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James A. Azar

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AN ITEM, FACTOR AND GUTTMAN ANALYSIS OF AN OBJECTIVE
INSTRUMENT DESIGNED TO MEASURE THE CONSTRUCTS OF
ERIKSON'S EPIGENETIC DEVELOPMENTAL
THEORY

BY

JAMES A. AZAR

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ABSTRACT

AN ITEM, FACTOR AND GUTTMAN ANALYSIS OF AN OBJECTIVE
INSTRUMENT DESIGNED TO MEASURE THE CONSTRUCTS OF
ERIKSON'S EPIGENETIC DEVELOPMENTAL

THEORY

By

James A. Azar

The Assessment of Adult Adjustment Patterns (AAAP) was devised by Farquhar, Wilson and Parmeter to operationalize the ego stages proposed by Erik Erikson. In its original form it contained 719 items reflecting the eight ego stages and a set of Modified Crowne-Marlowe Social Desirability items. The purpose of the study was to refine the item pool and explore the reliability and validity of the instrument.

There were 354 subjects consisting of staff and faculty at Michigan State University (n=322) and psychiatric patients at Pine Rest Christian Hospital (n=32). The item analysis consisted of criteria of eight steps that each item needed to meet.

The refined AAAP consisted of 258 items reflecting the eight ego stage scales and three validity indexes. The internal consistency of the scales ranged from .85 to .95 using the Cronbach alpha coefficient. The items in each stage were factor analyzed using a principal factor solution and a varimax rotation. Each stage, except Stage 1, had a

multiple factor structure. There were 23 factors that emerged from the 8 stage scales with reliability coefficients ranging from .68 to .92 (mean= .84). The sample of MSU faculty and staff had higher means on all of the ego scales as compared to the psychiatric sample. The differences were significant ($p < .001$) on seven of the eight scales.

The Social Desirability validity index consisted of Modified Crowne-Marlowe items that were designed to detect respondents wishing to appear in a highly favorable manner. The F scale validity index was designed to identify subjects trying to fake bad or appear pathological. A consistency validity index was not established in this study. The hierarchical properties of the AAP were explored. When mastery was defined as responding in the resolution direction to 80% of the items in a stage, the stages were not ordered by a Guttman scale from Stage 1 to 8 as Erikson proposed. When the mastery level was altered a quasi Guttman scale was obtained.

DEDICATION

To Jules

for every reason

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CHAPTER 1

THE PROBLEM

Erik Erikson's eight stage epigenetic theory of ego development has received considerable clinical and theoretical attention. The theory is arranged in a hierarchical manner in an attempt to describe the psychological development that occurs from birth to death. His model expanded classical psychoanalytic theory to include sociological and cultural influences. Erikson's theory is often used by clinicians and educators as a framework to conceptualize an individual's ego stage development.

Need for the Study

Although Erikson's theory has been used over the last 30 years, there is no current objective means to measure all eight of the ego stages in a form that would be useful in both a research and clinical setting. Counseling psychologists that use Erikson's model rely on history taking and clinical experience in assessing an individual's psychological development. A need exists for an objective instrument that operationalizes the constructs that pertain to each of the ego stages. Such an instrument could be included in a clinical assessment battery to complement and facilitate a counselor's initial interview and subsequent

therapy since it would measure and highlight crucial developmental areas. In addition, the instrument could supply research psychologists with the means to empirically validate Erikson's theory, in particular, and to study normal psychological development, in general. In summary, both research and clinical psychologists could use an objective, reliable and valid measure of the constructs of Erikson's Epigenetic Developmental Theory.

Purpose Of The Study

The purpose of the study was to refine the Assessment of Adult Adjustment Patterns (AAAP) Instrument. The instrument was designed by Farquhar, Wilson and Parmeter.¹ The AAAP was constructed to provide data concerning the development issues that have been resolved as well as the client's present areas of concern. The AAAP consisted of 719 items. There had not been an analysis of its validity or reliability, nor had an item analysis of the instrument been performed. An item analysis of the AAAP is necessary before it can be used as a clinical assessment tool. The purpose of this study was to perform this function, as well as to explore the internal consistency and factor structure of the ego stage scales that make-up the AAAP. In addition, the validity indexes and the Guttman properties of the

¹William W. Farquhar, Frederick R. Wilson, and Elizabeth J. Parmeter, Assessment of Adult Adjustment Patterns (East Lansing, Michigan State University Printing Service, 1977), pp. 1-27.

instrument were explored. The refined AAAP would be useful to the research psychologist interested in empirically validating Erikson's theory and/or studying normal psychological development. It was also designed to aid the clinician in diagnosis and treatment.

Research Criteria

The objective of this study was to refine the AAAP Instrument through a series of analytical procedures. The criteria for testing the items are arranged in the order that they were conducted. The research criteria for this study were the following:

1. All items are responded to in both the mastery and non-mastery direction by more than 5% of the respondents. The items that have a frequency of less than 5% in any one direction are eliminated from the stage scale and were considered for a validity index to detect faking or responding in a disfavorable light.

