRISIS PERIOD	PSYCHOSOCIAL STAGES	SOCIAL RADIUS	PRECURSORS	PSYCHOSOCIAL MODALITIES	CRITERIA OF PSYCHOSOCIAL HEALTH AND ILL-HEALTH	PRIMARY DERIVATIVES
I INFANCY	Oral-Respiratory, Sensory-Kinesthetic (Incorporative Modes)	Mother or Mother Figure	Unipolarity vs Premature Self-Differentiation	To get To give in return	Trust vs Mistrust	Time Perspective vs Time Diffusion
II EARLY CHILDHOOD	Anal-Urethral, Muscular (Retentive-Eliminative)	Immediate Family	Bipolarity vs Ascism	To hold (on) To let (go)	Autonomy vs Shame, Doubt	Self-Certainty vs Identity-Consciousness
III PLAY AGE	Infantile-Genital, Locomotor (Intrusive, Inclusive)	Play Groups, Parents, Siblings	Play Identification vs (Oedipal) Fantasy Identities	To make (=going after) To "make like" (=playing)	Initiative vs Guilt	Role Experimentation vs Negative Identity
IV SCHOOL AGE	"Latency"	Teachers and Other Significant Adults	Work Identification vs Identity Foreclosure	To make things (=completing) To make things together	Industry vs Inferiority	Anticipation of Achievement vs Work Paralysis
V ADOLESCENCE	Puberty	Cliques, Social Prototypes, Heterosexual Relationships	Four Previous Stages	To be oneself (or not to be) To share being oneself	Identity vs Identity Diffusion	Solidarity vs Social Isolation
VI YOUNG ADULT	Genitality	Adult Society	Sexual Identity vs Bisexual Diffusion	To lose and find oneself in another	Intimacy vs Isolation	
VII ADULTHOOD		Adult Society	Leadership Polarization vs Authority Diffusion	To make be To take care of	Generativity vs Self-Absorption	
VIII MATURE AGE		Adult Society	Ideological Polarization vs Diffusion of Ideas	To be, through having been To face not being	Integrity vs Disgust, Despair	

FIGURE I

DIAGRAM OF ERIKSON'S CONCEPTUALIZATION OF THE DEVELOPMENT OF EGO IDENTITY

with its own developmental challenges or psycho-social crises. The psycho-social crises of each stage are a function of the intra- and inter-personal conflicts which must be adequately resolved and integrated for the successful negotiation of each subsequent crisis stage. These normal developmental "crises" occur in sequence, and each limits or enhances the development of the personality. Each stage has its criteria of relative psycho-social health. Whether development is limited or enhanced is a function of the degree of resolution which is achieved in each crisis stage. By the conclusion of each crisis stage, the component of personality which is related to that specific psycho-social stage will have developed or become crystallized in a more or less lasting form. It is not expected that each or any of the crisis stages will be completely or "perfectly" resolved.

The unsuccessful resolution of any given crisis stage will make the resolution of subsequent crisis stages more difficult. In addition, the weakness in one or more stages of psycho-social development will be reflected in the mature personality.

Since this research is limited to adolescents, we are primarily concerned with crisis stages I through V, Infancy through Adolescence. These are described in detail in the following section.

#### SPECIFIC CRISIS STAGES AND THEIR DERIVATIVES

##### First Crisis Stage: Infancy

In the first stage the person must develop a sense of basic trust. The crisis of Infancy is a function of the child's relationship



to his mother or mother figure. Food, love, and security are initially incorporated orally as a consequence of the process of mothering. The warmth, dependability, and consistency he experiences from the mothering process help develop his confidence in himself and the limited radius of the world he can perceive. This radius widens as he develops increased cognition and can begin to incorporate through his eyes, ears, and other perceptual modes as well as orally. In the latter part of this stage, he becomes increasingly aware of himself as a distinct person. He may perceive this differentiation as a loss of mother, a loss of part of him, or a degree of abandonment for which he is responsible. As Erikson notes:

It is against the combination of these impressions of having been deprived, of having been divided, and of having been abandoned, all of which leave a residue of basic mistrust, that basic trust must be established and maintained (1959, p. 61).

Erikson labels the precursors to establishing a positive ratio between basic trust and its counterpart basic mistrust, Unipolarity and Premature Self-Differentiation. Unipolarity is defined as a

. . . dominant sense of the goodness of individual existence. While still vulnerably dependent on direct, continuous, and consistent maternal support, an actual sense of the reality of good powers outside and within oneself must be assumed to arise (1959, p. 140).

Premature Self-Differentiation, the negative counterpart to unipolarity, is characterized by "a diffusion of contradictory introjects and a predominance of fantasies which pretend to coerce hostile reality with omnipotent vengeance" (1959, p. 140).

When a sense of premature self-differentiation is predominant, the infant develops a basic sense of mistrust.

From the ratio of a sense of unipolarity versus the sense of premature self-differentiation, Erikson establishes his criteria of health vs ill-health for the first stage: Trust vs. Mistrust. If the resolution of this first crisis is essentially positive and a sense of unipolarity is predominant, the infant develops a sense of trust in himself and the world about him. As stated by Erikson:

The general state of trust, furthermore implies not only that one has learned to rely on the sameness and continuity of the outer providers but also that one may trust oneself and the capacity of one's own organs to cope with urges; that one is able to consider oneself trustworthy enough so that the providers will not need to be on guard or to leave (1959, p. 61).

As the individual matures psychologically and his life experiences widen, the experience of a healthy basic trust (or its converse, mistrust), becomes more differentiated and is manifest by primary and a number of secondary derivatives. The primary derivatives for the first crisis stage are: Time Perspective vs. Time Diffusion.

Time perspective implies that there is sufficient trust in the world and in oneself to allow for the delay of immediate gratification of wishes or desires in order to obtain a future goal. The negative derivative, time diffusion, is manifested in subsequent psychological functioning, by general attitudes and feelings which represent mistrust in the future, or the inability to endure any aspect of life which demands delay such as waiting or making long-term plans.

This transposition of trust to a temporal concept is explained by Erikson in the following:

. . . the conception of temporal cycles and of time qualities is inherent in and develops from the first experience of mounting need tension, of delay of satisfaction and final unification with a satisfying "object." As tension increases, future fulfillment is delayed, moments of impotent rage occur in which anticipation (and with it, future) is obliterated; the potential of an approaching potential satisfaction again gives time a highly condensed quality of intense hope and fear of disappointment . . . all this contributes the temporal element to the formation of basic trust, i.e., the inner conviction that . . . sufficient satisfaction is sufficiently predictable to make waiting and "working" worthwhile . . . (thus) . . . Attitudes which represent a mistrust of time; every delay appears to be a deceit; every wait an experience in impotence; every hope a danger; every plan a catastrophe; every potential provider a traitor (1959, p. 141).

A number of more specific secondary behavioral derivatives are deduced from this general postulate. They are:

1. Basic mistrust in others or belief in the trustworthiness of others.
2. Sense of urgency and also of a loss of consideration for time as a dimension of living.
3. Attitude on the part of the individual of having missed his opportunity for success; a feeling of having suffered a premature and fatal loss of useful potential.
4. Impulsivity or low frustration tolerance; the inability to delay impulse relates to poor concentration and limited ability to sustain attention.
5. Poor object relations; the individual cannot trust enough to incorporate people or things.
6. Diffuse parameters; the past, present and future become vague and diffuse.

7. Greater utilization of fantasy as a mechanism for controlling omnipotence and rage.

Second Crisis Stage: Early Childhood

The crisis or conflict of the second stage of the psychosocial development is autonomy vs. shame and doubt. This struggle is a function of the child's increased physiological development and control of incorporating, retentive and eliminative muscle systems. Along with these evolving physical capabilities comes a social radius that has expanded from the mothering figure to include the immediate family. This stage brings to the fore all the mutual expectancies and controls the family and the child demand of each other while the child is developing an initial sense of individuality. With its emphasis on controls, on retention and elimination, this stage is analogous to psychoanalysis' anal stage. To quote Erikson:

The overall significance of this stage lies in the maturation of the muscle system, the consequent ability (and doubly felt inability) to coordinate a number of highly conflicting action patterns such as "holding on" and "letting go," and the enormous value with which the still highly dependent child begins to endow his autonomous will. . . This stage, therefore becomes decisive for the ratio between love and hate, for that between cooperation and willfulness and for that between the freedom of self-expression and its suppression (1959, p. 68).

The precursors to autonomy vs. shame and doubt are Bipolarization vs. Autism. The achievement in infancy of a predominant sense of unipolarity, that is, trust in oneself and the world, permits bipolarization or what in psychoanalytic terms is referred to as object cathexis. Bipolarization refers to the persistent ambivalence of early childhood. There is the evolving differentiation of identity:

the "I" and "you," "me" and "mine." There is the demand to stand on one's own feet, along with the realization that one is still vulnerable and dependent. There are the ambivalent external demands for better controls and growth manifest in the processes of toilet training, learning to walk, talk, etc., which allow a child to feel that to experiment with choice is both permissible and desirable, and which, in turn, leads to the development of a healthy sense of autonomy. The criterion of psychosocial health for this stage is this sense of Autonomy.

If the child's experiences with the significant persons in the limited social radius of his immediate family do not allow for the development of a healthy sense of autonomy, then he is forced to look upon his natural impulses for autonomy as dangerous to himself and others and somehow forbidden. The object with dangerous and forbidden feelings is felt to be a bad object. He withdraws into a form of autism which leads to the criterion of ill-health: A sense of Shame and Self-Doubt. Erikson describes the rationale for this autism:

If outer control by too rigid or too early training insists on robbing the child of his attempt gradually to control his bowels and other functions willingly and by his free choice, he will again be faced with a double rebellion and a double defeat. Powerless in his own body (sometimes afraid of his bowels) and powerless outside, he will again be forced to seek satisfaction and control either by regression or by fake progression. In other words, he will return to an earlier, oral control . . . or he will pretend an autonomy and an ability to do without anybody to lean on which he has by no means really gained (1959, p. 68).

Shame is the experience of self-consciousness, of feeling exposed and looked at. It is "being with a public history." Doubt

concerns the reliability and reconcilability of the whole span of childhood. It is the adolescent manifestation of initial basic mistrust that has persisted through each of the preceding crises. Mistrust becomes doubt about one's own tools, capabilities and realities; and doubts about the reliability, purposes and meanings of adults, past and present.

The primary derivatives of early childhood that are deduced from autonomy vs. shame and doubt are a sense of Self-Certainty vs. a sense of Identity (Self-)Consciousness.

Self-certainty is the lasting sense of autonomy and pride that is the product of "establishing self-control without the loss of self-esteem." Identity (self-)consciousness is a function of the lasting sense of doubt and shame that comes from "the feeling of muscular and anal impotence, the loss of self-control, and of associated parental overcontrol" (1959, p. 68).

The secondary derivatives which are deduced from the crisis of Early Childhood are:

1. A feeling of uncertainty or self-confidence as to the correctness of the courses of action which the individual has followed.
2. A sense of independence in that the individual comfortably makes decisions and lives his life without being primarily dependent upon his family guidance.
3. A fear of being shamed or publicly exposed to peers and leaders.
4. An angry pretense of autonomy in a form of isolation.
5. A defiant shamelessness.

Third Crisis Stage: Play Age.

By this time the child's social radius encompasses parents, siblings, and play groups. He has developed greater mobility and language skills which, in turn, force greater interaction both in reality and in fantasy. This is also the stage of infantile sexual curiosity and occasional overconcern with sexual matters. It is analogous to the oedipal stage.

In this period the child develops a predominant sense of Initiative or Guilt. The precursor to establishing initiative is Play Identification, that is, the child begins to engage in role taking activities with adults and peers. In this process, Erikson says:

He begins to make comparisons and is apt to develop untiring curiosity about differences in sizes in general and sexual differences in particular. He tries to comprehend possible future roles or at any rate understand what roles are worth imitating. His learning now is eminently intrusive and vigorous; it leads away from his own limitations and into future possibilities. . .

The intrusive mode dominating much of the behavior of this stage characterizes a variety of configurationally 'similar' activities and fantasies. These include the intrusion into other bodies by physical attack; the intrusion into other people's ears and minds by aggressive talking; the intrusion into space by vigorous locomotion; the intrusion into the unknown by consuming curiosity (1959, p. 76).

He must develop the initiative to test and experiment with those possibilities he conceptualizes, in reality and in fantasy, as a basis for an adequate sense of ambition and independence.

Opposing initiative is guilt. Its precursor is the oedipally-bound Fantasy Identity that the child must work through in the process of establishing identifications with the parents of the

opposite sex. The anxiety and constriction generated by a pre-occupation with oedipal fantasies limits his freedom to invest in and master the techniques of play identification and leaves him with a predominant sense of guilt. Thus the criterion for health and ill-health for this third crisis stage is Initiative vs. Guilt.

The primary positive derivative from initiative is a freedom for curiosity and psychosocial Role Experimentation. The negative derivative from a predominant sense of guilt is the self-limiting choice of a Negative Identity. In the choice of a negative identity the individual feels that he cannot live up to the expectations of others (or himself) and attempts to define some role or identity in which he can feel some semblance of security - some sense of being. Erikson notes that:

Where the identity crisis breaks through to the oedipal crisis and beyond it to a crisis of trust, the choice of a negative identity becomes the only form of initiative a youngster can manifest, that is, a complete denial of guilt or a complete denial of ambition as the only ways of managing guilt (1959, p. 144).

The secondary derivatives are:

1. Contempt for and a tendency to deny background, hostility toward roles considered proper and desirable in one's family or immediate community.
2. Inability to achieve emotionally comfortable role experimentation in adolescent subsocieties where discipline and boundaries are provided by the group.
3. The feeling that one's worth as a person is a function



of what he is doing, or what he may do next, not of what he is as an individual.

Fourth Crisis Stage: School Age

The child adds teachers and other significant adults to his social radius in this fourth crisis stage. He is now ready to see how things are done and to try to do them as his physical capabilities and initiative grow. He goes to school. He is ready to participate in and share tasks and responsibilities with other children. He is also ready to draw some of his sense of identity from teachers and ideal prototypes. At this stage, being someone is concretized to being someone who knows and does something specific, a plumber or a baseball player, a pilot or a teacher. Identity, then, is a function of what one does and how well he does it. The child now needs to do and make things which are real, are actually useful, and are therefore important because they represent a sense of participation in the real work-world of adults.

School age is the period of latency and as Erikson notes:

The school age significantly follows the oedipal stage: The accomplishment of real (and not only playful) steps toward a place in the economic structure of society permits the child to reidentify with parents as work and tradition bearers rather than as sexual and familial beings, thus nurturing at least one concrete and more 'neutral' possibility of becoming like them (1959, p. 128).

Work Identification, the precursor to the positive resolution of this stage, is the constructive redirection of instinctual aims from which the child develops a sense of achievement or accomplishment. It is also the positive identification with those who know things and how to do things. It makes possible the anticipation of satisfaction

from future work identifications or roles. A sound work identification leads to the development of a sense of Industry which is the criterion of psychosocial health for this stage.

Identity Foreclosure is the precursor to the criterion of psychosocial ill-health: A sense of Inferiority. It implies a premature closure of the ever-expanding process of developing healthy ego identity. The deep sense of personal inadequacy or mistrust in one's own physical and emotional resources forces this foreclosure, in which the individual defensively inhibits his development or regresses to maintain a position of dependency, of being cared for, or being protected against one's own inferiority. Where a sound work identity does not develop, this feeling of insecurity and deep sense of personal inadequacy and fear of competition develops in its stead.

It should be noted that this feeling of insecurity can be the product of many things - internal and external. For example, it could be the function of unrealistic parental demands being made upon the child; of inadequate resolution of the previous psycho-social crises; or of an unrealistic ego ideal, willing to settle only for omnipotence or omniscience. Whatever the reason, the individual is excluded from that experimental competition in play and work through which he learns to find and demand his kind of achievement and work identity.

The primary derivatives from a sense of industry vs. inferiority are Anticipation of Achievement vs. Work Paralysis.

Anticipation of achievement as a source of pleasure and recognition is a function of the fact that one learns that work completion

gives one a sense of accomplishment, reflects capability and is direct evidence of personal adequacy.

Work paralysis is a function of so severe a sense of inferiority and inadequacy that one can invest in no external source of identity or gratification and is, in effect, immobilized.

The secondary derivatives are:

1. Difficulty anticipating achievement and work endeavors which are a source of pleasure and recognition.
2. Inability to concentrate on required or suggested tasks.
3. Goals that are vague or grandiose.
4. Excessive awareness as well as abhorrence of competition.
5. Fears of competing with father, directly or indirectly.
6. A subtle need to fail or an inability to complete tasks.

#### Fifth Crisis Stage: Adolescence

Adolescence is a particularly crucial stage of development during which so many physiological changes, needs, roles, and defenses must be integrated and crystallized into a sense of identity.

Adolescents are sometimes morbidly preoccupied with what they appear to be in the eyes of others as compared with what they feel they are and with the question of how to connect their previously developed roles and skills with their current ideals and prototypes. The individual's social radius now extends to cliques, social prototypes, and heterosexual relationships, through which he must reconcile his self-concept and his community's concept of him in order to achieve a sense of "inner continuity and social sameness." Erikson refers

to this period as a "psychosocial moratorium" during which the individual integrates his experiences (what he was as a child) into a sense of identity with which he can successfully confront the demands of adulthood (what he is about to become). He describes the function and purpose of the psychosocial moratorium in the following statement:

Social institutions support the strength and distinctiveness of work identity by offering those who are still learning and experimenting a certain status-of-the-moratorium, an apprenticeship or discipleship characterized by defined duties, sanctioned competitions, and special freedoms, and yet potentially integrated with hierarchies of expectable jobs and careers, castes and classes, guilds and unions (1959, p. 145).

The precursors to adolescence are simply stated as the Four Previous Stages and thus emphasize the integrating and crystallizing aspects of this particular crisis stage. In a sense, this is an organizing and regrouping period during which the individual marshals his forces for a realistic advance to successful maturity.

The criterion of health for the crisis stage of adolescence is the development of a sound Ego Identity. The criterion of ill-health is Identity (Ego) Diffusion.

The crisis of adolescence, the ego identity crisis, is especially significant for the healthy resolution of the three subsequent stages: Young Adulthood, Adulthood, and Mature Age.

Ego identity is defined as the psychosocial equilibrium necessary for the individual to make a satisfactory adjustment as an adult, both intrapersonally and to his society. A sound ego identity includes: a clear perspective of the future, an adequate

self-concept, an ability to relate positively to others, and an inner assuredness of anticipated recognition from those who count.

Following is Erikson's summary definition of ego identity:

The growing and developing young people faced with this physiological revolution within them, are now primarily concerned with attempts at consolidating their social roles. They are sometimes morbidly, often curiously, preoccupied with what they appear to be in the eyes of others as compared with what they feel they are and with the question of how to connect the earlier cultivated roles and skills with the ideal prototypes of the day . . . The integration now taking place in the form of ego identity is more than the sum of childhood identifications. It is the inner capital accrued from all those experiences of each successive stage, when successful identifications led to a successful alignment of the individual's basic drives with his endowment and opportunities. . . the sense of ego identity then, is the accrued confidence that one's ability to maintain inner sameness and continuity (one's ego in the psychological sense) is matched by the sameness and continuity of one's meaning for others (1959, p. 89).

With the term identity diffusion (or ego diffusion), the criterion of ill-health, Erikson suggests a "split of self-images, . . . a loss of centrality, a sense of dispersion and confusion and a fear of dissolution" (1959, pp. 122-123). It is a function of the accrued doubt and feelings of inferiority that result from the predominantly poor resolution of the preceding four crisis stages. The individual is both unsure of his own capabilities and unable to accurately evaluate what others expect of him.

Identity diffusion results in a disturbed sense of workmanship which includes learning and academic problems, because it is often manifest in an inability to concentrate on required or suggested tasks and in a self-destructive preoccupation with some one-sided activity. There is also an oedipally related excessive awareness

as well as an abhorrence of competition. Erikson explains the intolerance, clannishness, negativism, and inappropriate idealizations of some adolescents as a necessary defense against the threat manifest in the sense of identity diffusion. He says:

It is difficult to be tolerant if deep down you are not quite sure if you are a man (or a woman), that you will ever grow together again and be attractive, that you will be able to master your drives, that you will really know who you are, that you know what you want to be, that you know what you look like to others, and that you will know how to make the right decisions without, once and for all, committing yourself to the wrong friend, sexual partner, leader, or career. . . To keep themselves together they temporarily over-identify, to the point of apparent complete loss of identity, with the heroes of cliques and crowds. . . They become remarkably clannish, intolerant and cruel in their exclusion of others who are "different" in skin color or cultural background, in tastes and gifts and often in entirely petty aspects of dress and gesture arbitrarily selected as the signs of an in-grouper or an out-grouper (1959, pp. 92-93).

There is a temporary defense against identity diffusion in the sort of reactive identity that adolescents establish by forming cliques and by stereotyping themselves, their ideals and their enemies.

The primary derivatives of identity vs. identity diffusion are Solidarity vs. Social Isolation.

The sense of solidarity is a function of the successful integration of the accrued identity forming experiences into a solid, stable, acceptable ego identity with which the adolescent can confidently approach the demands of adulthood.

Social isolation, the negative derivative, is a withdrawal from interpersonal relations to maintain some sense of cohesion (if only in fantasy) while suffering a sense of identity diffusion.

The secondary derivatives are:

1. An adequate self-concept.
2. A sense of psychosocial well being; being at home in one's body.
3. The ability to relate positively to others.
4. An inner assuredness of anticipated recognition from those who count.
5. Recognition of one's self-concept and the response or recognition of the community's conception of one's self.
6. The individual has a sense or feeling of knowing what his plans and goals are and where he is headed in the foreseeable future.
7. A tendency to be depreciative of others as well as oneself.
8. An avoidance of competition.

#### RELATIONSHIP TO OTHER THEORIES OF PERSONALITY

Erikson's is a psychoanalytic theory. However, it varies significantly from other neo-Freudian social psychological theories such as those of Horney, Adler, Fromm, and Sullivan. In his stages of development, he integrates the major emphases of each of these writers, in the context of the inborn needs and capabilities that are manifest in the processes of psychosexual and psychophysiological development. He does not seem to overemphasize or limit his focus to one major area of interpersonal relations or another, e.g., the

family (Horney), the "mothering one" (Sullivan) or their societal context (Fromm).

Although there are numerous differences in emphasis and structure, Erikson's theory is very much like the biosocial theory of personality postulated by Gardner Murphy (1947). While Erikson's concepts and terminology are more difficult to comprehend than Murphy's, they also appear to be somewhat more systematically interlocked. Murphy's approach is very broad, holistic, and pointedly eclectic. Erikson is much less broad, also holistic, and obviously psychoanalytic. The concept of the expanding social radius, tied closely to development through the psychosexual stages and psychosocial modalities gives the impression of a more systematic framework to Erikson's conceptualizations. Nevertheless, many of Murphy's concepts could readily be integrated into Erikson's theory.

#### RESEARCH BASED ON ERIKSON'S THEORY

The frequency of references to Erikson's work in the literature is a reflection of the increasing interest and applicability of his conceptualizations. The 1950 Mid-Century White House Conference on Children and Youth (1951) chose Erikson's theory to serve as the basis for discussion of personality development because it most effectively allowed for the consideration of the viewpoints of all social and behavioral science disciplines.

A number of theoretical discussions have appeared that compare and contrast and attempt to integrate and apply Erikson's psychosocial epigenic conceptualizations, (Tabachnic, 1965; Holt, 1960; Jacobson,



1964; Maier, 1965). Wheelis's (1958) The Quest for Identity and Lynd's (1958) On Shame and Research for Identity are books that were very much influenced by Erikson's approach to identity.

In view of this interest and popularity, it is surprising and somewhat disappointing to note that only four studies have been published which are based on his theoretical formulations.

None of the published research deals with either the specific problem of underachieving or represents clinical research. However, they each seem to add support to Erikson's concept of ego identity, particularly to the ego identity diffusion continuum.

The first study (Hess and Hink, 1959) was a function of a larger research project on Erikson's concept of the process of identity formation in adolescence. This larger work is, as yet, unpublished. The project being considered here was actually a pilot study to compare the use of a forced versus free Q-sort procedure on "areas and dimensions" derived from Erikson's concept of identity.

Hess and Hink constructed a balanced design covering the areas of occupation, social role and sex role and the dimensions of autonomy in making decisions, feelings of competence in present or future role performance, and definiteness of the individual's identity decisions. A total of 72 items was paired, one item dealing with "positive" identity while its mate dealt with the "diffuse" identity counterpart. This gave 12 pairs of items for each dimension that were sorted on a ten-interval scale. The subjects were small groups of 11th graders, i.e., 16- to 17-year olds.

The free and forced sorts did not give strikingly different results. They found considerable intra-individual variation in both sorts and in their test, retest procedure with an interval of one week. They attributed this lack of stability to the differences between self-concept (a private image of oneself), and self-representation (the manner in which the individual presents himself to the outer world), which could not be dealt with adequately with the limited number and kinds of items they used.

The contribution this report makes to the study of Erikson's theory is, of course, an indirect one. Hess and Hink, in analyzing intra-individual responses found that the relationship between self-concept and self-representation is indeed a significant one. This supports Erikson's contention that a sound ego identity is in part a function of, "an inner sameness and continuity." That is, one's inner feelings about oneself should be essentially coincident with the way one wants the outer world to see him. This is more commonly referred to as the self-concept versus the ideal self, which is the emphasis of the research to be considered next.

Gruen (1960) presents experimental verification of Erikson's concept of ego identity in his study entitled "Rejection of False Information About Oneself as an Indication of Ego Identity." Gruen hypothesized that a person with a sound ego identity will demonstrate evidence of his psychosocial stability by rejecting evaluations of himself which are made by others, if these evaluations do not coincide with his own self-concept. Conversely an individual manifesting

evidence of ego diffusion will be prone to accept the evaluation made by others, even if these evaluations do not coincide with his own self-concept. Forty-five college students, ranging in age from 18 to 24 years, served as subjects. They were asked to perform a Q-sort of 100 items descriptive of personality characteristics. The items were sorted first on the basis of the subject's real self and then his ideal self. A discrepancy correlation score between real and ideal self was used as the measure of ego identity. As postulated by Erikson, there should be little discrepancy between the real and ideal self in subjects with sound ego identity. After a period of one week, the subjects were presented with personality sketches and told that these had been drawn up on the basis of the Q-sort results. Actually, the sketches were identical and wholly unrelated to the test materials. Two ten-point rating scales were then administered to allow for rejection of the personality sketch. The subjects were required to rate how effective the basic Q-sort had been in revealing personality, and the degree to which the sketch pointed out important characteristics of the subjects' personalities. Persons demonstrating a high degree of ego identity rejected the personality sketches as predicted. The results were statistically significant at the .01 level of confidence. Gruen concluded that his hypothesis was fully supported and that the results lend additional validity to Erikson's concept of ego identity.

Bronson (1959) demonstrates Erikson's concept of ego diffusion in a "normal" adolescent group. He hypothesizes that ego diffusion,

which is not necessarily of pathological proportions, is a frequent characteristic of individuals who are passing through adolescence. He uses a modification of Osgood's semantic differential technique and ratings from a recorded, semi-structured interview to assess four characteristics of psychosocial behavior which Erikson postulates as indicative of ego diffusion. Forty-six female undergraduates were used as subjects. On the basis of intra-correlations of these measures, each of the four characteristics of ego diffusion postulated by Erikson was found to be meaningful. Bronson concluded that ". . . the construct of identity diffusion is a measurable preliminary of personality development" (p. 416). He further concluded that the construct of identity diffusion holds considerable promise in understanding the seemingly unrelated manifestations of adolescent behavior as well as the social effectiveness of adults. In addition to its importance as an integrating construct in adolescent psychology, identity diffusion can also be seen as a significant concept in a study in adult personality difference.

The fourth and most recent study reported is an exceptionally well-done piece of research. Rasmussen (1964) wanted to demonstrate the concept of ego identity in a real-life situation. Rasmussen's subjects were military recruits. One of the rare environmental situations in which all of the psychosocial stresses are encapsulated is the nine-week military recruit training period. The recruit has to deal with the combination of physical intimacy, competition, definitive occupational choice, and self-definition, all of which are a function of the ego identity diffusion concept. Like Gruen,

he approached ego identity through the study of self-concept and was concerned about the relationship of the concept of ego identity to effective psychosocial functioning.

To investigate Erikson's concept of ego identity, Rasmussen devised an Ego Identity Scale (EIS) based on rather concrete derivatives from the criteria of health and ill-health of each of Erikson's crisis stages, which is analogous to the use of the ego identity diffusion continuum seen in other research. He administered the self-acceptance scale from Gough's Adjective Check List (ACL) to compare with the EIS and as a means of testing the construct validity of the concept of ego identity. The adequacy of a recruit's psychosocial adjustment was evaluated with a sociometric peer nomination form which had been developed, and whose reliability had been demonstrated, in this same military setting.

The EIS and the ACL were administered to 19 companies of recruits (N=1400) at the beginning of training. The peer nomination form was administered five weeks later to each of the 19 companies. This allowed the recruits time to define their roles in training and become acquainted with their peers. The three men in each of the 19 companies (of 70 men) with the highest scores on the peer nomination form were selected as the group manifesting adequate psychosocial adjustment. The three men in each company with the lowest scores comprised the group whose adjustment was considered poor. Because of certain attrition factors, he ended up with 56 subjects in the adjusted ego identity group and 51 subjects in the poorly adjusted identity diffusion group. He then compared the respective EIS and ACL

scores of these two groups. The results supported his hypothesis, ( $p > .01$ ), that individuals who demonstrate differences in the adequacy of their psychosocial adjustment will also show differences in ego identity. That is, the better the adjustment the greater the ego identity. The other hypothesis, that persons presenting evidence of satisfactory ego identity will demonstrate a greater degree of self-acceptance than will individuals presenting evidence of ego diffusion, was also supported beyond the .01 level of significance.

Rasmussen concludes that his work lends support both to the value of Erikson's theory in the systematic study of personality and to his position that an adequate ego identity is necessary for a person to cope effectively with his social and cultural environment. His results also demonstrate the construct validity of Erikson's theory in that his subjects met two different criteria of psychosocial adjustment and were distinguished in a predicted manner on the basis of an operational measure of ego identity.

#### APPLICATION OF ERIKSON'S THEORY TO THE STUDY OF ACADEMIC DEFICIENCY

To date there has been no published attempt to systematically relate ego impairment to academic deficiency. Erikson's concept of identity diffusion as a form of ego impairment seems an appropriate concept with which to demonstrate this relationship. Erikson's theory provides a framework and terminology with which to consider factors or conceptualize phenomena deemed relevant to both academic deficiency and personality development, from such diverse areas as

the school, the clinic, the psychological laboratory, and social psychology.

The theory makes it possible to demonstrate academic deficiency as a manifestation of a personality problem to be examined and delineated by clinical methods and for which various forms of psychotherapy must be considered. Its direct relationship to psychoanalytical theory makes it possible to apply Erikson's theory to very individual clinical research.

The theory readily lends itself to operational definitions, since it deals with both intra- and interpersonal developmental relationships as well as socio-cultural factors. Thus, the theory ties together in an orderly, sequential fashion the important bio-social phenomena of personality for the very necessary integration of longitudinal developmental concepts.

Finally, Erikson's concepts about initiative, ambition, workmanship, and a sense of industry presented explicitly in Crisis Stages III and IV, Play Age and School Age, relate directly to the issue of academic deficiency and ego impairment.

CHAPTER IV  
PROCEDURE

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## METHOD

The research model is a clinical one in which experienced clinical psychologists are asked to make global judgments on a rating scale developed for this research. The clinical psychologists were asked to make judgments either directly from test scores, or based on their clinical intuition or both, from each detailed case unit presented. This is essentially the way a clinician functions in clinical practice. A copy of the rating scale is included in Appendix A.

There is one difference between our approach and daily clinical practice. The psychologist in practice necessarily develops feelings and hypotheses about his patient and his patient's test responses from his knowledge of the patient's background and the interaction that evolves in the testing process as the patient relates to the psychologist, directly and via the particular instrument(s) the psychologist may be using. That particular experience was not possible for the clinical judges in this instance, as it was necessary to preserve the independence and objectivity of the judges. The judges had to make their ratings from data collected by, that is, in response to, the same examiner.

All the testing of the subjects was accomplished at Central High School, Bushey Hall, Watford, Middlesex. The school provided a small, comfortable, well-lit office in which all the subjects were interviewed and tested. The battery of individual psychological tests was administered to each subject in a series of two-hour

sessions. No subject required less than two sessions nor more than three. No subject was seen for more than two hours in any one day. The testing of each subject was completed within the week the testing was initiated. The testing on most subjects was completed on consecutive days. No one had more than two days' grace between testing sessions. The interview was conducted as part of the last session.

The parents of all the subjects were interviewed in the writer's office at the psychiatric clinic of the hospital in which he worked.

The tests were all scored and re-scored for accuracy and reliability. The responses and their scores were typed for inclusion in the case units. The process of typing and editing provided a third check on the accuracy of the material. The manner of presenting the test responses in detail was taken from Roy Schafer's Clinical Application of Psychological Tests (1948). The data from the interviews were organized into the format of the outlines shown in Appendix A. The twenty case units were arranged alphabetically, labeled consecutively 1 to 20, and put into ring binders. There was no direct identification as to whether a case unit was that of a UA or A subject.

Before the clinical judges began their work, a number of conferences were held with them to familiarize them with the rating scale and to resolve differences in interpretation of specific items of the scale. A practice case unit from the clinic's files was prepared. The judges applied the double rating procedure to this case and again discussed their differences and the problems generated by

the actual task. These proved to be essentially semantic differences which were easily resolved. After this, the clinicians were ready to undertake the judgments.

First, the psychologists were given only the verbatim individual psychological test protocols (the WAIS, Bender-Gestalt, HTP, TAT, Sentence Completion, and the Rorschach). They were instructed to complete the rating scale on the basis of these individual test data alone. Then they were given the four interviews and the group test data for each subject and asked to record any changes in their rating that resulted from being able to see the individual test data again in the context of the subject's background and history.

The sixty rating scales were collected and the ratings transposed to numerical values from one to five, one being the healthy end, and five the ill-health end of the continuum.

The ratings were organized so that the rating of the judges on each subject for each item could be compared. The ratings by the three judges across all subjects were consolidated for comparison of the UA and A groups. These totals were consolidated into categories, according to the Erikson Crisis Stages, into which the items had been grouped, allowing for the comparison of UA and A groups by crisis stages. All the ratings are shown by item, judge, and subject in Tables A9 through A23 of Appendix B.

#### SELECTION OF SUBJECTS

The experimental and control subjects were drawn from the sophomore class (10th year, ages 14 to 16) of Central High School.

Central High School is an American school for children of US military and government employees residing in the London area. Children of American civilians are admitted on a fee-paying, space-available basis. The school is located in Bushey Hall, near Watford, in metropolitan London.

The sophomore class was chosen because its age range, 14-16 years, represented a mid-range in adolescence. In such a limited age range, there is less probability of including pre-adolescents and late adolescents (pre-adults), limiting the possible contamination of extraneous variables. In addition, 15 years 11 months was set as the upper age limit, because it is the upper age limit of the Wechsler Intelligence Scale for Children. Choosing subjects older than 15 years 11 months would not only increase the risk of including the late adolescent but would demand the use of the Wechsler Adult Intelligence Scale as a measuring instrument. The WAIS, though logically and theoretically comparable to the WISC, is not directly comparable. The present age limits made it possible to use the same instruments with all subjects.

There were 143 adolescents in this class. 83 males and 60 females were divided into classes of 27-30 students each. The Cattell High School Personality Questionnaire (HSPQ) and the Wide Range Achievement Test (WRAT) were administered to each class.

In this school, as in most American high schools, students are given letter grades, A through F. F means failing; a C is for average performance; and an A is excellent, representing approximately the top five per cent of the grade distribution curve. The

letter grades were given numerical values (A = 4, B = 3, C = 2, D = 1, and F = 0), and these values were averaged to give a Grade Point Average (GPA) for each subject across the grading periods compared. A student with average resources is expected to achieve average or C grades and to maintain a grade point average of at least 2; one with better than average resources, 3 or better; and those with less potential, less than 2.

Each student's grades for the past three grading periods, previous psychological test scores, HSPQ and WRAT scores, and age, sex and school class, were summarized on a 5 x 8 card. After the subjects were chosen, their WISC scores were added to the summary card. The cards of adolescent females were removed for consideration in other research, leaving 83 males from whom to select underachievers and controls. The cards were then reviewed for selection of possible underachievers.

Of the 83 males, 22 were considered underachievers because of the discrepancy between their demonstrated potential and their current performance (GPA), as described in Chapter I, "Definition of Terms." Only 12 were able to meet our criteria. The 10 students who were not included were rejected for one or more of the following reasons:

1. They were older than 15 years 11 months.
2. There was a history of major illness.
3. They had experienced psychotherapy.
4. One of their parents was currently undergoing psychiatric treatment.

The controls were chosen at random from the remaining 61 students. Both the students and their parents readily agreed to the study.

The experimental and control subjects were asked to meet with the examiner in separate groups. The examiner was familiar to all of the students because of his previous experience with them. He had appeared before them as a member of panels for discussion of various topics connected with specific classes or projects they had organized over the previous two years. They were vaguely familiar with research procedure, to the extent of being aware of the need for taking samples and comparing experimental and control groups. They were asked if they would take part in a research project about high school sophomores. They were told that the results of the testing would be given to their counselors for use in helping them make future plans, and that the counselors would discuss the findings with them at any time after the data were all in. They were not told whether they were experimentals or controls or that this research dealt with underachieving. They were also asked to give the examiner permission to call their parents. School policy required specific parental permission to use students as subjects for research which included personality and projective test procedures. Also, the design was such that parental participation was required. One underachiever elected not to take part. He said later that he did not feel his parents wanted to get involved. This was later confirmed by his parents' refusal to come to the clinic when school authorities referred them independently of this research.

When called, all but one of the UA parents readily agreed to participate. This made a group of ten UA as the experimental group. These parents were not told the specific character of the research but readily saw its relevance to their son's difficulties. An interesting, very significant factor was in the amount of time and difficulty required to complete the necessary interviews with the UA, as compared with the A, parents. The UA parents spontaneously responded to the request that they participate, with enthusiastic remarks to the effect that they were pleased that someone was interested in helping their child, and that they were worried about what was to become of their son who constantly threatened failure. They repeatedly asserted how hard they had tried to motivate the subject, and the years of frustration and mutual aggravation that had resulted from their efforts. In sharp contrast to their enthusiastic verbal response is the record of broken appointments, rationalizations, and weak excuses of the UA parents who expressed such desperation. It took a full three months to complete arrangements with UA parents.

The parents of the achievers agreed to participate with only 30 minutes of effort on the telephone. They canceled no appointments and readily responded in the interviews. We had felt that there would be much more resistance among the A parents who, after all, had no apparent personal motivation to participate and who, the examiner thought, might hesitate to be seen at or get involved with a psychiatric clinic. They seemed motivated by a willingness to go along with their son's interest in the project. A few parents

expressed the feeling that they felt actual test taking and being interviewed was good experience for youngsters at a time when so much of this was required of people seeking jobs and university places.

As will be discussed in Chapter VI, this resistance manifest by UA parents is seen as evidence of their need to perpetuate the UA subjects' symptom.

The initial structure of the experimental (UA) and control (A) groups is detailed in Table 1, which lists the age, WISC Full Scale IQ, and grade point average of each subject, as well as his father's occupational level.

Because of their history of academic deficiency, one could reasonably consider the WISC scores of the UA's as somewhat depressed, and the discrepancy between their grade point average and their potential is somewhat greater than that indicated in Table 1. This is supported by the greater variance in WISC intra-test scores, by their school records, and their teachers' comments.

Experimental Group (UA) - The UA group has a mean age of 15 years 4 months with a range of 14 years 11 months to 15 years 9 months. Their mean WISC Full Scale IQ is 116.5 with a standard deviation of 5.47, and their grade point average is  $1.72 \pm .21$ . They come from middle to upper-middle class families. Three are civilians; five are children of senior noncommissioned officers, and two of officers.

Control Group (A) - The A group averages 15 years 7 months with an age range from 15 years 1 month to 15 years 10 months. Their mean WISC Full Scale IQ is 122.9 with a standard deviation of 6.67, and their grade point average is  $3.38 \pm .47$ . They represent



TABLE 1

Structure of UA and A Groups Showing: Age, IQ, Grade Point Average and Father's Occupational Level.

UA Case Number	Age*	WISC I.Q.	GPA	Father's Occupational Level
5	15-8-6	117	1.67	Chief Petty Officer (NAVY) Administration
6	15-3-4	116	1.67	Senior Master Sergeant Administration
10	15-1-24	125	1.75	Civilian Engineer
11	15-6-17	121	2.00	Lt Col Engineer
12	15-8-26	125	1.90	Master Sergeant Communications/Adm
13	15-6-28	111	1.75	Captain Meteorologist
14	14-11-17	108	1.67	Civilian Property Evaluation
16	14-11-9	114	1.75	Civilian Accountant
17	15-1-1	111	1.08	Master Sergeant Communications/Adm
18	15-6-1	117	2.00	Master Sergeant Air Police Chief
M	15-4	116.5	1.72	
$\sigma$	3.4 mo	5.47	.21	
<u>A</u>				
Case Number				
1	15-6-25	126	3.67	Technical Sergeant Medic
2	15-10-0	118	2.67	Lt Colonel (Army) Administration
3	15-3-26	130	2.67	Investigator Office of Special Investigation
4	15-8-0	122	3.80	Captain (NAVY) Engineer
7	15-10-6	125	3.00	Civilian Insurance Broker
8	15-3-17	131	3.17	Civilian Agricultural Economist
9	15-0-8	111	4.00	Civilian Sales Director
15	15-10-2	130	3.93	Civilian Math Professor
19	15-8-25	113	3.58	Captain (Navy) Aviator/Logistics Adm
20	15-8-17	123	3.33	Major Veterinarian
M	15-7	122.9	3.38	
$\sigma$	3.1 mo	6.67	.47	

\*Calculated from birth to the date subject was administered the WISC.

middle to upper-middle class families. Four are civilians; two are children of senior noncommissioned officers, and four of officers.

To assure that the two groups are indeed different in terms of achievement, a "t" test for the significance of the difference was run on the subjects' GPA's and their WRAT scores. The difference in GPA's and WRAT scores between the UA and A groups was found to be significant beyond the .005 level.

#### SELECTION OF TESTS

The tests utilized for this research were of two types: three group-administered procedures, and a clinical battery made up of individually-administered projectives and the Wechsler Intelligence Scale for Children.

#### GROUP TESTS

##### Wide Range Achievement Test (Jastak and Bijou, 1946)

The students could be made available to the examiner in large groups for only a limited number of forty-minute periods. The Wide Range Achievement Test (WRAT) was administered as a survey procedure and to aid in identifying the underachievers, if necessary. The Spelling and Arithmetic portions of the WRAT were easily administered in that time. The Reading portion was administered individually to those students who were actually being considered as possible subjects. The WRAT gives grade-level achievement scores in spelling, arithmetic, and reading based on standard American high school norms. It gives a gross but fairly reliable measure.

### High School Personality Questionnaire (HSPQ) (Cattell & Beloff, 1962)

The High School Personality Questionnaire, prepared by Raymond B. Cattell, Ph.D., D.Sc., of the University of Illinois, and Halla Beloff, M.A., Queens University, Northern Ireland, is described as a:

"Comprehensive personality measurement for the 12-18 year old range, arrived at briefly and objectively."

It was selected as an objective instrument that deals with fourteen personality dimensions. A copy of the HSPQ profile describing these fourteen dimensions may be found in Chapter V, Figure II, "UA & A Group HSPQ Profiles." The HSPQ has the advantage of requiring only 25 to 45 minutes to complete. It is based on solid statistical foundations and provides both a contrast and a balance to the more subjective clinical battery administered to each subject.

### Individual Psychological Tests

The individual psychological tests administered were:

- Wechsler Intelligence Scale for Children
- Bender-Gestalt and House-Tree-Person Figure Drawings
- Sentence Completion Test
- Rorschach Projective Technique
- Selected Thematic Apperception Test Cards

These were selected because they are all widely accepted clinical instruments from which clinical psychologists derive concepts about the dynamic structure and organization of personality. The selection of tests also had to be broad enough to provide sufficient material for experienced clinicians to make reliable global judgments.

### Wechsler Intelligence Scale for Children (WISC) (Wechsler, 1949)

The WISC was used both because it provides a good measure of intellectual functioning and gives the clinician both qualitative and

quantitative information about how the patient (subject) utilizes his resources. Many clinicians also use the Wechsler as a modified projective as described by Rapaport (1946) and Schafer (1948).

#### Projective Tests

The Bender-Gestalt (BG) and House-Tree-Person (HTP) figure drawings, Sentence Completion and Thematic Apperception Test (Bellak, 1962), and the Rorschach allow for broad sampling of projective material. Projective tests make it possible for the clinician to conceptualize individual personality dynamics in depth. Two modifications should be noted. First, in the HTP, subjects were asked to draw an additional person, "the opposite sex of the first person drawn." The writer has found it useful in his practice to be able to compare and contrast the male and female figures drawn. Subjects were given a blank piece of 8½ x 11 paper for each figure and asked to draw a house, then a tree, then a person and, lastly, the opposite sex of the first person drawn. The sentence completion test was made up of 45 stems that were taken from an "authorless" list of items that had been used in our clinic for the better part of ten years. Apparently this is not at all uncommon. According to Anastasi (1954):

The construction of projective sentence completion tests has been characterized by extensive borrowing of items. It is therefore difficult to trace the authorship of items or sets of items (p. 613).

A sample of the sentence completion form is included in Appendix A.

Second, a limited set of twelve TAT cards was selected as most relevant to the task. It was felt that the whole set of TAT pictures would become too burdensome in view of the rest of the test battery, and that some of the less structured cards would tend to

overlap the less structured Rorschach stimuli.

The TAT pictures and the rationale for selecting them are listed below:

Card 1	Relating to fantasies concerning achievement, ambition, and impotence.
Card 2	The oedipal situation.
Card 3BM	Depressive anxiety, guilt, etc.
Card 5	Relationship with mother.
Card 6BM	Mother-son relationship.
Card 7BM	Father-son relationship.
Card 7GF	Mother-daughter relationship.
Card 8BM	Relating to power and aggressive fantasies.
Card 12M	Relating to power and passivity.
Card 13B	Feelings of independence and inadequacy.
Cards 14 and 16	An opportunity to present self-image with some structure and with no structure.

#### Bender-Gestalt

The Bender-Gestalt figures were simply presented to the subject one at a time with the following introduction as suggested in Hutt and Briskin (1960):

I am going to show you some cards, one at a time. Each card has a simple drawing on it. I want you to copy them on the paper as well as you can. Work in any way that is best for you. This is not a test of artistic ability, but try to copy the drawings as accurately as possible. Work as fast or as slowly as you wish (p. 39).

#### Rorschach

The Rorschach was administered and scored in accordance with Klopfer and Kelley (1946) and Theodora Alcock (1963).

## THE INTERVIEWS

Each subject and his parents were interviewed clinically. The subject was interviewed regarding himself, his feelings about school, his peers and his parents. The mothers had two or more interviews. The first was on the birth and development of the subject, her feelings about the subject and his siblings, his school, and his future; and then in regard to her own history, with emphasis on her own family relationships, feelings about herself and her marriage. Each subject's father was similarly interviewed.

A good clinical interview cannot be a structured question and answer session. Outlines for each interview were prepared using Menninger's A Manual for Psychiatric Case Study (1952) as a guide. These outlines were used as a checklist to insure that all relevant areas were systematically covered and to provide a standard format in which to report the verbatim material collected. A copy of each outline is included in Appendix A.

The individual testing and all interviews were carried out in a clinical setting in a typically clinical fashion. The administration, scoring, and verbatim reports were completed in a more careful and detailed fashion than usual for purposes of this research.

## THE RATING SCALE

In order for judgments from different clinicians to be compared statistically, a five-point rating scale was developed. Erikson's organization of stages of development and the linear

perspective implied in his criteria of psychosocial health and ill-health readily lend themselves to a rating scale. Since ego diffusion and all the variables that are thought to contribute to it are not absolute concepts, they must necessarily be considered a matter of degree. A rating scale permits the necessary flexibility of judgment. Such flexibility insures that the individual and cumulative judgments are less a function of the instrument and, as much as possible, a function of the data as perceived by the experienced clinical judge.

As noted in previous chapters, Erikson posits eight major stages or crises in the development of the individual ego from "infancy" through to "mature age." He derives criteria of psychosocial health and ill-health for each crisis period. The adequate resolution of each crisis period is a necessary step toward the development of a healthy ego. The inadequate resolution of any one crisis stage leads to difficulties in resolving that stage and the conflicts of subsequent crisis stages. This, in turn, leads to various forms of ego impairment and maladaptive behavior. Underachieving is seen as a form of maladaptive behavior resulting from an ego impaired by identity diffusion. Identity diffusion is Erikson's criterion of ill-health for the inadequate resolution of his fifth crisis stage, adolescence.

Perfect or complete resolution of each crisis stage is only theoretical. However, for normal, healthy development, the resolutions must be predominantly positive.

We are primarily concerned with the first five crisis periods

Erikson posits in the development of the ego from infancy to adolescence. The transposition of our hypothesis, then, is that ego impairment is manifest by the inadequate resolution of one or more of Erikson's five crisis stages from infancy to adolescence. The inadequate resolution of each stage is expressed in various forms of maladaptive behavior, resulting in the inability to adequately resolve the crisis of adolescence, ego identity vs. identity diffusion. Thus, the manifestation of identity diffusion in adolescence. Therefore, the operational hypothesis is that the underachievers (experimental group) will demonstrate less successful resolution of each stage than the control group and will manifest a greater degree of identity diffusion.

In the rating scale each crisis stage is presented as a series of five-point continua from psychosocial health to psychosocial ill-health. It was predicted that the underachievers would cluster toward the "ill-health" end of each continuum, the controls toward the "healthy" end. Each crisis period has its criteria of health and ill-health. Each criterion has its psychological and behavioral derivatives. Thus, clinical observations, conclusions from other research, and statements of authorities can be classified under whichever crisis period they are logically derived from or related to. For example, under the first crisis stage labeled "Trust vs. Mistrust" are such items as "Trust in authority figures" - judged on a five-point scale from "appropriate, healthy" to "limited, unhealthy" - and "Ability to Control or Delay Impulses" - judged from "very good through good, adequate,



poor to very poor." 110 items derived from clinical observations, conclusions from other research, and the statements of authorities were put on 3 x 5 cards and sorted into groups that coincided with each of the five crisis stages. This was accomplished by six judges. The judges were:

A psychiatrist on the staff of the author's clinic.

The psychiatrist in charge of Tavistock's Adolescent Unit.

A senior psychologist at the Tavistock Clinic.

A senior psychologist at the Castle Hospital.

Two American psychologists.

Each of these people was experienced in the treatment of adolescents and felt quite familiar with Erikson's writings. Each of these judges was given a sample case unit and asked to judge each item as to whether:

1. It was related to the suggested Erikson stage.
2. It was relevant to the question of ego impairment.
3. They had any doubt that any particular judgment could be made directly or intuitively from the test and interview data that make up each case unit.

4. There was any overlap among items.

They were also asked to pencil in any changes they felt would make an item more relevant or appropriate to the rating scale type of judgment requested. This was required in order to achieve phraseology that could be interpreted as similarly as possible by different people to help assure that the final judges would have a common basis for judgment.

The first item sort left 75 items that all the judges felt were relevant and appropriate. However, many changes were suggested. These were considered and integrated and the items rephrased. The items were then listed under the relevant crisis stage and resubmitted to four of the judges. This time 63 items were agreed upon as relevant and appropriate, but eight of these were judged to be overlapping or redundant. This left 51 fully agreed upon items for the final rating scale plus four items that required simply a yes-no judgment. These related to the gross classification of UA or A group memberships and ego impairment. Ten of the 51 items were split into two judgments, a and b, because extremes at either end were considered manifestations of "ill-health." For example, Item No. 15:

Sense of responsibility.