2. Each item correlates higher with the total stage score for which it was written than it does to the Modified Crowne-Marlowe Social Desirability Scale embedded in the AAAP.

3. Each item correlates higher with the total stage score for which it was written or to a previous stage total score than it does to a subsequent ego stage.

4. Each item increases the internal consistency of the stage scale.

5. Respondents who have mastered an ego stage, as defined by responding in the resolution direction to over 80% of the items, respond in the mastery direction to the individual items in the stage. Likewise, the respondents who have not mastered an ego stage will fail the items in that stage, i.e. respond in the non-mastery direction.

6. A factor analysis of the items screened through tests of Hypotheses 1 thru 5 yields an interpretable structure for each stage which corresponds to the constructs outlined by Erikson's theory. The items were factor analyzed stage by stage.

7. Each item increases the internal consistency of the stage factor.

8. The AAAP has Guttman-like properties, that is, scales are mastered in ascending order from Stage 1 to Stage 8.

9. The social desirability items correlate higher with the total Modified Crowne-Marlowe Social Desirability Scale than to any of the ego stage scales.

10. Every pair of consistency items, i.e., items reflecting the same content but placed in different parts of the AAAP, are responded to in a similar way and are highly correlated.

Theory

Erik Erikson's personality theory is an extension of classical Freudian thought.² Erikson views the ego as a developing part of personality in its own right rather than as a prooduct of the id. Ego development is assumed to occur in a systematic fashion in conjunction with somatic, psychological and social changes. Erikson divided ego development into eight stages, whereby each successive stage enables the individual to develop more complex behaviors and interpersonal relationships than the previous one. He postulated that each stage is related to a certain chronological age and that at each of these periods the ego faces a central problem or crisis. The successful or unsuccessful resolution to each developmental conflict has a major influence on the subsequent behavior of the individual. However, Erikson believed that at a certain point an individual is propelled into the next stage regardless of his solution to the present conflict. The unsuccessful resolution of the previous crises generally prevents satisfactory outcomes of the present and subsequent developmental conflicts. The healthy adult personality is determined by the successful resolution of the eight specific crises. For Erikson, the eight ego-stages with approximate age levels and descriptions may be characterized as follows:

²Erik H. Erikson, Identity: Youth and Crisis (New York: Norton, 1968).

I Trust-Mistrust (Hope), Age: 0-1 1/2

Trust is learned as the child can rely on the sameness and consistency of the primary caretakers. The child develops the capacity to deal with one's own urges and this is manifested in the depth of the child's sleep, the ease in feeding and the relaxation of bowel movements. Additionally, feelings of optimism and faith result when remembered and anticipated sensations and images become correlated with the familiar and predictable things and people in the environment. Mistrust occurs when inconsistency is the rule rather than the exception.

II Autonomy-Shame and Doubt (Will), Age: 1 1/2 - 3

Autonomy is learned as the child can hold on and let go without destructive consequences. This results in the production of decision-making behaviors, free choices, judgments and the feeling of being able to "stand on his own feet". This time is often referred to as the 'Terrible Twos' because of the child's developing sense of autonomy and will, which often comes in conflict with the mother's sense of order. On the other hand, shame occurs when children are exposed when they are not ready to be looked at. Doubt and indecision result when the child's decisions are constantly thwarted.

III Initiative-Guilt (Purpose). Age: 3-5

Initiative is learned as the child contemplates and initiates acts without experiencing feelings of guilt or fear of punishment. A pleasure in conquering and being

aggressive is seen in the child's play. Feelings of guilt may result in two extreme behaviors. At one pole are the behaviors of flight and withdrawal. While the other extreme is over-aggressiveness and manipulation of others.

IV Industry-Inferiority (Competence), Age: 5-12

Industry is learned when the child wins recognition by producing things. Such traits as perseverance and diligence appear. A sense of inferiority results when the child's productions are not valued by his family or peers.

V Identity-Role Diffusion (Fidelity), Age: 12-18

Identity is the crucial issue for the adolescent. It is learned as the adolescent is able to answer the question, "Who am I?". Adolescents begin to be concerned with the roles they play, and the occupations they imagine themselves entering. Peer group identity becomes an all embracing issue. Role Diffusion results when individuals are not certain about their dominant personality characteristics and do not have a sense of continuity when they view their past and present notions of themselves.

VI Intimacy-Isolation (Love), Age: 18-30

Intimacy is learned as individuals risk being hurt in an attempt to fuse with a member of the opposite sex and commit themselves to a loving relationship. This learning results in feelings of warmth, closeness and oneness with the chosen partner and the world. Isolation occurs when the individual fears ego loss in situations where deep intimacy is called for.

VII Generativity-Stagnation (Care), Age: 30-45

Generativity takes place as the adult begins to take an active interest in establishing and guiding the next generation. This results in a type of parental responsibility. Stagnation is seen when intimacy, caring, productivity and creativity no longer occur and the individual begins to return to a narcissistic view of the world.