- |              |       |       |       |                                      |
|--------------|-------|-------|-------|--------------------------------------|
| A. Realistic | _____ | _____ | _____ | Over-responsible,<br>guilt motivated |
| B. Realistic | _____ | _____ | _____ | Irresponsible                        |

Two items were similarly split into two judgments: whether a feeling was "felt" or "expressed" - that is, was present consciously or unconsciously; and whether it was acted upon. For example, Item No. 24:

Aggression toward mother figure.

Felt:

None \_\_\_\_\_ Very much

Expressed:

None \_\_\_\_\_ Very much

Nine additional items to be judged from the history and background material were agreed upon by the judges and added to the

list, independent of the five crisis stages. The final rating scale was made up of 64 items grouped as shown below in seven subscales. Subscales I to V relate directly to Erikson Crisis Stages I-V, Subscale VI to the four gross judgments, and Subscale VII to the nine supplementary ratings noted above.

<u>Subscale</u>	<u>Number of Items</u>
I	7
II	5
III	15
IV	7
V	17
VI	4
VII	9

These were prepared in booklet form and submitted to the judges with each case unit. That is, each judge completed 20 rating scales, one on each case unit. Each booklet included the following instructions on the cover sheet:

#### Rating Scale

From the case material presented, please judge the degree you feel the subject experiences and/or manifests the feelings, defenses or conflicts represented in the questions and items listed below.

Please mark the Rating Scale twice.

First, read only the Individual Psychologicals, from the Wechsler through the Rorschach, and mark the checklist in BLUE for each of the 20 cases.

Second, read the History and Background and the Psychologicals and mark the checklist again in RED, so that it will be clear what changes are made when the material is seen in the context of the history and background.

Please feel free to add any qualifying remarks to any item.

Please add any comments, impressions, etc., about the case that you care to at the end of this checklist, particularly if there are salient features that you wish to call attention to or to emphasize.

To help clarify the items, they are grouped under the Erikson crisis stage and derivatives to which they relate. Feel free to refer to the summary, "Erikson's Crisis Stages and Their Derivations," which is included with the case material.

A sample "Rating Scale" is included in Appendix A.

#### SELECTION OF JUDGES

The selection of experienced clinical psychologists to serve as judges for the prime task of this research proved more difficult than was originally anticipated. Professional colleagues in London, particularly those at the Tavistock Clinic and the Castle Hospital, were very generous with their time. Luncheons, several evenings and Sunday afternoons were contributed for discussions of variables, as reflected in their respective clinical practices, the development of the rating scale, and the selection of appropriate TAT cards. However, they could not find the forty to fifty hours required for the diagnostic review and double rating of the twenty case units. Their commitments were such that full payment for their time was not at issue. The scarcity of qualified clinical psychologists willing to take on this task and the necessity to pay them for the large block of time required limited us to three judges.

Three well-qualified judges were found, two American and one

British. The two Americans were Ph.D.'s in London on postdoctoral fellowships at the Tavistock and Hampstead Clinics, respectively. The third judge was a British clinical psychologist also associated with the Hampstead Clinic. Their full qualifications are listed in Appendix A under "Vitae of Clinical Judges."

Though three judges seems limited, a review of the clinical literature reveals that this number might even be considered generous.

## CHAPTER V

## RESULTS

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## HIGH SCHOOL PERSONALITY QUESTIONNAIRE

The results of the group performance on the HSPQ are considered three ways. First, those factors that differentiate (show significant or near significant differences) between the UA and A groups are identified. See Figure II, "UA and A Group HSRQ Profiles." Second, the UA and A profiles are compared with the "School Achievement" profile offered by Cattell in the HSPQ Handbook (1962, p. 19). See Figure III, "HSPQ School Achievement Profile Compared with Profiles of UA and A Groups." Third, UA and A profiles are compared with Upper and Lower Achievement group profiles of UA and A classmates (Fig IV).

When comparing differences on individual scales, significant differences (.05 or greater) are found on four factors, and differences that approach significance (.10) on two others. The following factors discriminated between the UA and A groups at the .05 level or greater (t test):

Factor B - General intelligence.

Factor E - Obedient, conforming vs. assertive, nonconforming.

Factor G - Disregards rules, undependable vs. conscientious, rule bound.

Factor I - Tough-minded, less aesthetically sensitive vs. tender-minded, sensitive.

A tendency towards significance (.10) is seen on Factor F - Sober, prudent vs. happy-go-lucky, and Factor O - Self-assured vs. apprehensive.

Factor B - General Intelligence

Cattell (1962, p. 13) refers to this scale as a "brief general

ability measure akin to Spearman's 'g'." He points out that the lower scores on the continuum tend toward "lower morale, less persistence" and less "strength of school interests." Though the UA mean falls at the mid-point of the scale, it nonetheless presents significantly less "strength of school interests," etc. than the 7.5 mean of the A group.

Factor E - Obedient, Conforming vs. Assertive, Nonconforming

The A group strikes a balance with the mean standard score of 5. The UA group, with a mean of 7.5, tends toward the "nonconforming" side of the continuum. Cattell notes that a "high score is very definitely part of the delinquency-behavior problem pattern in teenagers."

Factor G - Disregards Rules, Undependable vs. Conscientious

The A group mean of 6.5 compared with the UA group mean of 5.5 suggests that our achievers are a bit more conscientious and dependable than the UA group.

Factor I - Tough-minded vs. Tender-minded.

An A group mean of 6 vs. the UA group mean of 4 presents the underachievers as more "tough-minded" than the A group. Cattell indicates that one who is "tough-minded" tends to want to be more tough and masculine and, in some respects, nonacademic. Under tender-minded, he lists such characteristics as "aesthetically sensitive" and "imaginative in inner life and in conversation."

Factor F - Sober, Prudent vs. Happy-Go-Lucky

The UA group, with a mean standard score of 7.5 vs. 6 for the A group, would be considered less prudent and serious. The UA





group might also be a bit more impulsive with less well-directed enthusiasm. Cattell also implies that the tendency for desurgency, that is, for the adolescents to move away from the surgency, happy-go-lucky end of the continuum and to become more "desurgent", is to become more mature. Thus, the UA group may be seen as relatively less mature than the A group.

Factor 0 - Self-Assured vs. Apprehensive

The A group mean standard score of 5 is in the middle of this continuum. The mean standard score of 7 for the UA group indicates that this group tends to be more apprehensive, guilty and inadequate.

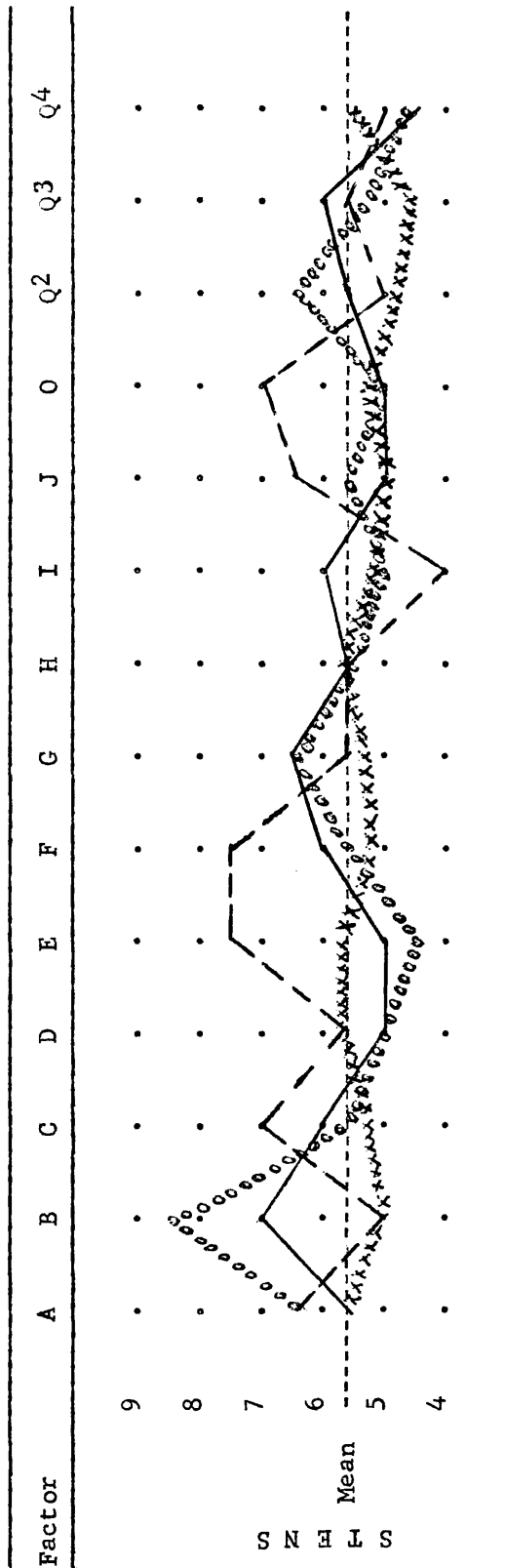
In summary, the comparison of the UA and A groups on individual HSPQ factors shows the UA group to:

1. Manifest less general intelligence or "strength of school interests" than the A group.
2. Be less conforming and obedient and more assertive and stubborn than the A group.
3. Present themselves as carefree and happy-go-lucky and to be less prudent than the A group.
4. Be more fickle, demanding and impatient than the more mature, conscientious A group.
5. Be less aesthetically sensitive and more concrete, that is, more concerned with immediate reality than the A group.
6. Be a bit more apprehensive and anxious compared to the greater self-confidence and adequacy of the A group.

Figure III is a comparison of the HSPQ means of the UA and A groups and the means of the highest and lowest 50 students of a

FIGURE III

High School Personality Questionnaire School Achievement Profiles Compared with Profiles of UA and A groups.



KEY: School Achievement Profiles:  
 Upper 50 oooooo  
 Lower 50 xxxxxx  
 UA and A Group Profiles:  
 UA .....  
 A \_\_\_\_\_

group reported by Cattell in the HSPQ Handbook as the "School Achievement Profile" (p. 19). The HSPQ profile of the A group is very similar to the profile of the top 50, i.e., the "achievers" in Cattell's sample. Except for Scale I, tough-minded vs. tender-minded, the means for the upper and lower groups are very similar, just below 5 on Factor I. This is one of the factors discussed on page 135 in which there is a significant difference between the UA and A groups (at the .05 level), the A group being more tender-minded. The mean of the UA group on Scale I is 4; the mean of the A group is 6. An average Sten score on the HSPQ profile falls in the range of 4.5 to 6.5 of the Sten. This is clearly presented on the shadowed area of the HSPQ profile presented in Figure II. With this in mind, we note that the mean of the UA group on Scale I is 4 and therefore falls outside the average range. The mean of the A group on Scale I is 6. The means of the Scholastic Achievement Profile subjects, both upper and lower 50, are at or near 5. The A group and both the upper and lower 50 in the Scholastic Achievement groups fall within the range that theoretically encompasses 38.2% of the population, while the UA group falls in that below-average area that encompasses 15%, as shown in Figure II. Therefore, the upper Scholastic Achievement group and the A group, with means that are close to the Sten mean, could be said to strike more of a balance on the "tough to tender-minded" continuum of the HSPQ; while the UA group tends to be more concrete, less aesthetically sensitive, more "tough-minded."

Inspection of Figure III reveals very little similarity

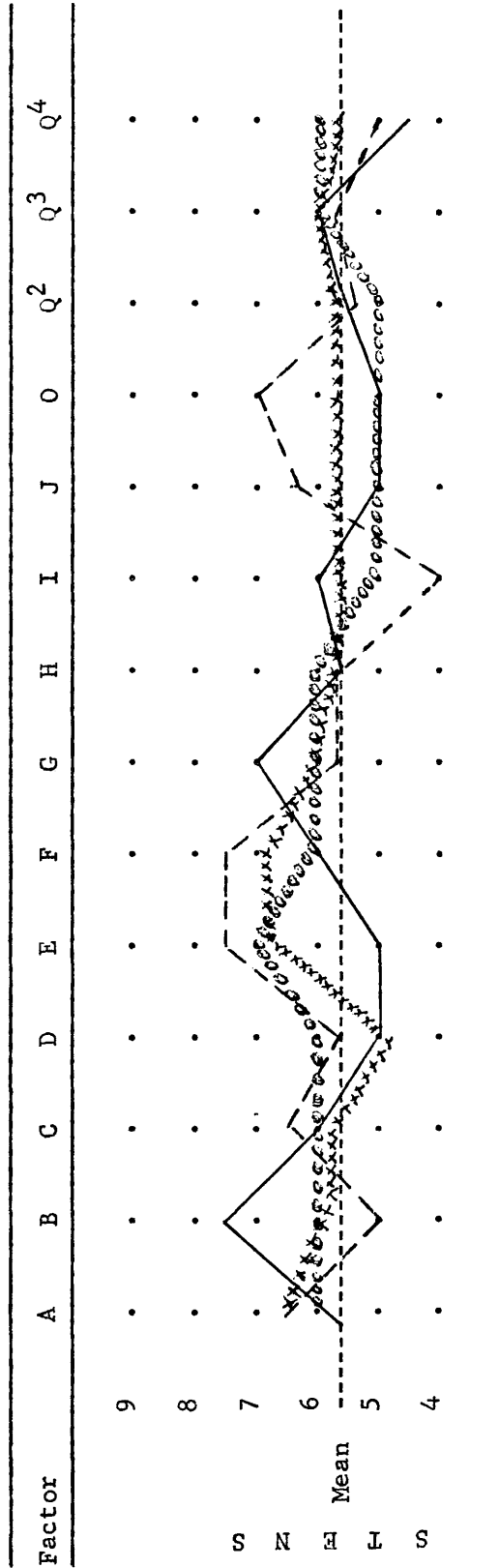
between the profile of the UA group and the School Achievement lower 50. However, it is interesting to note that the A group presents a very similar profile to that of achievers in the School Achievement profile. One could advance the hypothesis that the School Achievement's top 50 and the A group are both "normal," i.e., non ego-impaired achievers, and that the School Achievement lower 50 are simply those with the least potential and achievement and may or may not be underachievers (or ego-impaired). That is, our UA group may be more legitimately compared with the top 50 school achievers than with the lower 50 school achievers.

The upper and lower 50 school achievers shown in Figure III were based on a sample of 177 rural and urban, male and female children whose average age was somewhat younger than our sample. Some of the differences seen in Figure III may be a function of the differences in these populations; not only was the age range of Cattell's sample broader, but it also included females.

In order to make the same comparisons, with fewer intervening variables, we drew two groups of male students in the same age range as the UA's and A's from our basic population of tenth graders. This provided a group of 36 males which was divided into upper and lower achievement groups based on their grade point average. Thus, we had 18 "lower scholastic achievers" (LSA) and 18 "upper scholastic achievers" (USA) to compare with the UA and A groups. The upper achievers were from the same pool from which the A subjects were randomly selected. The lower achievers were from an essentially lower ability group. Those with similar grade

FIGURE IV

UA and A Group HSPQ Profiles Compared with Upper Scholastic Achievers (USA) and Lower Scholastic Achievers (LSA) Selected from the Same Population as the UA and A Group Subjects.



KEY: HSPQ Profiles:  
 USA 000000  
 LSA xxxxxx  
 UA and A Group Profiles:  
 UA - - - - -  
 A \_\_\_\_\_

point averages and greater demonstrated ability had been withdrawn to form the UA group.

Figure IV shows the profiles drawn from the mean scores of these four groups.

The USA and the LSA groups present very similar HSPQ profiles. The slight differences shown are on Factors A, D and F. The LSA subjects seem to present themselves as slightly more outgoing (A), happy-go-lucky (F), and less excitable (D) than their more intelligent, achieving peers. No difference is seen on Factor B, the scholastic mental capacity (intelligence) factor, between the LSA and USA groups. This is probably a function of the lack of extreme intelligence scores within these two groups.

Unlike the Cattell Upper Scholastic Achievement group, the USA group profile does not quite parallel the A group profile. The USA group profile and the A group profile differ on Factor B (USA lower, but not below average scholastic mental capacity), Factor D (USA slightly more excitable and impatient), Factor E (USA more assertive and stubborn), Factor G (USA slightly less conscientious and persevering), and Factor I (USA slightly more tough-minded, less aesthetically sensitive), but both score within the average range.

The LSA and the UA groups differ on Factor B. The difference is only one Sten unit within the average range. The UA and A groups differ  $2\frac{1}{2}$  Sten units on this scholastic mental capacity factor. The UA group mean Sten falls at 5, within the average range, while the A group mean Sten is well above average. As noted

above, the USA and LSA show no difference, both having a mean Sten score of 6, which, like the UA Sten of 5, is still within the average range. The UA group and LSA also differ on Factor I, the tough to tender-minded, aesthetically sensitive continuum. The UA's present themselves as less aesthetically sensitive, more tough-minded, with a below average Sten of 4, than the LSA's and USA's who both show a Sten of 5 and the A group, whose Sten is 6. The Sten scores of both Cattell's Upper and Lower 50 Scholastic Achievers are 5. Thus, the UA and A groups differ from each other and the other four comparison groups on Factor I, the tough to tender-minded continuum.

The UA group also differs from the other three groups on Factors J and O. The A, USA and the LSA groups all show a Sten score of 5 on Factors J and O. The UA group has a Sten of 6.5 on Factor J and a Sten of 7 on Factor O. These two factors represent restriction and isolation, anxiety and neuroticism. They are described as the "sick" factors. On Factor J, the UA's are seen as more doubting, internally restrained. On Factor O, the UA's present themselves as more anxious, apprehensive and guilt prone.

In summary, both sets of comparisons present the underachiever as a more tough-minded, less aesthetically sensitive adolescent with more "neuroticism" - apprehension, anxiety and guilt - than his peers.

The HSPQ profile of underachievers seems to have prognostic potential. Further exploration of this profile is indicated.



## WECHSLER INTELLIGENCE SCALE FOR CHILDREN

The model for this research does not call for a detailed comparison of the inter-individual WISC intra-test variables. The WISC was included in the battery of individual psychological tests both as an objective measure of intelligence and as a unit for the clinician to integrate with all the test data, per Rapaport's "projective hypothesis" (1946, p. 10), to form his judgments about the processes that underlie the way the subject's personality is functioning. However, certain factors stand out that are considered relevant.

TABLE 2

## Comparison of UA and A Groups WISC IQ's

UA and A Group WISC Full Scale Means, Verbal Scale and Performance Scale Means, including t's and significance of the difference between means.

WISC	UA	A	t	Level of Significance
Full Scale Mean IQ $\sigma$	116.5 6.57	122.9 6.67	2.23	>.05
Verbal Scale Mean IQ $\sigma$	116.5 5.9	125.4 6.26	3.11	>.005
Performance Scale Mean IQ $\sigma$	113.2 8.39	116.2 9.75	.699	-

Table 2, above, shows that comparison of the UA and A group means with the "t" test (Lindquist, 1942, pp. 138-139), yields significant differences on the WISC Full Scale mean IQ (>.05) and on the WISC Verbal Scale mean IQ's (>.005). No significant difference was found

between the WISC Performance Scale Mean IQ's. When the means of the WISC subtest scores were compared, only the Arithmetic subtest demonstrated a significant difference ( $>.05$ ). The results of the "t" test carried out on the means of the other subtests approached significance on the Comprehension, Vocabulary, and Digit Span subtests.

Tables A4 through A8 in the appendix summarize all the UA and A group means on the WISC Scales and Subtests and the results of the "t" tests used to approximate the significance of their difference.

Initially it would seem incongruous to have the difference of only one Verbal Scale subtest, Arithmetic, clearly significant at the .05 level and still have the means of the Verbal Scale IQ's differ at the .005 level. Apparently the near significant differences and the small non-significant differences of the subtest means accrue to demonstrate significance when they are summed and compared.

The general conclusion to be drawn from these differences in functioning on the various subtests of the Verbal Scale is that the UA are less efficient in those areas that demand facility in verbal conceptualization. The psychological rationale underlying the subtests that make up the Verbal Scale (Rapaport, 1946) suggests that the UA's, as compared to the A's, present:

1. Less efficiency in their ability to attend and concentrate (p. 195).
2. Poorer judgment and reality testing (p. 110).
3. Perhaps more repression of early conflictual experiences that limits their readiness to accumulate and utilize information and knowledge (p. 90).

These particular psychological differences between the UA and A groups relate directly to their ego processes involved in the acquisition and utilization of knowledge and, thus, to the problem of underachieving.

#### COMPARATIVE EDUCATION OF SUBJECTS' PARENTS

In the introduction of Chapter I, reference is made to a preliminary observation about the differences in educational level achieved by UA parents. It was noted that the parent of the sex opposite that of the UA referred had achieved academic superiority over the parent of the same sex. This led to the hypothesis that the male underachiever's identity was distorted by having to identify with a father who was, at least academically, less adequate than his mother.

Table 3 below shows the educational level achieved by each parent in the UA and A groups. The differences between years of education achieved by the UA group mothers and fathers and by the A group mothers and fathers is not statistically significant. Therefore, we must accept the Null hypothesis. However, viewing the data empirically allows for some reservation in accepting the Null hypothesis.

Six of ten UA mothers did actually achieve a higher educational level than their husbands, while only one A mother shows a higher educational level than her husband. The overall educational level of both A group parents is higher than that achieved by both UA parents. The UA group mothers averaged only 1.3 years less

TABLE 3

## COMPARATIVE EDUCATIONAL LEVEL ACHIEVED BY UA AND A GROUP PARENTS

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Educational level is a function of the number of years of formal education accrued.

---

Subject	UA Group Education Level		Subject	A Group Education Level	
	Mother	Father		Mother	Father
5	12*	10**	1	15*	8**
6	12	12	2	13	16
10	17*	14	3	12	12
11	14	16	4	14	16
12	12*	10**	7	12	13
13	13	17	8	17	22
14	14*	13	9	16	16
16	12	15	15	16	18
17	11**	9**	19	16	16
18	13*	10**	20	12	22
M	13.0	12.6		14.3	15.9
$\sigma$	3.4	2.73		1.73	4.06

---

\* = Superior to that of father.  
 \*\* = School leaver.

---

than the A group mothers. The UA group fathers averaged three years less education than the A group fathers, which is significant beyond the .001 level.

There are other interesting contrasts shown in Table 3 that are considered to be meaningful psychodynamically. Table 3 shows that four UA fathers are school leavers. In his interview, each of these UA fathers notes that he left school because of a combination of academic and behavioral problems. The technical competence that they have achieved (see Table 1, Chapter IV), reflects at least average and more than likely above average intellectual potential. These men attribute their later academic and professional success to the demands of their respective wives.

Only one UA mother left school prematurely. In her interview she relates that she had academic problems and preferred to leave school to work.

One A father was a school leaver and all A mothers completed at least high school.

The overall educational superiority of the A group parents, the higher incidence of school leavers among the UA parents, and the fact that six of ten mothers had from one to three years more education than their respective husbands, does indicate that parental education level is in some way relevant to the manifestation of academic deficiency.

#### BIRTH ORDER

Table 4, below, indicates that the birth order of the subjects

TABLE 4

## BIRTH ORDER OF UA AND A GROUP SUBJECTS

Subject's birth order, sex of the sibling that preceded the subject and the sex of the sibling that followed the subject in their order of birth.

Subject	A Group		Subject	UA Group		Subject	UA Group	
	Birth Order	Preceded By		Followed By	Birth Order		Preceded By	Followed By
1	1-4	-	F	5	1-4	-	F	
2	1-1	-	-	6	2-3	F	F	
3	2-3	M	M	10	1-3	-	M	
4	3-3	F	-	11	4-4	F	-	
7	1-2	-	F	12	1-3	-	F	
8	1-5	-	F	13	1-3	-	M	
9	1-3	-	F	14	3-3	M	-	
15	3-3	F	-	16	2-2	M	-	
19	2-3	F	M	17	1-6	-	F	
20	3-5	M	F	18	1-4	-	M	

in both groups is quite similar; six UA subjects and five A subjects are first born; one UA and two A are middle born; and three UA and two A subjects are last born. The remaining A subject is an only child. Therefore, unlike Harris (1966, p. 190) and Bentzen (1963, p. 97), we can draw no relevant conclusions from the comparative birth order of the UA and A groups. Harris (p. 177) found that boys with learning difficulties were most likely to be last born children.

On the basis of Table 4, we cannot provide support for D. Miller's (1965) premise that the male UA will often be followed by a sibling of the opposite sex. The variation in both the actual birth order and in the sex of the sibling that preceded or followed the subject is such that no significant conclusion can be drawn from our data on this factor.

#### MOBILITY OF FAMILIES

Table 5 and Table 6 reveal no significant relationship between UA or A group membership and either the mobility of the family or the number of schools a subject attended. The premise, that the number of disruptions of this kind that a child must adjust to is related to underachieving, is not supported by these data.

#### SEPARATION FROM PARENTS

Table 7 and Table 8 reveal that the number of separations from the mother for both the UA and A groups (UA 22, A 21) is essentially the same. These separations from the mother were

TABLE 5

UA GROUP FAMILY MOBILITY

Number of moves each UA subject has experienced and his age at the time of the move. The number of schools attended is also shown.

Subject	Number of Moves	Number of Schools	Age of Subject When the Family Moved														
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
5	5	5		X		X		X					X				X
6	4	3		X	X			X						X			
10	3	3			X			X						X			
11	4	3		X		X			X							X	
12	6	6				X	X	X		X			X			X	
13	4	4					X				X			X			
14	4	4				X			X	X			X				
16	0	2						X						X			
17	6	6						X	X				X	X		X	
18	7	6		X		X	X		X	X			X	X	X		X
	43	42	0	4	3	3	5	3	3	2	3	3	3	6	3	2	0
M	4.3	4.2															





TABLE 7

## UA SUBJECTS' SEPARATION FROM PARENTS

Subject	Separation from Mother		Separation from Father	
	Age(s)*	Length of Separation	Age(s)*	Length of Separation
5	2 mo	11 mo	2 mo	11 mo
	2	2 wks	2	2 mo
	3	1 wk	3	2 mo
	4	1 wk	8	2 mo
	5	1 wk	12	8 mo
	6	1 wk		
6	4	1 wk	3	6 mo
			6	3 mo
10	9	1 wk	4	3 mo
	10	1 wk	6 - 14	6 wks
11	13	6 wks	-	-
12	3	1 wk	4	6 mo
	6	1 wk	11	1 mo
			12 - 13	1 - 3 wks monthly
13	1	1 wk	-	-
	10	1 wk		
14	-	-	4	4 mo
16	-	-	-	-
17	3	1 wk	1	15 mo
	6	1 wk	3	2 yrs
	8	1 wk	11	1 yr
	12	1 wk		
	13	1 wk		
18	1	1 wk	2	18 mo
	7	1 wk	9	3 mo
	12	1 wk		

\*Age is stated in years unless otherwise shown.

Note: All the one-week separations from mother noted above represent hospitalizations for the birth of siblings.

mostly of a week's duration, usually while she was hospitalized for the birth of a sibling. The UA subjects did experience more separations from their fathers (UA 37, A 10), especially before the age of four (UA 10, A 0), suggesting that possibilities for identification that occur early in life are perhaps the most crucial to the later manifestation of academic deficiency.

#### EXPERIENCE WITH PARENT SURROGATES

Table 9, below, indicates that six of the UA subjects experienced adult surrogates before age 4. One of the six repeated the experience from age 3½ to 5½ years and again from 11 to 12 years of age. Subject 1 experienced a partial loss of both parents from 2 to 13 months, since they were able to visit him only on weekends. Subject 6 did not experience the absence of either parent, but his mother refers to a live-in maid who "took over the baby." The others all experienced maternal grandparents in the absence of their fathers. (For Subject 12, the "couple" is considered analogous to grandparents.)

Two factors stand out here: (1) Early absence of the father, and (2) early consistent intervention of alternate parental figures.

The A subjects experienced no early non-parent adult intervention. One A (Subject 3) lived with his maternal grandparents from the age of 8 to 9½ years. Four others experienced siblings that were from 5 to 12 years their senior. The A subjects, then, did not experience either an early loss of the father figure or any early consistent experience with an adult surrogate.

TABLE 8

## A SUBJECTS' SEPARATION FROM PARENTS

Subject	Separation from Mother		Separation from Father	
	Age(s)*	Length of Separation	Age(s)*	Length of Separation
1	2	1 wk	-	-
	4	1 wk		
	10	1 wk		
2	14	3 wks	4	8 mo
			9	18 mo
			13	12 mo
3	13	1 wk	8	18 mo
	14	1 wk		
4	4	6 wks	-	-
7	2½	1 wk	10	2 mo
	11	3 wks	13	2 mo
8	2	1 wk	13	2 wks
	4	1 wk		
	10	1 wk		
	13	2 wks		
9	2	1 wk	-	-
	6	1 wk		
15	-	-	0 - 12	1 - 2 wks monthly
19	3	1 wk	12	7 mo
	13	2 wks		
20	3	1 wk	7	5 mo
	7	1 wk	8	3 wks
	8	3 wks		

\*Age is stated in years unless otherwise shown.

Note: All the one-week separations from mother noted above represent hospitalizations for the birth of siblings.

TABLE 9

## UA AND A GROUP SUBJECTS' EXPERIENCE WITH PARENT SURROGATES

Age(s) at which subject experienced surrogate(s) and a comment on the kind of surrogate experienced.

A Group		UA Group	
Subject	Age(s)	Subject	Age(s)
Comment		Comment	
1	-	5	2-13 mo.
2	-	6	0-2 yrs.
3	8-9½	10	-
4	-	11	-
7	-	12	0-2 mo.
8	-	13	0-4
9	-	14	-
15	0-14	16	-
19	-	17	1-2½ 3½-5½ 11-12
20	-	18	2-4

## THE RATING SCALE

The "Rating Scale" was divided into seven subscales. The first five subscales relate to Erikson's five Crisis Stages of development from infancy to adolescence. These are represented in Items 1 to 51.

Subscale VI, Items 52, 53, 54, and 55, are not scaled items. They are straightforward "yes-no" classifications regarding the subjects' group membership and ego impairment.

Items 56 through 64, which make up Subscale VII, are scaled items based on the history and background material and were judged independently of the five Crisis Stages.

The three judges' ratings for each subject on each item were consolidated, items by judge across each group, as shown in Tables A9-A23 of Appendix B. Then, the ratings per item across the ten subjects in each group were compared with the Mann-Whitney U Test corrected for ties (Siegel, 1956, p. 125), to see if they discriminated between the UA and A groups. See Table A23 of Appendix B for the probability level at which each item discriminated.

A test for the significance of the differences of each subscale was accomplished by converting the Mann-Whitney probability of each item to its logarithm, the logs summed, and the significance level of these summed probabilities was then drawn from the Chi Square table (Fisher, 1941, p. 98). This is also shown in Table A23 of Appendix B. Since some statisticians (Anderson, 1961, pp. 305-316) would feel that an analysis of variance is also

appropriate for these data, all the ratings were subjected to a Lindquist Type III (1956, pp. 281-284) analysis of variance procedure. The results of the application of the non-parametric and parametric tests are shown by subscale in Table 10. The initial ratings were made by the judges from the individual's psychological tests without any identifying information as to the background or group membership of the subject. The judges were allowed to change their ratings after they reviewed the history and background material. The effects of these changes are considered via the analysis of variance. All of the analysis of variance data are shown in Tables A24-A29 of Appendix B.

As shown in Table 10, each subscale and, thus, the rating scale as a whole discriminates between the UA and A groups at better than the .001 level when subjected to either the non-parametric test or to the analysis of variance procedure (AOV).

In this particular instance, the two techniques are mutually supportive, and considerable additional information is provided by the AOV. Therefore, it is felt that the AOV, though a belated addition to the design and one that some authorities would abhor (Siegel, 1956) while others (Anderson, 1961) would encourage, has proved a worthwhile addition to the overall study.

As predicted, the UA's tend to be rated with significant consistency toward the "ill-health" and the A's toward the "health" end of the continuum. Thus, the A's demonstrated better resolution of each of Erikson's Crisis Stages and are judged to present less identity diffusion than the UA group.

TABLE 10

## MANN-WHITNEY U VS. ANALYSIS OF VARIANCE

Significance levels achieved when the non-parametric Mann-Whitney U Test is applied and converted to Chi Square (shown here as  $X^2$ ), contrasted with the results achieved when the same data are subjected to an analysis of variance.

<u>Subscale</u>	<u>Mann-Whitney U</u>		<u>Analysis of Variance</u>	
	<u><math>X^2</math> .001</u>	<u>UA vs. A Group <math>X^2</math></u>	<u>F .001</u>	<u>UA vs. A Group F</u>
I	36.12	86.31	10.83	125.26
II	29.59	53.84	10.83	79.00
III	73.40	162.44	10.83	83.42
IV	42.31	80.98	10.83	53.41
V	73.40	150.10	10.83	93.59
VII	42.31	53.84	10.83	34.44



The effect of the changes of ratings (shown as Trial 2 in the Analysis of Variance Tables, Appendix B) made by the judges after they reviewed the history and background material and were able to identify the UA and A subjects, did not significantly influence the main effects. There were some interesting interactions revealed by the AOV which suggest that some items within groups, and the judges, within some subscales, seem to work on different levels. Though there are significant interaction effects, they apparently do not significantly influence the extremely high significance levels achieved by the main effects. Some of these interactions, particularly as they relate to the reliability or consistency of the judges' ratings, will be discussed in the summary of the results by subscale below.

Tables 11 and 12 reflect the consistency with which the judges functioned. They were calculated from the supplements to Tables A24-A29. Table 12 shows the differences between trials in each judge's mean rating of the UA and A groups for each subscale and across all subscales except Subscale VI. Subscale VI is a group of non-rated items.

Table 11 reveals that Judge A was most consistent with a range of mean differences from 3.22 to 7.00. He separated the UA and A groups by an average mean difference in ratings of 5.21.

Judge B's mean ratings reflect less certainty and less consistency in his average of the differences in mean ratings of 3.48 for the separation of the UA and A groups, and a range of subscale differences that run from a narrow 1.47 to a wider differentiation

TABLE 11

## MEAN DIFFERENCE BETWEEN A GROUP AND UA GROUP MEAN RATINGS

This table lists the mean difference between the UA and A group mean ratings by each Judge and Subscale.

Subscale	Judge		
	A	B	C
I	6.42	6.23	13.28
II	7.00	1.60	12.00
III	3.90	1.47	8.62
IV	5.44	4.11	9.67
V	5.05	1.62	7.76
VII	<u>3.22</u>	<u>5.78</u>	<u>4.78</u>
Total	31.03	20.86	56.11
M	5.21	3.48	9.35

of 6.28. Even though there was more variation in the "distance" with which he separated the two groups, he did consistently separate the UA from the A group in the "ill-health" direction.

Judge C apparently tends to use more extreme ratings and perceives greater differences in the two groups. She, too, shows a wider range of mean differences (4.78 to 13.28) on the subscales, but all her differences are larger. Her average of the differences in mean ratings across subscales is 9.35.

Thus, the judges separate the groups differentially. This may be either a function of the fact that they actually perceive the degree of "ill-health" of the UA group as more or less greater than the A group, or a function of the rater's individual tendency to rate more or less severely. From Table 11, it would seem that the latter is more likely.

Table 12 shows the size and direction of the changes in ratings (Trial 1 vs. Trial 2) made by the judges in each group by subscale.

Here, again, we note that Judge A's ratings are the most stable and consistent. His range is quite narrow for both the UA and A groups. The averages of his mean changes show that, when he had the history and identifying data for Trial 2, he made rather slight changes in his ratings in the direction of "health" for the A group and "ill-health" for the UA group,  $-.05$  and  $+0.6$ , respectively.

Judge B made greater changes in his ratings within the A

TABLE 12

## UA AND A GROUP

## Size and Direction of Mean Rating Changes

This table lists the size and direction of the mean changes in rating from Trial 1 to Trial 2, by Judge and by Subscale.

Subscale	A Group			UA Group		
	Judge A	B	C	Judge A	B	C
I	+ .14	-2.29	- .14	+ .58	+ .43	-1.14
II	- .40	-1.20	.00	+ .80	+2.00	.00
III	+ .23	- .58	- .33	+ .29	+ .43	- .53
IV	- .22	- .67	- .44	+ .89	- .56	- .44
V	<u>.00</u>	<u>-1.57</u>	<u>- .34</u>	<u>+ .43</u>	<u>+ .33</u>	<u>.00</u>
Total	- .25	-6.31	-1.25	+2.99	+2.63	-2.11
M	- .05	-1.26	- .25	+ .60	+ .53	- .42

group in the direction of "health," as shown by the larger differences in his mean ratings and the average mean difference of -1.26. This was much larger than any of the others. His changes within the UA group tended to be small and averaged only +.53. In both instances, Judge B's rating changes were in the predicted group direction.

Judge C presented rather small average changes within and across the subscales. On the A group, she showed a narrow range in the size of the difference between Trial 1 and Trial 2, an average of -.25, which was in the appropriate direction. However, on the UA group, the range of the size of her mean changes in ratings was somewhat larger, but the average was only -.42. This was in the direction opposite to that predicted; unlike the other judges, she saw the UA group as slightly "healthier" after reviewing the history and background material for Trial 2.

In summary, then, the data indicate that Judge A was the most stable and consistent rater; Judge B was more variable than the other two; and Judge C had a tendency for more extreme ratings and, like Judge A, rather small changes in Trial 2.

These are rather interesting findings that clarify but do not change the significance or overall reliability of the main effects. It is these rater differences and the fact that some items within the subscales did not differentiate between the UA and A groups that account for the within group interactions noted in the summaries of the results by subscale which follow below.

### Subscale I

#### Crisis Stage I Trust vs. Mistrust

This subscale of seven items (1 through 7) discriminated between the UA and A groups beyond the .001 level of significance.

In the AOV all main effects were significant. See Table A24, Appendix B. There were significant interaction effects in the following:

Group by Raters (Judges)

Trials

Raters by Trials

Group by Raters by Trials

The trials interaction is thought to be a function of both the fact that there is probably a very small within-cell error term and the comparatively large mean change shown in Table 11 for Judge B, Subscale I, A group, and Judge C, Subscale I, UA group. The group by trials interaction was not significant, which lessens the weight that needs to be given to the trials interaction and accounts for its apparently limited effect on the highly significant main effects.

The other three interactions indicate that the judges differed differentially by group and by trial. Table 12 shows that Judge A shifted upward while rating the A group and also while rating the UA group. Judge B shifted downward while rating the A group and upward while rating the UA group. Judge C shifted downward for both groups but more for the UA group (-1.14) than for the A group (-.14).

### Subscale II

Crisis Stage II      Autonomy vs. Shame and Doubt

This subscale of five items (8 through 12) discriminated between the UA and A groups beyond the .001 level of significance. All main effects were significant in the AOV. See Table A25, Appendix B.

In this subscale there were significant effects in the following interactions:

Group by Raters

Group by Trials

Group by Raters by Trials

The same rationale described for Subscale I is considered to apply here. The raters apparently worked on different levels and differ differentially. Judge B seems to have accounted for more of the interaction with his narrow differentiation of the UA and A groups and the larger difference between trials. Here Judge A and Judge B shifted downward. Judge B's shift across trials in both groups is much larger. Judge C remained constant.

### Subscale III

Crisis Stage III      Initiative vs. Guilt

This subscale of fifteen items (13 through 27, plus 6 sub-items) discriminated between the UA and A groups beyond the .001 level. All main effects were significant in the AOV. See Table A26, Appendix B.

There were nine items and sub-items in this subscale which had very significant p values (13, 14, 16, 17, 18, 19b, 20b, 21 and 22a). Item 27 approached significance with a p of .07.

Some of the items that did not clearly discriminate in Subscale III seem to show meaningful trends in the predicted or appropriate direction (15, 19a, 20a, 22b, 24 and 26).

There were four interactions that reached significance:

Group by Scale (Items)

Group by Raters

Scale by Raters

Group by Scale by Raters by Trials

The group by scale interaction was caused by the fact that all the items in this subscale did not significantly discriminate between the UA and A groups. The group by rater and scale by rater interactions indicate that the judges used the items differently within and across the groups. This is again reflected in Tables 11 and 12 and in the differences that seem idiosyncratic to the judges. This may also reflect the common problem that occurs in the AOV of this type of rating scale. The scale differences within and across items are not directly equivalent to the numbers that represent them. That is, we do not actually have an equal interval scale. It is not likely, for example, that the difference between scaled scores of 3 and 4 mean exactly the same distance to all three judges.

This was the only time a four-way interaction appeared.



The GSRT interaction is thought to be accounted for by the factors described above and by the differential shift across trials by the judges. The importance of this interaction is also limited by the fact that we have no significant scale by trial interaction, suggesting that the quality of this subscale was not weakened by the differences in the trial means, that the subscale was equally efficient in detecting the difference between groups on both trials. Again, these interactions apparently do not limit the meaning of the main effects.

#### Subscale IV

##### Crisis Stage IV Industry vs. Inferiority

This subscale of seven items (28 through 34, plus two sub-items) discriminated between the UA and A groups beyond the .001 level of significance. The AOV shows that all main effects were significant.

Only Items 33a and b were found to be nondiscriminatory, with 33a having a p of .2946 and 33b a p of .2177.

Three interactions appeared as significant on the AOV of this subscale. See Table A27, Appendix B. They were:

Group by Scale

Group by Rater

Scale by Rater

The group by scale interaction is felt to be a function of the two subscale items, 33a and 33b, that did not differentiate significantly between the UA and A groups.

The group by rater interaction points out again that the judges discriminated between the groups differentially, Judge C more effectively than the others, as shown across Subscale IV in Table 11.

Scale by rater interaction is a function of the differential use of the items by the raters, and, again, this seems more a function of Judge C than the others.

#### Subscale V

##### Crisis Stage V Identity vs. Identity Diffusion

This subscale of seventeen items (35 to 51, plus four sub-items) discriminated between the UA and A groups beyond the .001 level of significance. All main AOV effects were significant. See Table A28, Appendix B.

Of the 21 items and sub-items in this subscale, 11 have clearly significant p values (Items 35, 36, 37, 39, 40, 42, 43, 44, 45, 47b and 50). Two items approach significance; Item 41, p equals .0594, and 46a, p equals .0681. Of the remaining items, Item 38 is clearly not significant (p equals .3336). The split or sub-items have contrasting p values that clearly show a trend in the predicted direction.

Seven interaction effects were produced by the AOV of this subscale:

Group by Scale

Group by Raters

Scale by Raters  
 Group by Trials  
 Scale by Trials  
 Rater by Trials  
 Group by Raters by Trials

These interactions are accounted for in this subscale as in those above. Only half of the items in this subscale have significant  $p$  values. The items obviously have different discriminatory power and different content value which contribute to all the interactions with scale. The judges responded differentially here also. Judge B shows the smallest discrimination figure between the two groups, 1.62 (Table 11, Subscale V). Judge A shows his near-average 5.05, and Judge C's is consistently larger, 7.76. Judge B also shows the largest change figure for Trial 2 among the ratings for the A group, -1.57, and a small change figure for Trial 2 on the UA group, +.33 (Table 12, Subscale V). Here, too, the judges shift differently by group and by trial. In all these instances except Judge B, A group, the changes are quite small, e.g., 0, -.34, +.43, +.33 and 0, but they represent the shift of judgment across trials reflected by the interaction effects.

There is a differential shift within and across groups and across trials. In group A, Judge B and C shift downward; Judge B's change is almost five times larger than C's. Judge A shows no rating changes in A group, Trial 2, Subscale V. In the UA group, it is Judge C who makes no changes in her ratings, while

Judges A and B shift upward. These differences in the size of the discrimination figure between groups, and differences in the size and direction of the shifts or changes within trials and across groups, contribute to those interactions involving trials, raters and groups.

#### Subscale VI

##### Group Membership and Ego Impairment

This subscale will be discussed after Subscale VII because it was not made up of rating scale type items, and its discussion does not require reference to Tables 11 and 12 and the AOV data.

#### Subscale VII

##### Ratings from History and Background Material

This unit of nine items (56 to 64) also discriminates between the UA and A groups at the .001 level. The Analysis of Variance (Table 29) indicates that the main effects were all significant at beyond the .001 level.

This supplementary subscale of judgments about the UA and A group parents is independent of the other six subscales, since they were made after all the data were made available, as opposed to only the individual testing for Subscales I through VI. Therefore, these judgments were not "blind." The judges were aware of whether or not these were UA or A group cases, since their attitudes and background information as revealed in the interview data

were supplied after the initial judgments were made on the individual testing alone. As in Subscales I through V, these items were also judged on a five-point scale.

Since these items are quite specific and do not relate directly to an Erikson Crisis Stage or other integrating theoretical referent, they will be taken up individually here.

Item 56 asks for a judgment about how the mother views the subject, on a five-point continuum from "much like herself" to "much like her husband." The  $p$  value for this item is .5596, and it therefore does not discriminate between the UA and A groups.

Item 61 asks for a judgment about how the father views the subject, on a five-point continuum from "much like himself" to "much like his wife." The responses to this item did not distinguish significantly between the two groups ( $p$  equals .2709). However, more of the UA fathers described their sons as being more like their wives than did the fathers of the controls. Only one UA father felt that his son was more like himself; two felt that the underachiever had characteristics of both parents; and seven UA fathers felt that their sons were more like their mothers. In contrast, only two A fathers felt that their sons were more like their wives than themselves; four stated that they felt their sons were more like themselves; three were described as being like both parents. The remaining A father felt that his son was not at all like either himself or his wife.

Item 57 refers to the mother's feelings about her own

femininity. This achieves a p value of .0618, which approaches significance and carries with it the implication that the UA mothers more often seem to reject their own femininity.

Items 58 and 62 ask whether the parents' attitude toward the subject is "accepting and supportive" or "rejecting and depreciating." The mothers (Item 58) differ at the .0294 level while the fathers at the .00016 level. Thus, both UA parents are seen as rejecting of their sons, with the father being judged as manifesting the greater degree of rejection. Item 59, "mother's feeling about her own adequacy," has a p at the .2709 level of significance which, of course, is not a significant difference but suggests that the judges felt that the UA mothers seemed to feel less adequate and were more self-depreciating than the A mothers. It is felt that this indicates a sense of direction, even though these judgments clearly did not reach our stringent .05 level of significance criterion. The UA fathers (Item 63), on the other hand, are seen as feeling significantly more self-depreciating and inferior than the A fathers. Item 63 has a p of .0179.

As for the parents' feelings towards each other, Items 60 and 64, we find that the UA mothers are seen as significantly more depreciating and rejecting of their husbands (Item 60, p equals .0392). The UA fathers in Item 64, with a p of .2420, are felt by the judges to reflect more rejecting and depreciating attitudes toward their wives than did the A group fathers. Again, .2420 does not indicate a significant difference but does imply a direction, sufficient to warrant further consideration.

In summary, then, the UA subjects are felt to have parents who tend to reject themselves as well as each other and the subject, while the parents of the A subjects are seen as feeling more adequate, mutually supportive of each other and accepting of the A subjects.

Table A29 shows that all the main effects in the Analysis of Variance were significant. It also shows a significant group by scale interaction which is attributed to the four items described above (56, 59, 61 and 64) that did not discriminate between the UA and A groups.

As shown in Table 12, the factors that resulted in the interactions discussed above were almost all rather small. Overall they tend to support the hypothesis, since the changes were, for the most part, in the predicted direction. It speaks well for the power of the AOV procedure to pick them up and demonstrate them. Fortunately, the AOV served to clarify and consider issues that the Mann-Whitney or other procedures would not have brought out.

The use of the Analysis of Variance procedure will be discussed further in the "Discussion" section of Chapter VI.

#### Subscale VI

##### Group Membership and Ego Impairment

The judges were in full agreement with the correct identification of eight underachievers. Two of the three judges correctly

identified both of the other two UA's. In both cases (Subjects 12 and 14) the same clinician (Judge B) initially identified them as A's. On review he reversed these judgments. Therefore, of the 30 judgments only two differed, making for an agreement figure of 93% in their identification of the underachievers.

The judges were in full agreement correctly identifying five A's. Two of the three judges correctly identified each of the remaining five A subjects. Three were judged underachievers (Subjects 2, 9 and 20) by Judge B, who changed his judgment when he reviewed the data in the context of the history and background material. Subjects 3 and 8 were judged UA's by Judge A, who did not feel that the history and background material justified a change in his initial judgment. Thus, of these 30 initial judgments the clinicians were in agreement 83% of the time in their identification of the achiever controls.

Items 53, 54 and 55 were included to allow for the possibility that a subject could be seen as:

1. Ego impaired but not an underachiever (Item 53).
2. An ego impaired underachiever (Item 54).
3. Not at all ego impaired (Item 55).

The judges unanimously rejected the statement that a UA subject was considered ego impaired but not an underachiever (Item 53). Of the 30 judgments made for Item 53 among the A group subjects, there was a little less certainty. Six judgments indicated that there was ego impairment among the achiever control



subjects without the manifestation of academic deficiency.

Subject 1 was the only subject where this was a two-out-of-three decision. For the other five subjects only one judge disagreed. This makes for 80% agreement in the clinicians' initial judgment regarding the A group on Item 53.

Of the 30 judgments on Item 54 (ego impaired and under-achieving) among the UA group, four judgments expressed doubt that the UA's were ego impaired. In no case was this a more than one-out-of-three opinion. There was 87% agreement in initial judgments that the UA's were ego impaired underachievers. In the A group the figure is five out of 30. Again, these were one-out-of-three judgments for an overall agreement on initial judgments of 83%.

On Item 55, the gross judgment "not ego impaired," the judges indicated in only four of the 30 judgments made on the UA group that they felt that a UA subject was not ego impaired. In none of these four was this more than a one-out-of-three opinion. In each of these four cases the judge made a qualifying notation to the effect that he felt ambivalent about the decision. Therefore, there was 87% agreement in the initial judgments that the underachievers were ego impaired. There was less certainty on Item 55 within the A group. Nineteen judgments indicated no ego impairment, while the remaining 11 judgments indicated some ego impairment in certain A group subjects. This yields only 63% agreement in initial judgments for no ego impairment within the

A group. It supplements the finding on Item 53 that the judgment of ego impairment can be made in the absence of manifest academic deficiency. This seems to demonstrate the point that with our emphasis on pathology it is often easier to identify relative illness than relative health. Those subjects who are not considered ego impaired in the A group did not manifest significant identity diffusion. It is realistic for an adolescent to suffer ego impairment and utilize other defenses than academic deficiency. Part of this lower percentage may be an artifact, a function of the fact that the item called only for a "yes" or "no" statement and allowed for no consideration of degree, thus forcing the judgment into one category or another.

CHAPTER VI  
FINDINGS AND RECOMMENDATIONS

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## SUMMARY AND CONCLUSIONS

Twenty detailed case studies, ten underachievers and ten controls, were drawn from a typical high school population to test the hypothesis that academic deficiency or underachieving in some adolescent males is a function of the impairment of the ego structure, specifically identity diffusion. Three experienced clinical psychologists were asked to make judgments on a rating scale developed for this research, either directly, from test scores or based on their clinical intuition or both, from each detailed case study presented. First the psychologists were given only the verbatim individual psychological test protocols and instructed to complete the rating scale on the basis of the test data alone. Then they were given the interviews with the parents and the subjects and the group test data on each subject and asked to record any changes in their ratings that resulted from being able to evaluate the test data in the context of the subject's background and history.

The rating scale was based on Erikson's five crisis stages of development from infancy through adolescence. Using Erikson's linear concept of health to ill-health with items derived for each of the crisis stages, the operational hypothesis was that the ratings of the underachievers would tend toward the ill-health end of the continua and the ratings of the controls toward the health end. Ill-health was equated with identity diffusion and health with an adequate ego

identity. The rating scale was made up of seven subscales. Subscales I through V related to the crisis stages 1 through 5, respectively. Subscales VI and VII were supplementary subscales. The data from the 60 rating scales (3 per subject) were consolidated and compared with both the non-parametric Mann-Whitney U Test and the parametric Analysis of Variance.

On the basis of the statistical analysis described above, the judges were able to differentiate between the UA and A groups with the rating scale at better than the .001 level of significance. The Null hypothesis of no difference between the UA and A groups is rejected at the .001 level of significance. Therefore, it can be stated with confidence that academic deficiency in this group of subjects is associated with ego impairment.

In addition, it is felt that with these results we have added support to Erikson's theory as a viable conceptualization of the development of the ego. It is also felt that we have demonstrated that the clinical model as utilized in this study can be a reliable approach to the study of personality.

The educational level achieved by the UA mothers was superior to that achieved by the UA fathers in six of the ten cases. This difference in educational level did not reach statistical significance.

Birth order did not prove a meaningful variable. The premise that a male UA will often be followed by a female sibling in the birth order was also unsupported.

Mobility of the family and the number of schools attended

was about equal for both the UA and A groups. This is an unusually good population in which to test the impact of these two particular variables because all the children in this school (military and civilian) come from highly mobile families.

The data regarding comparative experience with parent surrogates revealed that UA subjects experienced more parent surrogates, particularly before the age of 4, than the A subjects. Most of these surrogates were experienced in the total absence of the subject's father.

Separations from the mother were mostly of a week's duration, usually while the mother was hospitalized for the birth of a sibling. The number of separations was about the same for both groups (UA 22, A 21). However, the UA subjects experienced significantly more separations from their fathers, especially before the age of 4, suggesting that the processes of identification that occur early in life are perhaps the most crucial to the later manifestation of ego impairment.

The overall premise of distortion occurring in the process of identification is also given considerable support within the rating scale by the judgments on those items that indicate self-concept and attitudinal differences among the UA and A group parents. These indicate that the UA group parents tend to see themselves, as well as each other and the subject, as less adequate and less acceptable people. The UA mothers seem to be more rejecting and depreciating of their husbands as well as of the UA subjects. The UA's identification with his mother is seen as

extreme, while his identification with his father is seen as limited. These relationships are most certainly exacerbated by the greater feeling of rejection the UA father is judged to feel toward his son. At best, these factors make the development of an appropriate stable ego identity unlikely and the later manifestation of ego impairment and academic deficiency more likely.

## DISCUSSION

Theory and research in child psychology has, until recently, tended to neglect the father's role and the effect of his needs and behavior on family interactions. True, youngsters usually spend much more time with their mothers, especially in their first five years and with female teachers for many years thereafter. Though the father's role is less direct, and apparently more subtle, it is no less significant. For example the majority of our subjects who suffered ego impairment were "fatherless" for lengthy periods of time in the first four years of their lives.

Mothers are most often found in treatment associated with their children. This may be an artifact of both a theoretical bias and the fact that mothers are more generally available during the normal working day to join in treatment programs.

It is not denied that mothers may often have unconscious, or even conscious needs to limit their son's development of an adequate masculine identity. This has been demonstrated in this research and by Hall (1966), Grunebaum et al (1962) and others, as well. However, what is also demonstrated in this and other research is that family members do not function as isolated units, but in dynamic interaction with each other.

Parents select mates who meet their respective needs for dominance or passivity; for dependence, independence, or



isolation; for turmoil, pain, or mutual respect. They then proceed to develop a kind of balance or family homeostasis based on these gratifications -- be they healthy and productive or neurotic and limiting. In turn, this homeostasis is defended. Couples frequently divorce when treatment is successful and mutually neurotic demands are no longer appropriate -- the "balance" is upset.

So, too, it seems with children's problems, especially in the areas of ego formation and the development of identity. The child's "illness," in this case his underachieving symptom, is somehow necessary to maintain the subtle balance of interacting needs and forces within his family. The child and his family are really ambivalent about treatment and change. Both the child and his parents act to protect and perpetuate the particular circumstances in which certain needs are met.

Parents perpetuate marital and occupational conditions about which they constantly complain. They talk of their concern for their child's academic deficiency but act to perpetuate the condition. For example, Chance (1961) noted that the thirteen mothers who did not cooperate in her research on independence training and achievement were all mothers of children who were considered to be maladjusted. In the course of this research, as noted in Chapter IV, the A group parents readily agreed to participate, canceled no appointments, and seemed to be actively involved in the project. In contrast, the parents of the under-achievers responded with considerable verbal concern but could

not seem to keep appointments, readily rationalized their ambivalence, were less spontaneous and more passively defensive in their interviews.

This contrast between their ability to realistically conceptualize the seriousness of their child's academic deficiency, to verbally respond to the offer of help and their behavioral avoidance of that help, was felt to be indicative of their need to perpetuate the very condition they said they wanted to change.

This rather inconsistent evidence that academic deficiency is a function of ego impairment, which, in turn, is a function of the distorted identification processes of neurotic family interaction, means that a more psychodynamic or treatment oriented approach is necessary to help these children. Earlier recognition of the problem and the development of parental counseling and group psychotherapy techniques will have to be developed with which to more economically intervene. As more is learned about family interaction and ego development, perhaps other procedures can be found to modify the growth environment of the child early in his school experience.

#### The Use of Analysis of Variance

One aspect of the methodology adopted in handling the results of this research deserves further attention. Both the Mann-Whitney U Test and the Analysis of Variance were employed, each having advantages and limitations. The use of the Analysis of Variance for this kind of rating scale data has a major drawback. The mathematical inference in a five-point rating scale, for instance,

is that each point is separated by an equal interval. Another inference is that the items are equally discriminating. The variations in the Mann-Whitney derived p values for each scale item, which partially account for some of the AOV interactions, demonstrate that the numerical values and relationships within the scale are not cardinal, or in an equal interval relationship. For example, the extreme, ill-health end of the continuum is given a value of 5. Ill-health on the continuum for "Feelings of Inferiority" (Item 31) may be more limiting in a particular personality than the degree of passiveness implied by a rating of 5 given to the expression of Initiative (Item 28) in the context of another personality.

The Mann-Whitney is obviously more appropriate for these data since these inferences are not inherent in the technique. However, the AOV has proven quite useful and appropriate across judgments and across groups where the influences discussed do not need to apply. It has revealed interesting differences among the judges which would otherwise not have been noted. In support of the Mann-Whitney results, it has reflected the clinical reality that even judges with the same theoretical frame of reference respond differentially to different items and to the task as a whole -- but not so differentially that their perception of variables is not similar enough for essential agreement.

Even though a theoretical model may be clear and consistent, the conscious and unconscious behavioral manifestations of the relationships described in the theory can be quite different

across subjects. This is one reason why studies devoted to objectifying dynamic relationships often do not prove out. It is also one reason for research utilizing a clinical model that can more flexibly deal with a whole personality as opposed to the sum of its parts, regardless of their interaction. Further, the perception of those theoretical factors and manifestations varies with the clinician, as reflected in the interactions revealed by the Analysis of Variance. Because judges also have personalities, some psychological tests are more meaningful than others to them, and they are more consistent in some areas of judgment than others. Yet, as demonstrated, different clinicians can make similar judgments and reach similar conclusions from the same data. That is, they can reliably reach the same goal by slightly different paths through the same data. At the present state of our knowledge, clinical judgment depends on intuitive, rather subjective skills. Judgment across clinicians becomes more consistent and reliable when the clinicians have a firm foundation in a theoretical model and sufficient experience to bridge theory and reality.

One of the overall contributions of this study is its emphasis on the underachiever's personality in the context of the milieu in which it develops, as contrasted with the broad emphasis on the phenomena of underachieving or the more specific indirect focus on the underachiever's father, his mother or on various social factors.

Utilizing a typical clinical model, the study has demonstrated a relationship between ego impairment and academic deficiency.

We have shown that ego diffusion among adolescents, as

posited by Erikson, is a function of the development of the ego in the distorted milieu of neurotic family interaction.

We have added support to the findings reported in both the clinical and academic literature that individual personality and intra-family variables are significant in the causation of academic deficiency.

## SUGGESTIONS FOR FURTHER RESEARCH

1. The distorted family relationships described above warrant further systematic study to better understand how intra-family behavior develops and maintains the limiting kind of homeostasis described above. It seems a self-perpetuating, closed circle kind of phenomenon. In order to intervene therapeutically, this closed pattern has to be interrupted and more adequate inter-relationships developed.
2. Exploration of the specific combination of conditions within individuals and within families that determine the choice of the underachieving symptom is required. This could lead to the possibility of predicting which sons of which fathers and mothers will most likely manifest ego impaired academic deficiency.
3. This study has demonstrated that academic deficiency is associated with ego impairment. It has also shown that some adolescents can manifest ego impairment without suffering academic deficiency. Specific comparisons of these two groups might yield insight about the nature of symptom choice, referred to above.
4. This same clinical model might be usefully applied to academic deficiency among female adolescents, both to test the hypothesis of identity diffusion in girls and to provide some exploration of the fact that underachieving seems at least three times more prevalent among males than females.

5. Research should be directed both to early identification of ego impairment and to the development of compensatory or therapeutic techniques that can give sufficient consideration to family dynamics. Early identification can also lead to the necessary development of programs aimed at prevention.

It would seem that the development of specific group counseling and group psychotherapy techniques would be most realistic here, especially if they could be applied within the structure of the school. They do not make the impossible demand of one therapist for each patient.

6. The High School Personality Questionnaire should be administered to a very broad sampling of adolescent underachievers and controls for the possible development of an underachiever profile that might be used as a screening tool.

7. Research should be directed at differentiating early reading disabilities from the initial manifestations of the ego impairment/academic deficiency syndrome. Efforts could then be directed at the personality problem and a great deal of nonproductive tutorial time saved.

8. The relevance of the underachieving symptom as an early indication of later psychopathology has become increasingly apparent. More specific parameters of this diagnostic and prognostic "sign" need to be defined. A closer working relationship between research in preventive psychiatry and remedial education must be established.





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## APPENDIX A

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## THE RATING SCALE

From the case material presented, please judge the degree you feel the subject experiences and/or manifests the feelings, defenses or conflicts represented in the questions and items listed below.

Please mark the check list twice.

First, read only the Individual Psychologicals, from the Wechsler through the Rorschach, and mark the check list in BLUE for each of the 20 cases.

Second, read the History and Background and the Psychologicals and mark the check list again in RED, so that it will be clear what changes are made when the material is seen in the context of the history and background.

Please feel free to add any qualifying remarks to any item.

Please add any comments, impressions, etc. about the case that you care to at the end of this check list, particularly if there are salient features that you wish to call attention to or to emphasize

To help clarify the items, they are grouped under the Erikson crisis stage and derivatives to which they relate. Feel free to refer to the summary "Erikson's Crisis Stages and Their Derivations," which is included with the case material.

## I Trust vs Mistrust

## Time Perspective vs Time Diffusion

- |   |                                    |       |          |       |                        |
|---|------------------------------------|-------|----------|-------|------------------------|
| 1. Ability to control or delay impulses.  | Very good                          | Good  | Adequate | Poor  | Very poor              |
| 2. Ability to organize and plan ahead.  | Very good                          | _____ | _____    | _____ | Very poor              |
| 3. Feelings about the future.   | Appropriate and realistic          | _____ | _____    | _____ | Avoided or unrealistic |
| 4. Security - in relations with other people.   | Adequate, appropriate, comfortable | _____ | _____    | _____ | Insecure, threatened   |
| 5. Trust in authority figures.  | Appropriate, healthy               | _____ | _____    | _____ | Limited, unhealthy     |
| 6. Tendency toward rather omnipotent controlling fantasy.   | None                               | _____ | _____    | _____ | Gross                  |
| 7. Impaired capacity to relate to others (object cathexis) - resulting in a social and emotional isolation. | No impairment                      | _____ | _____    | _____ | Marked impairment      |

## II Autonomy vs Shame and Doubt

## Self certainty vs Identity consciousness

- |                        |                       |       |       |       |          |
|------------------------|-----------------------|-------|-------|-------|----------|
| 8. Self-consciousness. | Realistic, acceptable | _____ | _____ | _____ | Limiting |
|------------------------|-----------------------|-------|-------|-------|----------|



9. Decisiveness - certainty.
- |                      |       |       |       |                    |
|----------------------|-------|-------|-------|--------------------|
| Decisive and certain | _____ | _____ | _____ | Indecisive, unsure |
|----------------------|-------|-------|-------|--------------------|
10. Dependency needs.
- |                                  |       |       |       |           |
|----------------------------------|-------|-------|-------|-----------|
| Adequately resolved, independent | _____ | _____ | _____ | Dependent |
|----------------------------------|-------|-------|-------|-----------|
11. Fear of failure.
- |                                    |       |       |       |          |
|------------------------------------|-------|-------|-------|----------|
| Appropriate, realistic, motivating | _____ | _____ | _____ | Limiting |
|------------------------------------|-------|-------|-------|----------|
12. Super-ego.
- |                          |       |       |       |                      |
|--------------------------|-------|-------|-------|----------------------|
| Effectively incorporated | _____ | _____ | _____ | Demanding, primitive |
|--------------------------|-------|-------|-------|----------------------|
- III Initiative vs Guilt
- Role experimentation vs Negative identity
13. Curiosity (re roles and expectancies).
- |               |       |       |       |             |
|---------------|-------|-------|-------|-------------|
| Healthy, free | _____ | _____ | _____ | Constricted |
|---------------|-------|-------|-------|-------------|
14. Drive - energy.
- |   |       |       |       |                          |
|---|-------|-------|-------|--------------------------|
| Directed toward present and future goals. | _____ | _____ | _____ | Limited to present goals |
|---|-------|-------|-------|--------------------------|
15. Sense of responsibility. (Answer a or b)
- |              |       |       |       |                                   |
|--------------|-------|-------|-------|-----------------------------------|
| a. Realistic | _____ | _____ | _____ | Over-responsible, guilt motivated |
| b. Realistic | _____ | _____ | _____ | Irresponsible                     |
16. Ambition.
- |                       |       |       |       |                             |
|-----------------------|-------|-------|-------|-----------------------------|
| Definitive, realistic | _____ | _____ | _____ | Vague, passive, unrealistic |
|-----------------------|-------|-------|-------|-----------------------------|

17. Oedipal fantasy.
- Well resolved     \_\_\_     \_\_\_     \_\_\_     Unresolved,  
binding
18. Selection of a negative identity.
- None             \_\_\_     \_\_\_     \_\_\_     Gross
19. Attitude toward roles considered proper and desirable by  
others. (Answer a or b)
- a. Acceptable     \_\_\_     \_\_\_     \_\_\_     Rejected
- b. Acceptable     \_\_\_     \_\_\_     \_\_\_     Overconcerned
20. Feelings regarding the expectancies of others. (Answer  
a or b)
- a. Acceptable     \_\_\_     \_\_\_     \_\_\_     Expect too  
little, failure
- b. Acceptable     \_\_\_     \_\_\_     \_\_\_     Expect too much
21. Feelings regarding subject's own expectancies (ego ideal).
- Realistic         \_\_\_     \_\_\_     \_\_\_     Omnipotence and  
immobility
22. Aggression. (Answer a or b)
- a. Adequate  
controls         \_\_\_     \_\_\_     \_\_\_     Poor controls
- b. Adequate  
controls         \_\_\_     \_\_\_     \_\_\_     Overcontrol
23. Aggression toward father figure.
- Felt:
- None             \_\_\_     \_\_\_     \_\_\_     Very much
- Expressed:
- None             \_\_\_     \_\_\_     \_\_\_     Very much
24. Aggression toward mother figure.
- Felt:
- None             \_\_\_     \_\_\_     \_\_\_     Very much

## III - continued

- |   |       |       |       |                              |
|---|-------|-------|-------|------------------------------|
| Expressed:  |       |       |       |                              |
| None  | _____ | _____ | _____ | Very much                    |
| 25. Aggression displaced - aimed at parent surrogates.                  |       |       |       |                              |
| Very little   | _____ | _____ | _____ | Very much                    |
| 26. Aggression repressed - aimed inward.                                |       |       |       |                              |
| Very little   | _____ | _____ | _____ | Very much                    |
| 27. Aggression aimed at appropriate objects.                            |       |       |       |                              |
| Very little   | _____ | _____ | _____ | Very much                    |
| IV Industry vs Inferiority  |       |       |       |                              |
| Anticipation vs Work paralysis  |       |       |       |                              |
| 28. Initiative.   |       |       |       |                              |
| Healthy expression  | _____ | _____ | _____ | Very passive                 |
| 29. Competition.  |       |       |       |                              |
| Stimulating   | _____ | _____ | _____ | Threatening                  |
| 30. Anticipation of achievement (work).                                 |       |       |       |                              |
| Source of pleasure and recognition                                      | _____ | _____ | _____ | Source of threat and anxiety |
| 31. Feelings of inferiority.  |       |       |       |                              |
| Not significant   | _____ | _____ | _____ | Severe                       |
| 32. Passive resistance to direction from authority or parental figures. |       |       |       |                              |
| Not significant   | _____ | _____ | _____ | Severe                       |
| 33. Expression of fantasy. (Answer a or b)                              |       |       |       |                              |
| a. Free   | _____ | _____ | _____ | Constricted                  |
| b. Free   | _____ | _____ | _____ | Fantasy dominated            |

## IV - continued

34. Need to complete tasks. (Answer a or b)

a. Appropriate	_____	_____	_____	Cannot allow completion
----------------	-------	-------	-------	----------------------------

b. Appropriate	_____	_____	_____	Obsessively concerned
----------------	-------	-------	-------	--------------------------

## V Identity vs Identity Diffusion

## Solidarity vs Social isolation

35. Self-confident, autonomous, accepts own individuality.

Very well	_____	_____	_____	Very little
-----------	-------	-------	-------	-------------

36. Body image.

Secure, minimum threat	_____	_____	_____	Threatening, anxiety inducing
---------------------------	-------	-------	-------	----------------------------------

37. Self concept (intra-personally).

Accepted	_____	_____	_____	Depreciated
----------	-------	-------	-------	-------------

38. Self concept (social).

Similar, acceptable, appropriate	_____	_____	_____	Different
-------------------------------------	-------	-------	-------	-----------

39. Sexual identity.

Acceptable, sexual identity	_____	_____	_____	Bisexual diffusion
--------------------------------	-------	-------	-------	--------------------

40. Intimacy.

Can handle mutuality, no threat of fusion	_____	_____	_____	Threat of diffusion, loss of identity
---	-------	-------	-------	--

41. Homosexual threat or anxiety.

None	_____	_____	_____	Considerable
------	-------	-------	-------	--------------

V - continued

42. Castration anxiety.

None                    \_\_\_\_\_                    \_\_\_\_\_                    \_\_\_\_\_                    Considerable

43. How well does subject utilize his intellectual resources?

Very well                    \_\_\_\_\_                    \_\_\_\_\_                    \_\_\_\_\_                    Very poorly

44. Fantasy life.

Rich                    \_\_\_\_\_                    \_\_\_\_\_                    \_\_\_\_\_                    Impoverished

45. Creative freedom - can utilize or apply fantasy resources.

Highly creative                    \_\_\_\_\_                    \_\_\_\_\_                    \_\_\_\_\_                    Work paralysis

46. Flexibility of thought processes. (Answer a or b)

a. None                    \_\_\_\_\_                    \_\_\_\_\_                    \_\_\_\_\_                    Rigid, limited

b. None                    \_\_\_\_\_                    \_\_\_\_\_                    \_\_\_\_\_                    Too flexible,  
diffuse

47. Subject's identification with his mother. (Answer a or b)

a. Appropriate                    \_\_\_\_\_                    \_\_\_\_\_                    \_\_\_\_\_                    Rejects

b. Appropriate                    \_\_\_\_\_                    \_\_\_\_\_                    \_\_\_\_\_                    Extreme

48. Subject's identification with his father. (Answer a or b)

a. Appropriate                    \_\_\_\_\_                    \_\_\_\_\_                    \_\_\_\_\_                    Rejects

b. Appropriate                    \_\_\_\_\_                    \_\_\_\_\_                    \_\_\_\_\_                    Extreme

49. Subject's identification with his peers. (Answer a or b)

a. Appropriate                    \_\_\_\_\_                    \_\_\_\_\_                    \_\_\_\_\_                    Rejects

b. Appropriate                    \_\_\_\_\_                    \_\_\_\_\_                    \_\_\_\_\_                    Extreme

50. Subject presents an overall identity that is

Solid                    \_\_\_\_\_                    \_\_\_\_\_                    \_\_\_\_\_                    Diffuse

51. Identification is essentially

Masculine                    \_\_\_\_\_                    \_\_\_\_\_                    \_\_\_\_\_                    Feminine

V - continued

52. Would you judge this adolescent an achiever \_\_\_\_\_ or underachiever \_\_\_\_\_.
53. Ego-impaired, but not manifest in academic underachieving, Yes \_\_\_\_\_ No \_\_\_\_\_.
54. Ego-impaired, manifest in academic underachieving, Yes \_\_\_\_\_ No \_\_\_\_\_.
55. Not ego-impaired \_\_\_\_\_.

From History and Background material:

56. Mother sees the subject as
- |               |       |       |       |           |
|---------------|-------|-------|-------|-----------|
| Much like her | _____ | _____ | _____ | Much like |
| husband       |       |       |       | herself   |
57. Mother's feeling about her own femininity.
- |         |       |       |       |         |
|---------|-------|-------|-------|---------|
| Accepts | _____ | _____ | _____ | Rejects |
|---------|-------|-------|-------|---------|
58. Mother's attitude toward subject.
- |            |       |       |       |              |
|------------|-------|-------|-------|--------------|
| Accepting, | _____ | _____ | _____ | Rejecting,   |
| supportive |       |       |       | depreciating |
59. Mother's feeling about her own adequacy.
- |             |       |       |       |              |
|-------------|-------|-------|-------|--------------|
| Adequate    | _____ | _____ | _____ | Inferior,    |
| comfortable |       |       |       | depreciating |
60. Mother's feelings toward her husband.
- |            |       |       |       |              |
|------------|-------|-------|-------|--------------|
| Accepting, | _____ | _____ | _____ | Rejecting,   |
| supportive |       |       |       | depreciating |
61. Father sees the subject as
- |                   |       |       |       |           |
|-------------------|-------|-------|-------|-----------|
| Much like himself | _____ | _____ | _____ | Much like |
|                   |       |       |       | his wife  |
62. Father's attitude toward subject
- |            |       |       |       |              |
|------------|-------|-------|-------|--------------|
| Accepting, | _____ | _____ | _____ | Rejecting,   |
| supportive |       |       |       | depreciating |

From History and Background material - continued

63. Father's feeling about his own adequacy.

Adequate comfortable	_____	_____	_____	Inferior depreciating
-------------------------	-------	-------	-------	--------------------------

64. Father's feeling toward his wife.

Accepting, supportive	_____	_____	_____	Rejecting, depreciating
--------------------------	-------	-------	-------	----------------------------

COMMENTS:

## SENTENCE COMPLETION FORM

NAME \_\_\_\_\_ DATE \_\_\_\_\_

1. I feel that my father seldom
2. When the odds are against me
3. I always wanted to
4. If I were in charge
5. To me the future looks
6. His father
7. Roger would have done anything to forget the time he
8. When I was a child
9. My idea of a perfect woman
10. When I see a man and a woman together
11. Compared with most families, mine
12. My mother
13. When he saw his father coming he
14. If anyone should stand in Tom's way he would
15. I believe that I have the ability to
16. I could be perfectly happy if
17. George was sorry after he
18. I look forward to
19. In school, my teachers
20. I don't like people who
21. When Jack became angry he
22. I think most girls
23. My feelings about married life



24. My family treats me like
25. My mother and I
26. My greatest mistake
27. I wish my father
28. Some day I
29. The people I like best
30. If anyone bothers Carl he
31. I believe most women
32. Most families I know
33. I like working with people who
34. I think that most mothers
35. I feel that my father is
36. When luck turns against me
37. What I want most out of life
38. When I am older
39. People whom I consider my superiors
40. When I'm not around, my friends
41. My most vivid childhood memory
42. What I like least about some women
43. When I was a child my family
44. I like my mother but

## INTERVIEW OUTLINES

## INTRODUCTION AND INTERVIEW I

## Interview with Mother re Subject

## 1 Introduction

## A Identifying Data

1 Name

2 Code

3 Date of birth

## B Impression of Subject

## C Family Structure

## 1 Parents

## a Father

(1) Age

(2) Education

(3) Occupation

(4) Sibship

## b Mother

(1) Age

(2) Education

(3) Occupation

(4) Sibship

## 2 Marriage

## 3 Sibship

## 4 Parent Surrogates

## II Developmental History (Interview I) (with Mother re Subject)

## A Date and Place of Birth

## B Pregnancy

- 1 Number of pregnancy
  - 2 Physical course of pregnancy
  - 3 Attitude toward pregnancy
    - a Specifically with subject and versus that of sibs
    - b Fantasies re child during pregnancy. Sex desired.
  - 4 Separations during pregnancy
  - 5 Delivery
    - a Labor and delivery problems
    - b Injury to mother or subject
- C Development
- 1 Feeding
    - a Weaned, how and when
    - b Eating habits
      - (1) Early
      - (2) Present
  - 2 Motor development
    - a Sit
    - b Crawl
    - c Walk
    - d Talk
  - 3 Toilet training
    - a Age
    - b Method
    - c Attitude
  - 4 Illnesses and operations
    - a Include phobias, speech problems, etc.

- b Previous psychological evaluation
- 5 Sleeping arrangements
- 6 Personal habits
- D Schooling
  - 1 Nursery/Kindergarten
  - 2 Number of schools
  - 3 Difficulties/Failures
  - 4 Performance record
  - 5 Age and grade at onset of problem
- E Separations
  - 1 Father from subject. Length and reason
  - 2 Mother from subject. Length and reason
  - 3 Subject from family
- F Sibling relationships
- G Socialization
  - 1 Play activities with sibs and peers. Play with younger, older or same age youngsters
  - 2 Give and take - need to dominate - feelings about winning or losing
  - 3 Organizations - group activities - Scouting, Little League, Church, etc.

### III Family Relationships

- A Identification/Relationship
  - 1 With Mother
  - 2 With Father
- B Family cohesiveness

- 1 Close knit?
  - 2 Activities as a group
  - 3 Religion and religiosity
- C Responsibilities and privileges
- D Discipline and punishment
- 1 For behavior vs learning
  - 2 How, who, frequency
- IV Hopes and Plans
- A Educational/vocational goals
- B Reality
- 1 In terms of subject's potential
  - 2 In terms of realistic family planning - savings, insurance,  
etc.

## INTERVIEW II - Mother

## INTERVIEW III - Father

## I Identifying Data

## A Name

Code

Age

## B Impression

## II Background

## A Place of birth, sibship, etc.

## B Parents

## 1 Description (including occupational and educational level)

a Father

b Mother

## 2 Parent surrogates

## 3 Home/parents' marriage

## C Relations with siblings

## D Religion

## E Mobility of family

## F Schooling

## 1 Level

## 2 Feelings about school, relations with peers and teachers

a To high school

b College

## 3. Extracurricular activities

## G Service or occupational history

## H Marital history

- 1 Length of courtship
  - 2 Feelings of both families
  - 3 Previous engagements
- I Relevant medical history
- III Present Status
- A Feelings about self, job and personal goals
  - B Feelings about the marriage
- IV Identification - View of subject's identification with one parent or the other
- V Learning and education
- A Generally
  - B Feelings regarding this school and subject's education
    - 1 Responsibility of school
    - 2 Responsibility of parents
    - 3 Responsibility of subject
  - C What assistance is offered to subject
  - D Hopes and plans
    - 1 Educational/vocational goals
    - 2 Reality
      - a Subject's potential
      - b Realistic planning, savings, insurance, etc.
  - E Comparison of subject's and parents' educational history
    - 1 Level reached and goals
    - 2 Feelings re opposite sex parent's education

## INTERVIEW IV - Subject

## I Identifying Data

## A Name

Code

Date of birth

## B Impression

## II Family

## A Parents

1 Description of and feelings about each parent

2 Which parent do you feel you are most like? Want to be most like?

3 How do they feel about you?

4 What do they seem to expect from you?

5 Discipline:

a What for?

b How and how often?

6 Knowledge of and feelings about father's job

## B Sibs

1 Describe

2 Feelings about

## III Self

## A Self description

1 Likes, dislikes, hobbies, etc.

2 In relation to classmates

3 In relation to opposite sex: feelings about, interest in girls, dating, dancing, etc.



## 4 Ambition

- a Personal vs that of parents for subject

## IV School

## A Feelings about school

- 1 Teachers
- 2 Classmates
- 3 Extracurricular activities

## B Explanation of performance

- 1 Estimate of ability
- 2 Reasons for performance

## V Attitude Check List

1. How many students should there be in a class?
2. How should ability of students be judged?
3. How much homework should be given?
4. How should bright kids be treated?
  - a. By teachers
  - b. By other kids
5. Do you think the grading system used in this school is
  - a. Satisfactory
  - b. Ideal
  - c. Fair
  - d. Unfair
6. Should students have a full schedule of spare-time activities?  
Why?
7. Should discipline in school help pupils to learn?
8. Should students be punished for not learning?

9. If you had a student in your class who would not work, what would you do?
  - a. Talk to him after school
  - b. Talk to his parents
  - c. Expell him
  - d. Send him to the principal
  - e. Spank him
10. What do most teachers do?
11. How much should parents concern themselves with children's school work?
12. Everybody with good intelligence should succeed in his school work.
  - a. Agree?
  - b. Comment

## VITAE OF CLINICAL JUDGES

Judge ADegrees

1955	B.A.	McGill University
1958	M.A.	New School for Social Research
1963	Ph.D.	New York University

Experience

1957-58	Beth Israel Hospital	Psychological Testing and Therapy
1958-59	New York University	Clinical Assistant
1959-62	New York University	Instructor
1961-62	Staten Island Mental Health Center	Intern
1962-63	Staten Island Mental Health Center	Staff Psychologist
1963-65	Jewish Board of Guardians	Research Associate
1963-65	Einstein Hospital	Research Consultant
1963-65	Private Practice	Therapy
1965-66	Jewish Board of Guardians	Co-director Research in Psychological Therapy
1965-	Hampstead Clinic	Student and Research Assistant

Judge BDegree

1957	A.B.	University of Illinois
1963	Ph.D.	University of Illinois

Experience

1956-57	University of Illinois	Undergraduate Research Assistant
1957-58	University of Illinois	Teaching Assistant
1958-59	University of Illinois	Research and Diagnostic Assistant
Summer 1959	University of Illinois	Teaching and Diagnostic Assistant
1959-60	University of Illinois	Teaching and Diagnostic Assistant
Summer 1960	University of Illinois	Teaching and Diagnostic Assistant
1960-61	Veterans Administration Hospital, Palo, Alto, California	Clinical Intern
Fall 1961-62	Veterans Administration Hospital, Danville, Ill.	Clinical Trainee
Spring 1962	University of Illinois	Instructor
Fall 1962-Summer 1963	University of Colorado Medical Center, Denver, Colorado	Clinical Intern
Fall 1963-Summer 1965	Reiss-Davis Clinic for Child Guidance, Los Angeles, California	United States Public Health Post-Doctoral Fellowship
Fall 1965 -	Tavistock Clinic, London, England	Senior Psychologist and Trainee

Judge CDegree

1955	B.A. Hons.	Cambridge
1965	M.A.	Cambridge

Experience

1959-60	Child Guidance Training Center, London	Training in Educational and Clinical Psychology
1960-65	Borough of Wembley (Middlesex)	Educational Psychologist
1966	Hampstead Clinic, London	The Hampstead Child Therapy Course

## APPENDIX B

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TABLE A1

## WIDE RANGE ACHIEVEMENT TEST SUMMARY

UA and A Groups Means and Standard Deviations for the WRAT Reading, Spelling and Arithmetic Subtests. All differences are significant at the .005 level.

<u>WRAT</u> <u>Subtest</u>	<u>UA</u> <u>Group</u>		<u>A</u> <u>Group</u>	
	M	$\sigma$	M	$\sigma$
Reading	10.97	1.39	13.59	1.27
Spelling	9.78	.31	11.27	.71
Arithmetic	9.68	1.01	11.43	1.40



Subject No.	A	B	C	D	E	F	G	H	I	J	O	Q2	Q3	Q4
5	8	5	6	14	14	12	11	7	7	15	16	5	8	9
6	14	9	17	4	18	8	8	15	3	10	9	12	15	7
10	10	8	10	10	14	17	8	12	4	10	9	8	11	5
11	12	8	9	16	13	17	10	5	7	8	15	14	8	6
12	14	7	11	4	14	18	8	12	6	8	9	6	9	6
13	6	8	12	9	11	9	14	12	9	10	14	9	13	10
14	16	6	13	14	13	18	12	14	7	7	13	10	12	8
16	12	5	12	16	12	12	8	6	5	8	15	13	9	9
17	14	7	11	10	8	14	10	10	4	10	8	12	10	12
18	12	7	14	9	8	12	15	14	6	9	6	11	13	5
Total	116	70	115	106	125	137	104	107	58	95	124	100	108	80
M	11.6	7.0	11.5	10.6	12.5	13.7	10.4	10.7	5.8	9.5	12.4	10.0	10.8	8.0
$\sigma$	2.9	1.3	2.9	4.2	2.8	3.5	2.5	3.4	1.7	2.1	3.5	2.8	2.3	2.1
Mean = Sten	6-7	5	6-7	5-6	7-8	7-8	5-6	5-6	4	6-7	7	5	5-6	5

TABLE A2

## UA GROUP HIGH SCHOOL PERSONALITY QUESTIONNAIRE SUMMARY

Raw scores per subject on each HSPQ Factor. UA group means and SD for each Factor and Sten Score equivalent for the mean of each Factor.

Subject No.	A	B	C	D	E	F	G	H	I	J	O	Q2	Q3	Q4
1	7	7	13	5	12	12	13	7	9	9	11	13	6	12
2	10	9	4	12	4	11	10	7	4	10	11	12	10	9
3	10	9	13	11	10	13	9	11	13	12	14	11	13	4
4	9	10	16	6	7	8	12	13	5	7	6	11	14	5
7	16	7	9	8	3	12	13	14	7	5	8	4	11	7
8	8	8	8	10	11	5	14	11	11	11	7	12	14	8
9	8	8	11	9	11	9	11	9	8	9	11	11	13	10
15	12	10	10	7	9	13	13	8	11	5	10	9	16	10
19	10	8	12	10	8	14	12	11	10	3	14	11	12	9
20	8	9	13	18	8	13	14	12	7	6	7	7	11	5
Total	98	85	109	96	83	110	121	103	85	77	99	101	120	79
M	9.8	8.5	10.9	9.6	8.3	11.0	12.1	10.3	8.5	7.7	9.9	10.1	12.0	7.9
$\sigma$	2.5	1.0	1.0	3.5	2.8	2.7	1.6	2.3	2.7	2.8	2.7	2.6	2.6	2.6
Mean - Sten	5-6	7-8	6	5	5	6	6-7	5-6	6	5	5	5-6	6	4-5

TABLE A3

## A GROUP HIGH SCHOOL PERSONALITY QUESTIONNAIRE SUMMARY

Raw scores per subject on each HSPQ Factor. A group means and SD for each factor and Sten Score Equivalent for the mean of each Factor.

TABLE A4

## SUMMARY OF UA &amp; A GROUP WISC MEANS

Mean WISC IQ's, subtest scores, the  $\sigma$ 's, t's, and level of significance of the differences between UA and A group means.

	<u>UA Group</u>		<u>A Group</u>		<u>t</u>	<u>p</u>
	M	$\sigma$	M	$\sigma$		
Full Scale IQ	116.5	5.47	122.9	6.67	2.23	.05
Verbal Scale IQ	116.5	5.90	125.4	6.26	3.11	.005
Info	14.1	1.81	14.6	1.56	.627	-
Comp	13.2	1.47	15.1	2.81	1.8	-
Arit	11.2	2.00	13.7	2.5	2.35	.05
Simil	13.8	2.13	15.3	2.19	.926	-
Voca	13.2	1.40	14.3	1.42	1.66	-
Dig Span	10.1	2.74	12.4	2.65	1.811	-
Perform' Scale IQ	113.2	8.39	116.2	9.75	.699	-
Pic Comp	12.5	2.16	12.8	2.4	.260	-
Pic Arr	11.3	2.19	11.6	2.06	.299	-
Bl Des	11.7	2.9	11.3	2.41	1.096	-
Obj Ass	10.6	1.8	9.9	1.70	.848	-
Coding	13.4	2.54	13.7	2.83	.236	-

Subject	Info	Comp	Arith	Sim	Vocab	Digit Span	$\Sigma$	Pro Rate	VIQ
5	16	14	14	15	15	9	83	69	124
6	16	11	13	8	13	11	72	60	113
10	13	14	13	14	14	14	82	68	123
11	17	14	11	13	15	13	83	69	124
12	13	15	11	14	12	4	69	58	110
13	12	11	8	16	12	13	72	60	113
14	13	14	8	14	11	9	69	58	110
16	12	12	10	15	12	9	70	58	110
17	16	12	11	13	13	9	74	62	115
18	13	15	13	16	15	10	82	68	123
$\Sigma$	141	132	112	138	132	101		630	1165
M	14.1	13.2	11.2	13.8	13.2	10.1		63.0	116.5
$\sigma$	1.814	1.470	1.990	2.182	1.400	2.737		4.648	5.903

TABLE A5

## UA GROUP WISC VERBAL SCALE SUMMARY

Verbal Scale subtest totals and IQ's by subject. Group means and standard deviations.

Subject	Info	Comp	Arith	Sim	Vocab	Digit Span	Pro Rate	VIO
1	18	12	14	18	14	9	71	126
2	14	15	9	13	15	11	64	118
3	14	19	14	16	16	13	77	134
4	14	13	14	16	17	15	77	130
7	14	15	14	11	14	15	74	124
8	16	19	17	15	13	14	69	135
9	12	14	11	17	13	14	78	123
15	16	19	11	16	15	11	68	129
19	14	14	11	18	14	7	73	119
20	14	11	11	13	12	15	65	116
$\Sigma$	146	151	137	153	143	124	702	1254
M	14.6	15.1	13.7	15.3	14.3	12.4	70.2	125.4
$\sigma$	1.56	2.809	2.500	2.193	1.417	2.653	4.97	6.264

TABLE A5

## A GROUP WISC VERBAL SCALE SUMMARY

Verbal Scale subtest totals and IQ's by subject. Group means and standard deviations.

Subj	Pict Comp	Pict Arr	Block Design	Obj Assemb	Coding	$\Sigma$	Perf IQ
5	8	10	10	12	14	54	106
6	11	15	12	11	13	62	117
10	16	11	15	10	14	66	122
11	14	9	15	13	14	65	121
12	13	8	17	13	21	71	129
13	13	11	10	10	11	55	107
14	14	10	9	8	12	53	104
16	13	14	8	12	14	61	115
17	10	14	9	9	11	53	104
18	13	11	12	8	11	55	107
$\Sigma$	125	113	117	106	134	595	1132
M	12.5	11.3	11.7	10.6	13.4	59.5	113.2
$\sigma$	2.156	2.193	2.900	1.800	2.538	6.360	8.388

TABLE A7

## UA GROUP WISC PERFORMANCE SCALE SUMMARY

Performance Scale subtest totals and IQ's by subject. Group means and standard deviations.

Subj	Pict Comp	Pict Arr	Block Design	Obj Assemb	Coding	$\Sigma$	Perf IQ
1	14	12	16	10	13	65	121
2	16	13	10	10	12	61	115
3	16	11	13	7	17	64	124
4	11	11	13	9	12	56	108
7	14	11	16	12	13	66	122
8	11	11	12	10	20	64	120
9	8	10	10	9	10	47	96
15	14	11	16	13	14	68	125
19	11	9	11	11	11	53	104
20	13	17	16	8	15	69	127
$\Sigma$	128	116	133	99	137	613	1162
M	12.8	11.6	13.3	9.9	13.7	61.3	116.2
$\sigma$	2.40	2.059	2.410	1.700	2.830	6.753	9.755

TABLE A8

A GROUP WISC PERFORMANCE SCALE SUMMARY

Performance Scale subtest totals and IQ's by subject. Group means and standard deviations.

SUBSCALE I

Item	Subject 5			Subject 6			Subject 10			Subject 11			Subject 12					
	Judge A	B	C	A	B	C	A	B	C	A	B	C	A	B	C			
1	4	4	3	11	3	3	2	5	4/3	11	3	3	9	2	3	4/3	9	
2	3	4	4	11	4	3	11	2	3	8	3	4	3	10	4	2	3/4	9
3	4	3/4	4	11	4	5	13	3	3/4	10	4	5	4	13	4	4	4	12
4	4	4/5	4	12	3	5	12	4	4/5	13	2	5	4	11	3	2/3	4/3	9
5	4	3/4	3	10	3	3	9	4	5	13	2	4	4	10	4	2/3	2	8
6	4	3	3	10	3	3	8	4	4	12	2	4	2	8	4	4	2	10
7	3/4	4	3	10	3	4	10	3	5	12	2	5/4	4	11	2	2/3	2	6

TABLE A9

UA GROUP RATING SCALE SUMMARY

This table lists the individual ratings and the sums of the ratings given each subject by each judge on each item, (Trial 1). The changes in ratings (Trial 2) made by the judges are shown to the right of the diagonal. The totals and means of each judge's initial ratings are shown under Trial 1, and the totals and means of the changes in his ratings under Trial 2, on the last page of each subscale summary.



SUBSCALE I, CONTINUED

Item	Subject 13			Subject 14			Subject 16			Subject 17			Subject 18							
	Judge A	B	C	A	B	C	A	B	C	A	B	C	A	B	C					
1	4	3	3	10	4	2	3/2	9	2	4	4/3	10	2	4	3	9	4	4/3	3/2	11
2	3	4/3	3	10	4	4	3	11	4	3	4	11	2	3	4	9	3	4	3	10
3	3	4	3	10	4	2/4	2/3	8	5	5/4	4	14	2	4	4	10	2	3/4	3	8
4	3/4	5	2/3	10	2	3/2	3	8	5	5	4	14	2	5	4/3	11	2	4	3	9
5	3	3	2	8	2/3	2	3	7	5	5/4	5/4	15	3	2	4	9	2	4/3	4/3	10
6	3	3	2	8	4	3	2	9	3	4	3/2	10	1	3	2	6	1	4	4	9
7	3/4	4	2/3	9	2	1	3	6	5	5	3	13	1	5/4	3	9	3	3	3	9

TABLE A9, CONTINUED

UA GROUP RATING SCALE SUMMARY

SUBSCALE I, CONTINUED

Judge Trial	A		B		C		TOTALS	
	$\Sigma 1$	$\Sigma 2$	$\Sigma 1$	$\Sigma 2$	$\Sigma 1$	$\Sigma 2$	$\Sigma 1$	$\Sigma 2$
Item 1	30	30	35	34	33	28	98	92
2	32	32	35	34	33	34	100	100
3	35	35	38	42	36	36	109	113
4	30	31	42	44	37	35	109	110
5	32	33	33	33	34	32	99	93
6	29	29	35	35	26	25	90	89
7	<u>27</u>	<u>29</u>	<u>38</u>	<u>37</u>	<u>30</u>	<u>31</u>	<u>95</u>	<u>97</u>
$\Sigma$	215	219	256	259	229	221	700	699
M	30.71	31.29	36.57	37.0	32.72	31.57	100.	99.86

TABLE A9, CONT'D

UA GROUP RATING SCALE SUMMARY



SUBSCALE II, CONTINUED

Item	Subject 13			Subject 14			Subject 16			Subject 17			Subject 18						
	Judge A	B	C	A	B	C	A	B	C	A	B	C	A	B	C				
8	3/4	2	2	7	2	3/4	2	7	4	3	4	11	3	3	3	2	3	4/3	9
9	3	2/3	3	8	3	4/3	3	10	4	2	4/3	10	2	4	4	3	4	4	11
10	4	5	2/3	11	4	4	4	12	5	4	4	13	2	5	4	2	4	3	9
11	2/3	3/4	2/4	7	3	1/3	4/3	8	4	5	3	12	2	4	3	2	3	4/3	9
12	3	3	2	8	3	2	3	8	3	5	4	12	2	3	4	2	4	4	10

TABLE A10, CONT'D

UA GROUP RATING SCALE SUMMARY

SUBSCALE II, CONTINUED

Judge Trial	A		B		C		TOTALS	
	Σ 1	Σ 2	Σ 1	Σ 2	Σ 1	Σ 2	Σ 1	Σ 2
Item 8	29	30	31	33	31	31	91	94
9	33	34	29	32	34	33	96	99
10	38	38	42	43	37	39	117	120
11	34	35	31	36	30	30	95	101
12	30	29	35	34	36	35	101	98
Σ	164	166	168	178	168	168	500	512
M	32.8	33.2	33.6	35.6	33.6	33.6	100	102.4

TABLE A10, CONT'D

UA GROUP RATING SCALE SUMMARY

SUBSCALE III

Item	Subject 5			Subject 6			Subject 10			Subject 11			Subject 12							
	Judge	A	B	A	B	C	Σ	A	B	C	Σ	A	B	C	Σ	A	B	C		
13	4	4	3	11	4	5	4	13	3	5	2	10	3	3/4	3	9	4	2	4	10
14	4	4	4	12	4	5	4	13	4	4	4	12	4	4	3	11	4	5	4	13
15a	-	3	3	6	-	-1/2	4/2	4	2	3	3/5	8	-	4	4	8	-	3/-	3	6
b	2	-	-	2	2/3	3/-	-	5	-	-	-1/5	-	2/3	-	-	2	3	-1/2	-	3
16	4	4/5	4	12	4	5	4	13	4	4/5	4	12	4	5	3	12	5	4/5	4	13
17	4	3/4	4	11	4	4	5	13	4	4	4	12	4	5	4	13	4	4	5	13
18	4	2/3	3/2	9	4	3	2	9	2	4	2	8	2	3	2	7	4	2	2	8
19a	3	2	3	8	3	1/2	2	6	-	4	2	6	2	1	-	3	3	1	2	6
b	-	-	-	-	-	-	-	-	2	-	-	2	-	-	2	2	-	-	-	-
20a	-	-	-	-	-	-	-	-	-	-	-	-	-	1/3	1	1	2	1	-	3
b	3	3/4	3	9	3	3	2	8	2	4	2	8	2	-	2	4	-	-	2	2

TABLE A11

UA GROUP RATING SCALE SUMMARY

SUBSCALE III, CONTINUED

Item	Subject 13			Subject 14			Subject 16			Subject 17			Subject 18							
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C					
13	2/3	5	4	11	3	1	3	7	4	5	5	14	2	4	4	10	2	3/2	3	8
14	2/3	2	3/4	7	4	2/4	3	9	5	5	5	15	2	4/5	4	10	2	3	3	8
15a	3	-/3	3	6	-	4/3	2	6	-	5	3	8	3	5/3	4	12	2	5	4	11
b	-	3/-	-	3	4	-	-	4	3	-	-	3	-	-	-	-	-	-	-	-
16	2/3	5	3	10	4	3/4	3	10	5	5/4	4	14	3	4	5	12	2	4	3	9
17	4	4	5	13	4	2	5	11	4	5	5	14	3	4	5	12	2	5/4	5	12
18	3	3	3	9	2	2	2	6	3	3	3/2	9	3	3/2	2	8	2	3/2	2	7
19a	3	5	2	10	2/3	1	2	5	4	3	4/2	11	-	1/3	2	3	2	1	-	3
b	-	-	2	2	-	-	-	-	-	-	-	-	3	-	-	3	-	-	2	2
20a	-	-	-	-	-	-	-	-	-	-	-	-	-	1/-	-	1	-	1/-	-	1
b	2	2/4	2	6	2/3	4	3/2	9	3	4	4/3	11	2	-/3	3	5	2	-/3	2	4

TABLE A11, Continued

UA GROUP RATING SCALE SUMMARY

SUBSCALE III, CONTINUED

Item	Subject 5			Subject 6			Subject 10			Subject 11			Subject 12							
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C					
21	3	3/4	4	10	3	4	4/3	11	4	4	3	11	4	3	3	10				
22a	4	-	3	7	3	2	5/4	3	8	3	-	3	-	1	2/-	3				
22b	-	4	-	4	-	2	-	-/3	3	-	2	3	5	2	-	-/3	2			
23f	3	3	3	9	3	3	4/3	10	5	4/5	3	12	5	4	4	5	13			
24g	2	1	2	5	2	2/1	2	6	2	2	2	6	2	1	3/2	6				
24f	5	4	4	13	5	4	3	12	5	5/3	5/4	15	3	2/3	2	2	8			
e	4	1	3/2	8	4	2/1	2	8	3	4	2	9	2	2	2	2	6			
25	5	3/4	3	11	3	3/4	2	8	3	4	4/2	11	3	4	2/3	2	3	8		
26	4	4	3	11	5	4	3	12	4	2/4	3/4	9	4	4	5	13	4	3	10	
27	3	3/4	4	10	3	4	3	10	3	3	3	9	4	4	4	12	3	2/3	2	7

TABLE A11, CONTINUED

UA GROUP RATING SCALE SUMMARY



SUBSCALE III, CONTINUED

Item	Subject 13			Subject 14			Subject 16			Subject 17			Subject 18							
	Judge A	B	C	A	B	C	A	B	C	A	B	C	A	B	C					
21	2	3	3	8	4	3/4	3	10	4	4/3	4	12	2	3/2	4	9	3/4	4/3	4	11
22a	3	2	-	5	2	1	-	3	-	4/3	-	4	-	3/2	-	3	4/3	-	5/2	9
b	-	-	2	2	-	-	2	2	3	-	2/4	5	3	-	3	6	-	3	5	8
23f	2	2/3	2	6	2	2/3	3	7	4	4	5/4	13	3	4/5	4	11	5	4	5	14
e	2	1	2	5	2	1	2	5	2	1	3/2	6	1	1	2	4	2/1	1	2	5
24f	5	5/3	4/3	14	4	3/2	3/2	10	4	3/4	3	10	2	3/2	2	7	3	4/2	3/2	10
e	2	2	2	6	2	3/2	2	7	2	1	3/2	6	2	2	2	6	3	3/2	2	8
25	3	3	3/2	9	2	2	2	6	2	3	4/3	9	2	3/2	2	7	4/3	1	3/2	8
26	3	2/3	3/4	8	2	3/2	4	9	4	5	3/4	12	4	4	4	12	3/4	4	5	12
27	3	4	3	10	3	2	3	8	4	5/4	3	12	4	3/4	3/2	10	3	3	3/2	9

TABLE A11, CONTINUED

UA GROUP RATING SCALE SUMMARY

## SUBSCALE III, CONTINUED

Judge Trial	A		B		C		TOTALS	
	Σ 1	Σ 2	Σ 1	Σ 2	Σ 1	Σ 2	Σ 1	Σ 2
Item								
13	31	32	37	37	35	35	103	104
14	35	36	38	41	37	38	110	115
15a	10	10	32	31	33	33	75	74
15b	16	18	6	2	-	5	22	25
16	37	38	43	46	37	37	117	121
17	37	37	40	40	47	47	124	124
18	29	29	28	27	23	21	80	77
19a	22	23	20	23	19	17	61	63
19b	5	5	-	-	6	6	11	11
20a	2	2	4	4	-	-	6	6
20b	21	22	20	29	25	23	66	74

TABLE A11, CONTINUED

UA GROUP RATING SCALE SUMMARY

SUBSCALE III, CONTINUED

Judge Trial	A		B		C		TOTALS	
	$\Sigma 1$	$\Sigma 2$	$\Sigma 1$	$\Sigma 2$	$\Sigma 1$	$\Sigma 2$	$\Sigma 1$	$\Sigma 2$
Item 21	32	33	34	34	36	35	102	102
22a	19	18	18	15	15	10	52	43
22b	11	11	9	9	19	27	39	47
23f	36	36	34	38	36	34	106	108
23e	20	19	12	11	22	20	54	50
24f	40	40	35	29	31	27	106	96
24e	26	26	22	19	22	20	70	65
25	30	29	28	29	28	24	86	82
26	37	38	35	38	36	39	108	115
27	<u>33</u>	<u>33</u>	<u>33</u>	<u>35</u>	<u>31</u>	<u>29</u>	<u>97</u>	<u>97</u>
$\Sigma$	529	535	528	537	538	527	1595	1599
M	25.19	25.48	25.14	25.57	25.62	25.09	75.95	76.14

TABLE A11, CONTINUED

UA GROUP RATING SCALE SUMMARY

SUBSCALE IV

Item	Subject 5			Subject 6			Subject 10			Subject 11			Subject 12							
	A	B	C	A	B	C	A	B <sub>2</sub>	C	A	B	C	A	B	C					
28	4	3/4	4/3	11	4	5	4	4	3	3	10	4	4/3	3	11	4/5	4/5	3	11	
29	4	3/4	4	11	3/4	3	4	10	4	4	5/4	13	4	5	4	13	5	2/3	2/3	9
30	3	4	4	11	4	4/3	4	12	4	4	3	11	4	4/3	4	12	4	3	3	10
31	4	5	3	12	4	5	4	13	4	4	4	12	4	5/3	4/3	13	4	3	4/3	11
32	5	4	2	11	4	4/5	4	12	3/4	5	2	10	3	3	2	8	4	3	2	9
33a	-	3	-	3	-	5	-	5	2	-	-	2	4	-	2	6	3	-	-	3
b	3	-	3	6	3	-	3	6	-	5	4	9	-	4/3	-	4	-	4	2	6
34a	2	-	2	4	3	1	2	6	-	1	2	3	2/3	1/2	-	3	2	1	2	5
b	-	4/3	-	4	-	-	-	-	2	-	-	2	-	-	2	2	-	-	-	-

TABLE A12

UA GROUP RATING SCALE SUMMARY

SUBSCALE IV, CONTINUED

Item	Subject 13			Subject 14			Subject 16			Subject 17			Subject 18								
	Judge	A	B	C	Σ	A	B	C	Σ	A	B	C	Σ	A	B	C					
28	2/3	4	4	4	10	3	1/2	3	7	5	5	4	14	3	5/4	4	12	2	2	3	7
29	2/3	3/4	4/5	4/5	9	2	3	3	8	5	5	5/4	15	4	4/3	4	12	3	3	3	9
30	2	3/4	4	4	9	2	5	3	10	4	4	4	12	4	4	4	12	2	3	3	8
31	3/4	4	4	4	11	2	2	3	7	4/5	4	3	11	4	5	4	13	2	3	4/3	9
32	3	3	3	3	9	3	3/2	3	9	4	4	3	11	3	4	3	10	4	4	4	12
33a	-	4	3	3	7	-	-	2	2	4	5/4	3	12	3	3	-	6	-	-	4	4
b	2	-	-	-	2	3	3	-	6	-	-	-	-	-	-	3	3	3	3	3	6
34a	3	1	3	3	7	2	-	1	3	-	3/2	3	6	3	1	2	6	-	1	3	4
b	-	-	-	-	-	-	4/2	-	4	2	-	-	2	-	-	-	-	2	-	-	2

TABLE A12, CONT'D

UA GROUP RATING SCALE SUMMARY

SUBSCALE IV, CONTINUED

Judge Trial	A		B		C		Total
	Σ 1	Σ 2	Σ 1	Σ 2	Σ 1	Σ 2	
Item 28	35	37	36	37	35	34	108
29	36	38	35	37	38	38	113
30	33	33	38	37	36	36	106
31	35	37	40	38	37	34	109
32	36	37	37	37	28	28	102
33a	16	16	20	19	14	14	49
33b	14	14	19	18	15	15	47
34a	17	18	10	10	20	20	48
34b	6	6	8	5	2	2	13
Σ	228	236	243	238	225	221	695
M	25.33	26.22	27	26.44	25	24.56	77.22

TABLE A12, CONT'D

UA GROUP RATING SCALE SUMMARY

SUBSCALE V

Item	Subject 5			Subject 6			Subject 10			Subject 11			Subject 12					
	Judge A	B	C	A	B	C	A	B	C	A	B	C	A	B	C			
35	3	4	3	10	3	3	10	3	3	9	3	3	9	4	3	10		
36	4	4/5	3	11	4	3	11	2/3	4	10	2	4/3	3	9	4	11		
37	4	4	4	12	4	4	12	2	3	9	4	2	4	10	3/4	7		
38	3/4	3/4	2/4	8	3	2/3	8	2/3	3/4	3/5	2	4/3	5	11	4	2,3	2	
39	3	4	3	10	3	3	9	3	5	4	12	3	5	2	10	4	2	11
40	3	4	2	9	3	4	9	4	4	3/2	11	4	2	10	3	3	2	8
41	3	3	3	9	3	3	9	4	3	10	3	5	3	11	4	3	2	9
42	4	4	3	11	4	3	11	4	5	3/4	12	4	4	12	4	5	3	12
43	4	4	4	12	4	5	13	4	4	12	4	3	4	11	5	3	3	11
44	2	3	4	9	3	5/4	12	2	1	2	5	4	2	10	3	1	3	7
45	3	3	3	9	3	4	11	3	4	3	10	3	3	9	3	3/4	3	9
46a	-	4	-	4	3	2	7	2	-	2	3	-	2	5	3	1	-	4
b	4	-	2	6	-	-	-	-	4	4	8	-	2	2	-	-	3	3

TABLE A13  
UA GROUP RATING SCALE SUMMARY

SUBSCALE V, CONTINUED

Item	Subject 13			Subject 14			Subject 16			Subject 17			Subject 18								
	Judge A	B	C	A	B	C	A	B	C	A	B	C	A	B	C						
35	4	4	3	11	3	2/3	3	8	4	5/4	3	12	3	4	3	10	2	3	3	8	
36	4	4	5	4	13	2	3	3/2	8	5	4/3	14	4	5	4/3	13	2	4	3	9	
37	4	4	3	4	11	2	3	3	8	4	5/4	4	13	3	4	4	11	2	4	4	10
38	3	5/4	4	12	1	2/1	4/3	7	4	3	3	10	2	2	2	6	2	3/2	4/3	9	
39	3	3	4	4	10	2	1/2	2	5	4	4	2	10	3	4	4/3	11	2	3	2	7
40	4	4	3	4	11	3	3	2	8	4	5	2	11	3	4	2	9	2	4/3	2	8
41	4	4	2	4	10	2	2	2	6	3	3	2	8	2	4	3	9	2	2	2	6
42	4	4	2	4	10	2/3	2	4	8	4	5	4	13	4	4	4	12	3	4	3	10
43	4	4	3	5	12	5	3	3	11	4	5/4	5	14	3	3	4	10	3/4	4	3	10
44	2	4	4	5	11	2	2	3	7	3	3	5	11	3	3	4	10	2	2/3	5	9
45	3	4	4	4	11	3	3	3	9	4	4	4	12	2	4	4	10	2	4	4	10
46a	-	4	2	6	-	3	2	5	4	4	4	4	12	2	3	-	5	2	4	4	10
b	2	-	-	2	4	-	-	4	-	-	-	-	-	-	-	2	2	-	-	-	-

TABLE A13, CONT'D

UA GROUP RATING SCALE SUMMARY





SUBSCALE V, CONTINUED

Item	Subject 13			Subject 14			Subject 16			Subject 17			Subject 18								
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C						
47a	5	5/3	-	10	1	1	2	-	1	1	1	-	-	-	1	1					
b	-	-	4	4	4	-	4	4	4	-	8	3	3/4	3	-	6					
48a	-	-	3/2	3	2	1/2	2	2	3	5	4	3	3/2	-	6	4	3	2/-	9		
b	5	4	-	9	-	-	3	3	-	2	2	2	-	2	2	-	-	-	2		
49a	3	4/3	2	9	-	1	2	3	-	3	3	-	1	2	3	-	2	2	4		
b	-	-	2	2	3	-	-	3	3	-	2	5	2	-	2	2	-	-	2		
50	3	4	3	10	2	2/3	2	2	6	4	5	3/2	12	3	4	2	9	2	4/3	2	8
51	2/3	2/3	3	7	2	1/2	2	2	5	4	4	2	10	3	3/4	2	6	2	3	2	7

TABLE A13, CONT'D  
 UA GROUP RATING SCALE SUMMARY

SUBSCALE V, CONTINUED

Judge Trial	A		B		C		TOTALS	
	Σ 1	Σ 2	Σ 1	Σ 2	Σ 1	Σ 2	Σ 1	Σ 2
Item 35	32	32	35	35	30	30	97	97
36	33	34	42	42	34	31	109	107
37	32	33	33	32	38	37	103	102
38	26	28	29	29	32	34	87	91
39	30	30	37	38	28	27	95	95
40	33	33	39	38	22	21	94	92
41	30	30	30	30	27	27	87	87
42	37	38	38	38	36	37	111	113
43	40	41	37	36	39	39	116	116
44	26	26	26	26	39	39	91	91
45	29	29	36	37	35	35	100	101
46a	19	19	25	25	16	16	60	60
b	10	10	6	6	11	11	27	27

TABLE A13, CONTINUED

UA GROUP RATING SCALE SUMMARY

SUBSCALE V, CONTINUED

Judge Trial	A		B		C		TOTALS	
	$\Sigma$ 1	$\Sigma$ 2	$\Sigma$ 1	$\Sigma$ 2	$\Sigma$ 1	$\Sigma$ 2	$\Sigma$ 1	$\Sigma$ 2
Item 47a	9	9	6	4	5	3	20	16
b	30	32	27	29	14	18	71	79
48a	26	27	27	28	14	9	67	64
b	9	9	4	4	10	14	23	27
49a	8	10	19	22	12	18	39	50
b	18	16	-	-	10	6	28	22
50	32	32	39	39	23	22	94	93
51	29	29	32	36	21	22	82	87
$\Sigma$	538	547	567	574	496	496	1601	1617
M	25.62	26.05	27.	27.33	23.62	23.62	76.24	77.

TABLE A13, CONTINUED

UA GROUP RATING SCALE SUMMARY

SUBSCALE VII

Item	Subject 5			Subject 6			Subject 10			Subject 11			Subject 12										
	Judge	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C							
56	5	4	4	4	13	1	3	1	5	3	3	4	10	5	5	4	14	4	4	4	4	12	
57	4	3	3	3	10	3	3	2	8	4	3	3	10	3	2	2	7	4	4	4	4	3	11
58	4	4	3	3	11	5	5	4	14	2	4	3	9	4	3	3	10	3	3	3	3	2	8
59	4	5	4	4	13	3	4	2	9	2	4	2	8	3	2	2	7	5	5	5	4	4	14
60	4	5	4	4	13	4	3	3	10	2	4	2	8	3	4	3	10	4	4	4	4	3	11
61	4	4	4	4	12	3	4	3	10	2	2	2	6	3	4	4	11	3	4	4	3	3	10
62	4	3	3	3	10	3	2	2	7	4	5	2	11	3	5	2	10	2	3	2	3	2	7
63	4	4	3	3	11	2	2	2	6	3	4	2	9	3	2	3	8	5	5	4	4	4	13
64	2	3	3	3	8	2	3	2	7	3	3	2	8	2	3	2	7	4	4	3	3	3	10

TABLE A14

UA GROUP RATING SCALE SUMMARY

SUBSCALE VII, CONTINUED

Item	Subject 13			Subject 14			Subject 16			Subject 17			Subject 18							
	A	B	C	Σ	A	B	C	Σ	A	B	C	Σ	A	B	C					
56	1	3	3	7	4	4	3	10	4	4	4	12	2	4	4	10	2	4	2	8
57	2	2	2	6	3	3	2	8	3	3	4	10	2	2	3	7	2	2	2	6
58	3	2	2	7	2	4	2	6	4	4	3	11	2	3	3	8	2	3	2	7
59	2	4	2	8	2	4	3	8	4	4	3	11	2	4	3	9	3	3	3	9
60	3	3	2	8	3	4	3	9	4	4	4	12	2	3	3	8	3	3	2	8
61	2	1	2	5	3	4	3	9	4	3	3	10	5	5	4	14	4	3	3	10
62	4	5	3	12	4	4	4	11	4	4	3	11	2	3	3	8	4	4	2	10
63	3	4	3	10	4	4	3	10	4	2	3	9	4	4	3	11	3	2	2	7
64	3	3	3	9	2	4	2	6	4	3	2	9	2	2	2	6	3	2	2	7

TABLE A14, CONTINUED

UA GROUP RATING SCALE SUMMARY

SUBSCALE VII, CONTINUED

Trial 2 Only

Judge	Σ A	Σ B	Σ C	Total
Item				
56	31	37	33	101
57	30	26	27	83
58	31	33	27	91
59	30	38	28	96
60	32	36	29	97
61	33	33	31	97
62	34	38	25	97
63	35	31	28	94
64	27	27	23	77
<b>Total</b>	<b>283</b>	<b>299</b>	<b>251</b>	<b>833</b>
M	31.44	33.22	27.88	92.55

TABLE A14, CONTINUED

UA GROUP RATING SCALE SUMMARY

SUBSCALE I

Item	Subject 1			Subject 2			Subject 3			Subject 4			Subject 7							
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C					
1	4	4	3	11	2	3	3	8	3	2	2	7	1	3/2	2	6	2	3	3	8
2	3	3	2/3	8	2	4/3	2	8	3	2	2	7	1	3/2	1	5	2	3	3	8
3	3	3/4	2	8	2	4/3	2	8	3	2/3	1	6	2	2	1	5	2	2	2	6
4	4	4	3	11	3	4	2	9	4	4/3	2	10	2	4/3	1	7	2	2	3	7
5	5	4/5	2/3	11	2	3	2	7	4	3	2	9	2	3/2	1	6	2	3	2	7
6	4	2	1	7	2	4	1	7	4	2	1	7	1	2	1	4	2	2	2	6
7	4	3	2	9	3	4/3	2	9	3	3/2	1	7	1	2/1	1	4	2	2	2	6

TABLE A15

A GROUP RATING SCALE SUMMARY

This table lists the individual ratings and the sums of the ratings given each subject by each judge on each item. The changes in ratings (Trial 2) made by the judges are shown to the right of the diagonal. The totals and means of each judge's initial ratings are shown under Trial 1, and the changes in his ratings under Trial 2, on the last page of each subscale summary.



SUBSCALE I, CONTINUED

Item	Subject 8			Subject 9			Subject 15			Subject 19			Subject 20							
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C					
1	2	3	2	7	3	4/3	3	10	1	3	2	6	2	2	6	2	4/3	2	8	
2	2	3	2	7	2	2	3	7	1	4	1	6	2	2	3/2	7	2	4	2	8
3	3	2	1	6	1/2	3	2	6	1	3/2	2	6	2	3	3/2	8	2	4/3	3	9
4	4	4/5	1	9	2	4/2	2	8	2	2	2	6	3/2	4	2	9	2	2	3/2	7
5	3	4	1	8	2	2	2	6	2	3	2	7	3	5/4	2	10	3	2	3	8
6	4	2	2	8	1	4/3	2	7	3	2/1	1	6	2	3	1	6	2	4	2	8
7	4	3/4	2	9	2	3	2	7	2/3	3/2	2	7	3	4	2	9	2	3/2	2	7

TABLE A15, CONTINUED

A GROUP RATING SCALE SUMMARY

SUBSCALE I, CONTINUED

Judge Trial	A		B		C		Total
	<u>Σ 1</u>	<u>Σ 2</u>	<u>Σ 1</u>	<u>Σ 2</u>	<u>Σ 1</u>	<u>Σ 2</u>	
Item 1	22	22	31	28	24	24	77
2	20	20	30	28	21	21	71
3	21	22	28	27	19	18	68
4	28	27	34	31	21	20	83
5	28	28	32	31	19	20	79
6	25	25	27	25	14	14	66
7	26	27	30	26	18	18	74
<u>Σ</u>	170	171	212	196	136	135	518
M	24.29	24.43	30.29	28.0	19.43	19.29	74.0
							71.71

TABLE A15, CONTINUED

A GROUP RATING SCALE SUMMARY

SUBSCALE II

Item	Subject 1			Subject 2			Subject 3			Subject 4			Subject 7							
	Judge A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	$\Sigma$				
8	4	2	3	9	3	3	2	8	3	2	2	7	2	4	1	7	2	2	2	6
9	2	2	3	7	3	4	2	9	3	3	2	8	2	3	2	7	2	2	2	6
10	2/3	4	4	10	4	3/4	2	9	4	4	2	10	2	4	2	8	2	3	3	8
11	2	2	4	8	2	3	1	6	3	2/3	1	6	2	2	1	5	2	3	2	7
12	3	3/4	3	9	2	4	2	8	4	3	2	9	1	3/2	1	5	2	4	3	9

TABLE A16

A GROUP RATING SCALE SUMMARY

SUBSCALE II, CONTINUED

Item	Subject 8			Subject 9			Subject 15			Subject 19			Subject 20							
	Judge A	B	C	Σ	A	B	C	Σ	A	B	C	Σ	A	B	C	Σ				
8	3	3	2	8	2	4/3	2	8	2	3	2	7	3/2	3	3	9	3	3	2	8
9	4	2	2	8	2	3/2	2	7	2	2	2	6	3	4/3	3	10	3	4	2	9
10	4	4	3	11	2	5	2/3	9	2	4	2	8	4/3	5/4	2	11	3	5	3	11
11	3	2/3	2	7	2	3/1	2	7	2	2	1	5	3/2	3/2	2	8	2	4/2	3/2	9
12	3	4	2	9	2	3	2	7	2	3	1	6	3	4	2	9	2	4	3	9

TABLE A16, CONTINUED

A GROUP RATING SCALE SUMMARY

SUBSCALE II, CONTINUED

Judge Trials	A		B		C		TOTALS	
	$\Sigma 1$	$\Sigma 2$	$\Sigma 1$	$\Sigma 2$	$\Sigma 1$	$\Sigma 2$	$\Sigma 1$	$\Sigma 2$
Item 8	27	26	29	28	21	21	77	75
9	26	26	29	27	22	22	77	75
10	29	29	41	41	25	26	95	96
11	23	22	26	23	19	18	68	63
12	24	24	35	35	21	21	80	80
$\Sigma$	129	127	160	154	108	108	397	389
M	25.8	25.4	32.	30.8	21.6	21.6	79.4	77.8

TABLE A16, CONTINUED

A GROUP RATING SCALE SUMMARY

SUBSCALE III

Item	Subject 1			Subject 2			Subject 3			Subject 4			Subject 7							
	Judge A	B	C	A	B	C	A	B	C	A	B	C	A	B	C					
13	3	2/3	2	7	2	4	1	7	4	2	1	1	1	1	3	2	4/3	2	8	
14	3	1/2	2/3	6	2	4	2	8	3	1/2	1	5	1	2/3	1	4	1	2/3	2	5
15a	3	3/4	3/2	9	2	-/4	2	4	3	3	2	8	1	1	2	4	2	4	3	9
b	-	-	-	-	-	4/-	-	4	-	-	-	-	-	-	-	-	-	-	-	-
16	3	2	3	8	2	5/4	2	9	3	1/3	1	5	1	2	1	4	2	3	2	7
17	3/4	3	2	8	3	4	3	10	4	4	2	10	2	3	2	7	2	3	4	9
18	4	2	2	8	1	5/3	3/2	9	4	1	1	6	1	2	1	4	2	2	2	6
19a	4	2	-	6	-	5/3	2	7	4	3	2	9	-	1	1	2	2	1	1	4
b	-	-	3/2	3	2	-	-	2	-	-	-	-	1	-	-	1	-	-	-	-
20a	3	-	-	3	-	3/-	-	3	3	1	1	5	-	-	1	1	-	1	-	1
b	-	2	2	4	2	-/3	2	4	-	-	-	-	1	2	-	3	1	-	2	3

TABLE A17

A GROUP RATING SCALE SUMMARY

SUBSCALE III, CONTINUED

Item	Subject 8			Subject 9			Subject 15			Subject 19			Subject 20						
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C				
13	3	3/4	2	2	3/2	2	7	2	4/3	1	7	3	3	2	8	2/3	5	3/2	10
14	4	3	2	1	4	2/3	7	1	3	1	5	3	3/2	2	8	2/3	5	3	10
15a	2	4	2	1	3/1	2	6	2	4	1	7	3	5	2	10	2	4/5	2	8
b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	3	3	2	2	5/4	2	9	2	4/3	2	8	3	4/3	3/2	10	4	4	2	10
17	4	4	4	2	5	3	10	2	4/3	2	8	3	5	3	11	3	5	2	10
18	4	3	2	2	3/2	2	7	1	1	1	3	2	3	2	7	2	2	2	6
19a	2	1/2	2	5	3/1	1	4	-	2/1	1	3	-	-	-	-	3/4	2	2	7
b	-	-	-	-	1	-	1	2	-	-	2	3	3/4	2	8	-	-	-	-
20a	-	1/-	2/-	3	1/2	-	1	1	-/1	2/1	3	3	-	1	4	-	1	-	1
b	2/3	-/3	-/2	2	-	3/2	2	5	-	4/-	-	4	-	4/2	-	4	2	-	4

TABLE A17, CONTINUED

A GROUP RATING SCALE SUMMARY

SUBSCALE III, CONTINUED

Item	Subject 1			Subject 2			Subject 3			Subject 4			Subject 7							
	Judge	A	B	C	Σ	A	B	C	Σ	A	B	C	Σ	A	B	C	Σ			
21	3	3	2	8	2	4	1	7	4	2/3	2	8	2	3	1	6	2	3	2	7
22a	4	4	-/2	8	-	2	2	2	-	-	3/2	2	-	5	-	3	2/-	5		
b	-	-	2/-	2	3	4	-	7	3	2/3	2	7	-	2	2	2	-	-/2	2	
23f	5	3/2	3	11	3	4	4/3	11	4	4	2	10	3	3/2	2	8	3	2	3	8
e	3	1	2	6	2	1	2	5	1	2	2	5	2	1	2	5	2	2	2	6
24f	5	5	2/3	12	3	3	3	9	2	2	2	6	2	2	3/2	7	2	2/3	2	6
e	5	2	2	9	2	2	2	6	2	2	2	6	2	2	2	6	2	1/2	2	5
25	4	3/4	2/3	9	2	3/2	2	7	2	2/3	2	6	3	3	2/1	8	2	3/4	2	7
26	4	4	3	11	4	4	2	10	4	3	3/2	10	3	3	2	8	4	5	4	13
27	3	4	3	10	3	4	3	10	4	3	2	9	3	3/4	2	8	3	4/3	3	10

TABLE A17, CONTINUED

A GROUP RATING SCALE SUMMARY



SUBSCALE III, CONTINUED

Item	Subject 8			Subject 9			Subject 15			Subject 19			Subject 20							
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C					
21	3	3	2	8	2	3	2	7	1	3/2	1	5	3/2	3	2	2	2	2	6	
22a	-	3	-	3	3	5/4	2	10	-	4/3	-	4	-	-	-	-	-	-	-	
b	2	-	2	4	-	-	-	-	4	-	2	6	3	4	3	10	2	3	2	7
23f	2	2	4/3	8	3	2	3	8	3/4	4/3	2	9	4	5	3	12	2	5/4	2	9
e	1	2	2	5	3	2	3	8	2	1	2	5	2	1	2	5	2	1	2	5
24f	5	5	3	13	2	2/3	2	6	3	3	2	8	4	4/3	3/2	11	5	3	3	11
e	3/4	2/4	2	7	2	2/3	2	6	3	2	2	7	2	2	2	6	2	3/1	2	7
25	4	3/4	1/2	8	3/4	4/3	2	9	3	4	2	9	2	3	2	7	4	4/3	2	10
26	4	4	2	10	2	4/5	3	9	4	2	2	8	5/3	5	3	13	4	2	2	8
27	4	3	2	9	2	3	3	8	3	2	2	7	4	3	2	9	3	2	2	7

TABLE A17, CONTINUED

A GROUP RATING SCALE SUMMARY

SUBSCALE III, CONTINUED

Judge Trial	A	B	C	Total
	$\Sigma 1$	$\Sigma 2$	$\Sigma 1$	$\Sigma 2$
Item 13	24	25	31	30
14	21	22	28	31
15a	21	21	31	35
15b	-	-	4	-
16	25	25	33	31
17	28	29	40	39
18	23	23	24	21
19a	15	16	20	16
19b	9	9	3	4
20a	11	12	7	4
20b	8	9	15	14
			17	10
			18	7
			20	19
			27	27
			18	17
			12	12
			5	4
			7	4
			10	12
			7	25
			4	33
			17	17
			25	20
			17	35
			47	44
			65	61
			95	95
			78	75
			4	-
			73	76
			67	73
			72	71

TABLE A17, CONTINUED

A GROUP RATING SCALE SUMMARY

SUBSCALE III, CONTINUED

Judge Trial	A		B		C		Total	
	$\Sigma 1$	$\Sigma 2$	$\Sigma 1$	$\Sigma 2$	$\Sigma 1$	$\Sigma 2$	$\Sigma 1$	$\Sigma 2$
Item 21	24	23	29	28	18	18	71	69
22a	10	9	21	19	6	6	37	34
22b	19	19	13	14	15	15	47	48
23f	32	33	34	30	28	26	94	89
23e	20	20	14	14	21	21	55	55
24f	33	33	31	32	25	24	89	89
24e	25	26	20	22	20	20	65	68
25	29	30	32	33	19	20	80	83
26	38	36	36	37	26	25	100	98
27	<u>32</u>	<u>32</u>	<u>31</u>	<u>31</u>	<u>24</u>	<u>24</u>	<u>87</u>	<u>87</u>
$\Sigma$	447	452	497	485	357	350	1301	1287
M	21.29	21.52	23.67	23.09	17.0	16.67	61.95	61.29

TABLE A17, CONTINUED

A GROUP RATING SCALE SUMMARY

## SUBSCALE IV

Item	Subject 1			Subject 2			Subject 3			Subject 4			Subject 7							
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C					
28	3	2/3	2	7	3	4	2	9	3	1/3	1	5	2	1	5	2	2	2	6	
29	3	3/2	3	9	3	3	2	8	4	4	2	10	2	3	7	2	3/2	3/2	8	
30	2	4	3	9	2	3/4	2	7	2	1/2	1	4	2	2	1	5	2	2/3	3/2	7
31	5	3	4	12	4	4	2	10	4	3	2	9	2	3	1	6	2	2	3/2	7
32	5	2/4	1/2	8	2	5/4	2	9	2	3	3/2	8	2	4/3	2	8	2	3/4	2	7
33a	-	3	-	3	-	-	1	1	-	3	1	4	-	-	1	1	-	3	-	3
b	3	-	2	5	2	4	-	6	2	-	-	2	1	2	-	3	3	-	2	5
34a	-	-	-	-	-	2	1	3	2	-	1	3	-	-	1	1	-	1	2	3
b	2	2	2/1	6	2	-	-	2	-	3	-	3	2	2	2/3	-	4	2	-	2

TABLE A18

A GROUP RATING SCALE SUMMARY

SUBSCALE IV, CONTINUED

Item	Subject 8			Subject 9			Subject 15			Subject 19			Subject 20				
	Judge A	B	C	A	B	C	A	B	C	A	B	C	A	B	C		
28	4	2	2	8	2	2	7	2	2	6	3/2	2	8	3	3/2	2	8
29	3	3/4	1/2	7	2	4	9	2	3	7	3	2	8	4	3/2	2	9
30	3	4	2	9	2	4	9	1	4	7	3	3/2	9	3	3	5	9
31	4	3	2	9	2/3	3	9	2	3	7	3	4	10	3	4/3	2	9
32	4	4	3	11	2	5/3	9	2	3/2	7	4/3	3/2	10	2	4/3	2	8
33a	-	3	1	4	-	-	-	-	4	1	5	-	-	3	4	2	9
b	2	-	-	2	2	5/3	10	2	-	2	4/3	3/2	9	-	-	-	-
34a	2	1	1	4	-	1	2	-	1	1	1	1	2	2	1	1	4
b	-	-	-	-	2	-	2	2	4	6	2	-	2	-	-	-	-

TABLE A13, CONTINUED

A GROUP RATING SCALE SUMMARY

SUBSCALE IV, CONTINUED

Judge Trial	A		B		C		TOTALS	
	Σ 1	Σ 2	Σ 1	Σ 2	Σ 1	Σ 2	Σ 1	Σ 2
28	27	26	24	24	18	19	69	69
29	28	28	32	30	22	22	82	89
30	22	22	30	33	23	21	75	76
31	31	32	32	31	25	23	88	86
32	27	26	36	32	22	22	85	80
33a	3	3	20	20	7	9	30	32
b	21	20	14	11	9	7	44	38
34a	6	6	7	7	10	10	23	23
b	14	4	11	12	2	1	27	27
Σ	179	177	206	200	133	134	523	511
M	19.89	19.67	22.89	22.22	15.33	14.89	58.11	56.78

TABLE A18, CONTINUED

A GROUP RATING SCALE SUMMARY

SUISCALE V

Item	Subject 1			Subject 2			Subject 3			Subject 4			Subject 7							
	Judge A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	Σ				
35	3	3/2	2	8	2	4	2	8	3	2/1	2	7	2	3/2	1	6	2	3	2	7
36	2	4	3	9	2	5	2	9	4	4	3	11	2	4	2	8	2	2	2	6
37	5	2	2	9	3	4/3	3	10	4	2	2	8	2	4	2	8	2	4	3	9
38	4	4	3	11	3	3	3	9	3	3/2	2	8	2	3	2	7	2	3	3/2	8
39	2	3	2	7	2	3	3	8	2/3	4/3	3/2	9	2	4/3	2	8	2	2	3	7
40	2	4	2	8	3	4/3	1	8	3	3	1	7	2	3	1	6	2	3	2	7
41	2	3	2	7	3	3	2	8	4	3	2	9	2	3	2/1	7	2	3	4/3	9
42	5	5	2	12	3	3	2	8	4	3	3/2	10	3	4/3	2	9	2/3	2	3	7
43	3	3	2	8	2	4/3	2	8	3	3/4	1	7	1	3/1	1	5	2	3	2	7
44	2	3	2	7	3	2	2	7	2	3	2	7	2	2	1	5	2	4	2	8
45	3	3	2	8	3	3	2	8	4	3	2	9	1	2	1	4	2	3	2	7
46a	-	3	1	4	2	3	1	6	-	2	2	4	-	-	2	2	-	3	1	4
b	2	-	-	2	-	-	-	-	2	-	-	2	1	2	-	3	2	-	-	2

TABLE A19

A GROUP RATING SCALE SUMMARY

SUBSCALE V, CONTINUED

Item	Subject 8			Subject 9			Subject 15			Subject 19			Subject 20				
	Judge A	B	C	A	B	C	A	B	C	A	B	C	A	B	C		
35	3	3	2	8	2	4	2	3	1	6	3/2	2	9	3	3/2	3	9
36	3	4	2	9	2	5	3	4	2	8	4/3	2	9	3	4	3/2	10
37	4	3	2	9	2/3	3	3	3	2	7	4/3	3	11	2	3	2	7
38	4	3/5	2/3	9	2	3	3	2/3	2	7	4/3	2	10	2	2	2	6
39	3	4	3	10	2	4	2	3	2	7	3	2	9	2	4	2	8
40	4	4	2	10	2	3	2	3	2	6	3	2	9	3	3	2	8
41	3	3	2	8	2	5/4	2	3	2	7	2	2	7	2	3	2	7
42	2	3	3	8	4	4/3	3	11	3	9	3	5/4	10	5	4	2	11
43	4	3	2	9	2	3/2	2	7	1	6	2	2	7	2	4	3	9
44	2	4/3	2	8	2	2	2	6	2	7	2	2	6	3	3	4	10
45	3	3	2	8	2	2	2	6	2	7	3	2	8	2	4/3	3	9
46a	-	-	1	1	-	1	-	1	2	3	1	6	3	1	7	2	8
b	2	2	-	4	2	-	3	5	-	-	-	-	-	-	-	-	-

TABLE A19, CONTINUED

A GROUP RATING SCALE SUMMARY





SUBSCALE V, CONTINUED

Item	Subject 8			Subject 9			Subject 15			Subject 19			Subject 20				
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C		
47a	-	4	-	4	1	-	1/-	2	1/-	1	3	-	1	3	-	1	4
b	4	-	2	6	-	4	-/2	4	-/2	-	-	3	4	-	4	-	4
48a	3	3	1	7	-	3/1	-	3	4	-	1	5	2	4/-	1	7	5
b	-	-	-	-	2	-	2/1	4	-	3	-	3	-	-/3	-	3	3
49a	2	1/4	1/2	4	-	1/2	1/2	2	3	2/1	1	6	2	2/3	1	5	1
b	-	-	-	-	2	-	2	-	2	-	2	-	-	-	2	-	4
50	3	4	2	9	2	4/3	2	8	2	3/2	1	6	3/2	4/3	2	9	10
51	3	3	2	8	2	4/3	1	7	3	3/2	2	8	2	4/3	2	8	8

TABLE A19, CONTINUED  
A GROUP RATING SCALE SUMMARY

SUBSCALE V, CONTINUED

Judge Trial	A		B		C		TOTALS	
	Σ 1	Σ 2	Σ 1	Σ 2	Σ 1	Σ 2	Σ 1	Σ 2
Item 35	25	24	32	27	19	19	76	70
36	26	25	39	39	24	23	89	87
37	30	30	32	30	24	24	86	84
38	28	28	31	31	24	24	83	83
39	22	23	35	33	24	23	81	79
40	27	27	33	32	16	16	76	75
41	25	25	31	30	22	20	78	75
42	34	35	37	33	24	23	95	91
43	22	22	32	29	19	19	73	70
44	22	22	28	27	21	21	71	70
45	25	25	29	28	20	20	74	73

TABLE A19, CONTINUED

A GROUP RATING SCALE SUMMARY

SUBSCALE V, CONTINUED

Judge Trial	A		B		C		TOTALS	
	$\Sigma 1$	$\Sigma 2$	$\Sigma 1$	$\Sigma 2$	$\Sigma 1$	$\Sigma 2$	$\Sigma 1$	$\Sigma 2$
Item 46a	9	9	22	22	12	12	43	43
b	11	11	4	4	3	3	18	18
47a	11	10	7	5	8	6	26	21
b	15	17	23	25	9	11	47	53
48a	16	17	29	21	12	9	57	47
b	15	15	3	6	2	3	20	24
49a	16	16	17	19	14	14	47	49
b	6	6	-	-	2	2	8	8
50	25	24	37	31	16	16	78	71
51	24	23	32	28	18	18	74	69
$\Sigma$	434	434	533	500	333	326	1300	1260
M	20.67	20.67	25.38	23.81	15.86	15.52	61.90	60.

TABLE A19

A GROUP RATING SCALE SUMMARY

SUBSCALE VII

Item	Subject 1			Subject 2			Subject 3			Subject 4			Subject 7				
	Judge	A	B	C	Σ	A	B	C	Σ	A	B	C	Σ	A	B	C	Σ
56	3	4	3	4	10	4	4	4	12	2	2	2	6	3	4	2	9
57	3	4	2	3	7	4	4	2	10	2	2	1	5	3	3	2	8
58	4	4	3	3	7	3	2	2	7	1	1	2	4	3	4	2	9
59	4	3	3	3	7	5	4	3	12	1	1	1	3	4	3	3	10
60	4	3	3	4	10	4	4	4	12	2	2	2	6	2	3	2	7
61	4	4	4	2	7	2	2	2	6	3	3	2	8	5	5	4	14
62	4	3	3	3	7	2	3	2	7	2	2	2	6	2	2	3	7
63	4	3	4	3	8	3	3	2	8	2	1	2	5	3	3	3	9
64	3	3	2	4	8	3	3	3	9	2	2	2	6	3	3	2	8

TABLE A20

A GROUP RATING SCALE SUMMARY

SUBSCALE VII, CONTINUED

Item	Subject 8			Subject 9			Subject 15			Subject 19			Subject 20								
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C						
56	5	4	4	13	5	5	4	14	5	4	3	12	4	4	4	12	2	2	1	1	4
57	3	3	2	8	2	3	2	7	3	2	2	7	2	1	2	5	3	3	4	3	10
58	3	3	1	7	3	2	2	7	2	1	1	4	1	2	1	4	3	3	2	3	8
59	4	4	2	10	2	4	3	9	2	1	2	5	2	1	1	4	4	3	3	3	10
60	2	2	2	6	3	3	2	8	2	2	1	5	2	3	2	7	4	2	2	3	9
61	3	3	4	10	5	4	4	13	3	3	2	8	4	3	2	9	2	1	1	1	4
62	4	2	1	7	3	1	2	6	2	2	1	5	2	3	1	6	2	1	2	1	5
63	3	1	2	6	3	2	2	7	2	2	2	6	2	2	2	6	3	3	3	2	8
64	2	3	2	7	2	3	3	8	2	2	1	5	2	3	1	6	3	2	2	2	7

TABLE A20, CONTINUED

A GROUP RATING SCALE SUMMARY

SUBSCALE VII, CONTINUED

Trial 2 Only

Judge	$\Sigma$ A	$\Sigma$ B	$\Sigma$ C	Total
Item				
56	35	36	31	102
57	27	29	20	76
58	25	24	19	68
59	30	27	23	80
60	28	28	24	80
61	33	30	28	91
62	25	22	19	66
63	27	23	24	74
64	24	28	20	72
Total	254	247	208	709
M	28.22	27.44	23.11	78.78

TABLE A20, CONTINUED

A GROUP RATING SCALE SUMMARY

SUBSCALE VI

Item	Subject 5			Subject 6			Subject 10			Subject 11			Subject 12			Subject 13		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
52	U	U	U	U	U	U	U	U	U	U	U	U	U	A/U	U	U	U	U
53	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
54	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y
55	-	-	-	-	-	X	-	-	-	-	-	X	-	X	-	-	-	-

Item	Subject 14			Subject 16			Subject 17			Subject 18			% Agreement
	A	B	C	A	B	C	A	B	C	A	B	C	
52	U	A/U	U	U	U	U	U	U	U	U	U	U	93%
53	N	N	N	N	N	N	N	N	N	N	N	N	100%
54	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	87%
55	-	X	-	-	-	-	-	-	-	-	-	-	87%

TABLE A21

UA GROUP RATING SCALE SUMMARY

Gross judgments as to UA or A group membership and ego impairment. U = Underachiever, A = Achiever, Y = Yes, N = No, X = Not Ego Impaired, - = Ego Impaired.



SUBSCALE VI

Item	Subject 1			Subject 2			Subject 3			Subject 4			Subject 7			Subject 8			
	Judge	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
52	A	A	A	A	U/A	A	U	A	A	A	A	A	A	A	A	U	A	A	
53	Y	Y	N	N	N/Y	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N
54	N	N	N	N	Y	N	Y	N	N	N	N	N	N	N	N	Y	N	N	N
55	-	-	X	X	-	X	-	X	X	X	X	X	X	X	X	-	-	-	X

Item	Subject 9			Subject 15			Subject 19			Subject 20			% Agreement	
	Judge	A	B	C	A	B	C	A	B	C	A	B		C
52	A	U/A	A	A	A	A	A	A	A	A	A	U/A	A	83%
53	N	N/Y	N	N	N	N	Y	Y	N	Y	N/Y	N	Y	80%
54	N	Y	N	N	N	N	N	N	N	N	Y/N	N	N	80%
55	X	-	X	X	X	X	-	-/X	X	-	-	-	X	63%

TABLE A22

A GROUP RATING SCALE SUMMARY

Gross judgments as to UA or A group membership and ego impairment. U = Underachiever, A = Achiever, Y = Yes, N = No, X = Not Ego Impaired, - = Ego Impaired.

TABLE A23

RATING SCALE DISCRIMINATION LEVELS FOR EACH ITEM AND SUBSCALE

This table shows the levels of significance at which each item and each subscale discriminates between the UA and A Groups. The z score and p for each item was determined by the Mann-Whitney U Test on the Judges' initial ratings (Trial 1). The significance level at which the Subscale discriminates between the UA and A Groups was determined by taking the sum of the logs of each p, as described by Fisher (1941 p. 98) and referring to the Chi Square table with the appropriate degrees of freedom.

SUBSCALE I

Item	z	p	Logarithm
1	2.73	.0032	$\bar{3}.50515$
2	3.70	.00011	$\bar{4}.04139$
3	3.46	.00027	$\bar{4}.43136$
4	2.677	.0038	$\bar{3}.57978$
5	1.992	.0233	$\bar{2}.36736$
6	3.04	.0012	$\bar{3}.07918$
7	2.10	.0179	$\bar{2}.25285$
			$\Sigma$ of Logs (-4.605) = 86.311
			Chi Square, 14df, .001=36.12
			Subscale I > .001

SUBSCALE II

Item	z	p	Logarithm
8	2.478	.0066	$\bar{3}.81954$
9	2.421	.0078	$\bar{3}.89209$
10	2.957	.0015	$\bar{3}.17609$
11	3.062	.0011	$\bar{3}.04139$
12	1.976	.0239	$\bar{2}.37640$

$\bar{z}$  of Logs (-4.605) = 53.84  
 Chi Square, 10df, .001 = 29.59  
 Subscale II, > .001

TABLE A23, CONTINUED

LOADING SCALE DISCRIMINATION LEVELS FOR EACH ITEM AND SUBSCALE

## SUBSCALE III

Item	z	p	Logarithm
13	2.974	.0015	$\bar{3}.17609$
14	3.078	.0010	$\bar{3}.00000$
15a	-1.193	.5753	$\bar{1}.75990$
b	.	.1094	$\bar{1}.03743$
16	3.44	.0003	$\bar{4}.04771$
17	3.45	.0003	$\bar{4}.04771$
18	1.86	.0314	$\bar{2}.49693$
19a	1.36	.0869	$\bar{2}.93902$
b	2.27	.0116	$\bar{2}.06446$
20a	-1.24	.8925	$\bar{1}.95060$
b	3.27	.007	$\bar{4}.06510$

TABLE A23, CONTINUED

RATING SCALE DISCRIMINATION LEVELS FOR EACH ITEM AND SUBSCALE

## SUBSCALE III, CONTINUED

Item	z	p	Logarithm
21	3.59	.00023	<u>4.36173</u>
22a	2.58	.0049	<u>3.69020</u>
b	-1.003	.1562	<u>1.92676</u>
23F	1.298	.0968	<u>2.98588</u>
F	.34	.3669	<u>1.56467</u>
24F	1.33	.0913	<u>2.96284</u>
E	.935	.1736	<u>1.24055</u>
25	.814	.2090	<u>1.32015</u>
26	.959	.1685	<u>1.22531</u>
27	1.484	.0694	<u>2.64136</u>

$\chi^2$  of 1.998 (-4.605) = 162.44  
 Chi Square, 4Cdf, .001 = 73.40  
 Subscale III > .001

TABLE A23, CONTINUED

RATING SCALE DISCRIMINATION LEVELS FOR EACH ITEM AND SUBSCALE

## SUBSCALE IV

Item	z	p	Logarithm
28	3.049	.0011	3.04139
29	2.85	.0022	3.34242
30	3.28	.0005	4.69897
31	2.53	.0057	3.75587
32	2.39	.0084	3.92423
33a	.537	.2946	1.46923
b	.775	.2177	1.33787
34a	2.718	.0033	3.51851
b	-.07	.5279	1.32597

$Z$  of logs (-4.605) = 80.89  
 Chi Square, 18df, .001 = 42.31  
 Subscale IV > .001

## TABLE A23, CONTINUED

RATING SCALE DISCRIMINATION LEVELS FOR EACH ITEM AND SUBSCALE

## SUBSCALE V

Item	z	p	Logarithm
35	3.09	.0010	$\bar{3}.00000$
36	2.20	.0139	$\bar{2}.14301$
37	2.07	.0192	$\bar{2}.28330$
38	.43	.3336	$\bar{1}.52283$
39	2.12	.0170	$\bar{2}.23045$
40	2.66	.0039	$\bar{3}.59106$
41	1.56	.0594	$\bar{2}.77379$
42	2.15	.0158	$\bar{2}.19866$
43	3.79	.00007	$\bar{5}.84510$
44	2.11	.0174	$\bar{2}.24055$
45	1.93	.0268	$\bar{2}.42813$

TABLE A23, CONTINUED

RATING SCALE DISCRIMINATION LEVELS FOR EACH ITEM AND SUBSCALE

SUBSCALE V, CONTINUED

Item	z	p	Logarithm
46a	1.49	.0681	$\bar{2}.83315$
b	.57	.2843	$\bar{1}.45378$
47a	-.66	.7454	$\bar{1}.87239$
b	3.15	.0008	$\bar{4}.90309$
48a	1.31	.0951	$\bar{2}.95670$
b	-.25	.5987	$\bar{1}.77721$
49a	-.95	.8289	$\bar{1}.91851$
b	.93	.1762	$\bar{1}.24600$
50	2.12	.0170	$\bar{2}.23045$
51	1.32	.0934	$\bar{2}.95588$

$\Sigma$  of logs (-4.605) = 150.104  
 Chi Square, 40df, .001 = 73.40  
 Subscale V > .001

TABLE A23, CONTINUED

RATING SCALE DISCRIMINATION LEVELS FOR EACH ITEM AND SUBSCALE



## SUBSCALE VII

Item	z	p	Logarithm
56	-.15	.5596	$\bar{1}.74788$
57	1.54	.0618	$\bar{2}.79099$
58	1.89	.0294	$\bar{2}.46835$
59	.61	.2709	$\bar{1}.43278$
60	1.76	.0392	$\bar{2}.59329$
61	.61	.2709	$\bar{1}.43278$
62	3.59	.00016	$\bar{4}.20412$
63	2.10	.0179	$\bar{2}.25505$
64	.70	.2420	$\bar{1}.38382$

$\bar{2}$  of Logs (-4.605) = 53.837  
 Chi Square, 15df, .001 = 42.31  
 Subscale VI  $>$ .001

TABLE A23, CONTINUED

RATING SCALE DISCRIMINATION LEVELS FOR EACH ITEM AND SUBSCALE

## TABLES A24 TO A29

## SUMMARY OF ANALYSIS OF VARIANCE DATA

These data were derived from the ratings made by the Judges on each Subscale. These tables list the source of the variance, the degrees of freedom, sums of squares, mean squares and F of each comparison. Those comparisons with F's that are significant at or beyond the 5% level are marked with one asterisk. Two asterisks mark those F's that are significant at or beyond the 1% level. F's that did not reach significance are not included.

In order to further clarify the interactions a table of means and totals has been included below the Analysis of Variance data. This additional table represents the mean ratings by each Judge, for each trial for the A and UA Groups. The totals by Judge, by groups and across all Judges and groups are also shown.

TABLE A24

ANALYSIS OF VARIANCE DATA: SUBSCALE I

SOURCE	DF	SS	MS	F
TOTAL	839.	883.614		
Groups	1.	170.100	170.100	**125.258
Scale (Items)	6.	23.331	3.889	* 2.864
Raters (Judges)	2.	78.350	39.175	** 28.848
GS	6.	13.816	2.303	
GR	2.	15.450	7.725	** 5.689
SR	12.	16.033	1.336	
GSR	12.	15.234	1.270	
N/GSR error (a)	378.	513.300	1.358	
Trials (changes)	1.	0.385	0.385	* 4.529
GT	1.	0.234	0.234	
ST	6.	0.698	0.116	
RT	2.	0.565	0.283	* 3.329
GST	6.	0.517	0.086	
GRT	2.	1.244	0.622	** 7.318
SRT	12.	1.252	0.104	
GSRT	12.	0.805	0.067	
TN/GSR error (b)	378.	32.300	0.085	

TABLE A24 - SUPPLEMENT - SUBSCALE I

TRIALS	JUDGE A		JUDGE B		JUDGE C		TOTALS		
	1	2	1	2	1	2	1	2	
GROUP A	24.29	24.43	30.29	28.	19.43	19.29	74.01	71.72	145.73
UA	30.71	31.29	36.57	37.	32.71	31.57	100.	99.86	199.86
TOTAL	55.	55.72	66.86	65.	52.14	50.86	174.01	171.58	345.59



TABLE A26

ANALYSIS OF VARIANCE DATA: SUBSCALE III

SOURCE	DF	SS	MS	F
TOTAL	2519.	5433.522		
G	1.	147.659	147.659	**83.423
S	20.	2466.055	123.303	**69.663
R	2.	42.339	21.170	**11.960
GS	20.	185.541	9.277	** 5.241
GR	2.	41.419	20.710	**11.701
SR	40.	209.478	5.237	** 2.959
GSR	40.	83.731	2.093	
N/GSR	1134.	2007.300	1.770	
T	1.	0.039	0.039	
GT	1.	0.192	0.192	
ST	20.	5.361	0.268	
RT	2.	1.049	0.525	
GST	20.	5.142	0.257	
GRT	2.	0.225	0.113	
SRT	40.	9.901	0.248	
GSRT	40.	12.591	0.315	** 1.658
TN/GSR	1134.	215.500	0.190	

TABLE A26 - SUPPLEMENT - SUBSCALE III

TRIALS	JUDGE A		JUDGE B		JUDGE C		TOTALS			
	1	2	1	2	1	2	1	2		
GROUP A	21.29	21.52	23.67	23.09	46.76	17.	16.67	33.67	61.29	123.24
UA	25.19	25.48	25.14	25.57	50.71	25.62	25.09	50.71	75.95	152.09
TOTAL	46.48	47.00	48.81	48.66	97.47	42.62	41.76	84.38	137.90	275.33

TABLE A27

ANALYSIS OF VARIANCE DATA: SUBSCALE IV

SOURCE	DF	SS	MS	F
TOTAL	1079.	2490.992		
G	1.	116.690	116.690	**53.405
S	8.	1057.467	132.183	**60.496
R	2.	39.800	19.900	** 9.108
GS	8.	59.718	7.465	** 3.416
GR	2.	13.874	6.937	** 3.175
SR	16.	64.450	4.028	** 1.843
GSR	16.	30.443	1.903	
N/GSR	486.	1062.050	2.185	
T	1.	0.112	0.112	
GT	1.	0.075	0.075	
ST	8.	0.730	0.091	
RT	2.	0.497	0.249	
GST	8.	0.700	0.088	
GRT	2.	0.155	0.078	
SRT	16.	0.986	0.062	
GSRT	16.	0.995	0.062	
TN/GSR	486.	42.250	0.087	

TABLE A27 - SUPPLEMENT - SUBSCALE IV

TRIALS	JUDGE A		JUDGE B		JUDGE C		TOTALS	
	1	2	1	2	1	2	1	2
GROUP A	19.89	19.67	22.89	22.22	14.89	14.89	58.11	56.78
UA	25.33	26.22	27.	26.44	25.	24.56	77.33	77.22
TOTAL	45.22	45.89	49.89	48.66	40.33	39.45	135.44	134.00
								269.44

TABLE A28

ANALYSIS OF VARIANCE DATA: SUBSCALE V

SOURCE	DF	SS	MS	F
TOTAL	2519.	5098.208		
G	1.	172.857	172.857	**93.588
S	20.	2071.941	103.597	**56.089
R	2.	163.339	81.670	**44.218
GS	20.	75.777	3.789	** 2.051
GR	2.	29.874	14.937	** 8.087
SR	40.	269.028	6.726	** 3.642
GSR	40.	79.792	1.995	
N/GSR	1134.	2094.600	1.847	
T	1.	0.311	0.311	
GT	1.	1.335	1.335	**12.714
ST	20.	6.723	0.336	** 3.200
RT	2.	0.658	0.329	* 3.133
GST	20.	2.731	0.137	
GRT	2.	0.844	0.422	* 4.019
SRT	40.	4.608	0.115	
GSRT	40.	4.790	0.120	
TN/GSR	1134.	119.000	0.105	

TABLE A28 - SUPPLEMENT - SUBSCALE V

TRIALS	JUDGE A		JUDGE B		JUDGE C		TOTALS					
	1	2	1	2	1	2	1	2				
GROUP A	20.67	20.67	25.38	23.81	49.19	15.86	15.52	31.38	61.90	60.	121.90	
UA	25.62	26.05	51.67	27.	27.33	54.33	23.62	23.62	47.24	76.24	77.	153.24
TOTAL	46.29	46.72	93.01	52.38	51.14	103.52	39.48	39.14	78.62	138.14	137.	275.14

TABLE A29

ANALYSIS OF VARIANCE DATA: SUBSCALE VII

SOURCE	DF	SS	MS	F
TOTAL	1079.	1036.885		
G	1.	56.033	56.033	**34.439
S	8.	74.185	9.273	** 5.699
R	2.	50.363	25.182	**15.478
GS	8.	27.534	3.442	* 2.116
GR	2.	3.267	1.634	
SR	16.	13.837	0.865	
GSR	16.	19.066	1.192	
N/GSR	486.	790.600	1.627	

TABLE A29 - SUPPLEMENT - SUBSCALE VII

TRIALS	JUDGE A		JUDGE B		JUDGE C		TOTALS	
	1	2	1	2	1	2	1	2
GROUP A	28.22		27.44		23.11		78.78	
UA	31.44		33.22		27.89		92.56	
TOTAL	59.66		60.66		50.00		171.34	