VIII Ego Integrity-Despair (Wisdom), Age: 45-Up

If the individual has successfully completed the previous seven stages, a sense of integration and wisdom develops. It is manifested as the acceptance of one's life cycle and as an orderly and proper unfolding of their life. It results in behaviors of calm and reasonable acceptance of life's triumphs and disappointments. Despair occurs when the previous stages resulted in unsuccessful resolutions. It manifests itself in regret, a lack of meaning, and a denial of death.

Each crisis in some form exists before it becomes phase-specific. Erikson stated that although an ego stage may have been resolved positively, there is likely some negative residue. In addition, previously unresolved issues reemerge at a subsequent ego-stage.

Although Erikson's theory is widely accepted in both clinical and academic settings, very little research has been conducted to 1) operationalize the theory in a form conducive to a large population, and 2) examine the constructs underlying the stages. There have been some

attempts to design assessment tools to test the validity of the theory and to obtain normative data. However, most of the studies have focused on a particular stage rather than addressing all eight developmental periods.

The refinement of the AAAP will hopefully provide a reliable and valid measure of the constructs underlying Erikson's epigenetic, developmental theory. The AAAP is a self-report measure and will be conducive to computer scoring. As a result, it can be administered to a large population and scored easily. The AAAP may supply the means to evaluate the constructs and the hierarchical configuration that Erikson postulated.

Overview

In Chapter II there is a review of the previous attempts to operationalize either specific stages or the entire epigenetic model. The aspects of Erikson's theory that have received support will also be presented. The design of the study, a description of the Assessment of Adult Adjustment Patterns (AAAP), and the proposed analysis will be the topics addressed in Chapter III. In Chapter IV there is an analysis and interpretation of the results with respect to the retained AAAP items, the reliabilities of the scales, and the constructs that emerge from each ego stage. Chapter V is devoted to integrating the results of the research, drawing conclusions, and discussing the implications of the findings.

CHAPTER II

A REVIEW OF THE LITERATURE

The major goal within this chapter is to review the previous attempts to operationalize either specific ego stages or multiple stages of Erikson's epigenetic model. The aspects of Erikson's theory that have received empirical support from these studies will also be presented. The review proceeds from multiple to single stage studies.

Multiple Stage Studies

There have been some attempts to measure all eight of the ego stages as well as the first six and seven stages. The review begins with the more comprehensive efforts to operationalize Erikson's theory.

Stages 1 thru 8

The two previous attempts to measure the entire theory were devised by Boyd. They were the Unit Utterance Approach and the Self Description Questionnaire. A description of the Assessment of Adult Adjustment Patterns (AAAP) which also operationalizes the eight ego stages is found in Chapter III.

Unit Utterance Approach. Boyd's procedure to measure all eight ego stages with adults consisted of analyzing the responses from a semi-structured interview schedule. A

coding system was devised based on Eriksonian concepts in an attempt to match the content of the interview responses with the appropriate ego stage. He then designed a series of projective pictures for children, each of which portrayed a basic aspect of one of the first six ego stages. The child was asked to tell a story about the picture or to tell what he believed has happened, is happening or will happen. The analysis of the child's or adult's interview into coded utterances provided a frequency count which gave a quantitative profile of the individual's eight ego stages. Skilled coders achieved agreement between .81 and .98 on twelve distinct measures over an entire interview. When studying children at ten different age groups (8 thru 17), Boyd found that ego stage development did progress with age. The age span for the ego stages as stated by Erikson also received empirical support, i.e., the younger children were more concerned with Stage 3 (Initiative vs. Guilt) while the older children were more concerned with Stage 5 (Identity vs. Role Diffusion). Boyd also found that all sixty adult subjects had a profile characterized by only one stage significantly outranking the other stages. This relationship was not found with children or adolescents. It appears that children deal with 2 or 3 stages simultaneously which is quite different than Erikson's conceptualization.³

³Robert D. Boyd "Analysis of the Ego-Stage Development of School-Age Children," The Journal of Experimental Education, 32(1964), 249-257.

Ciaccio used Boyd's procedure for children and also tested Erikson's theory of ego epigenesis. He tested a sample of 120 boys aged 5, 8 and 11. The results supported the epigenetic notion of ego stage progression with increasing age. The four year-olds were more concerned with Stage 2 (Autonomy vs Shame and Doubt) and 3 (Initiative vs Guilt) issues, while the 8- and 11-year olds showed peak interests in Stages 3 and 4 (Industry vs Inferiority), respectively.⁴ He also found that all three groups showed more conflict for the Stage 2 crisis suggesting that this may be the focal crisis of the first five ego stages.

Self Description Questionnaire. Due to the length of time needed in administering and scoring the "unit utterance" procedure, Boyd and Koskela designed the Self-Description Questionnaire, consisting of 160 items. The content of the items were procured from nondirective interviews of adults. A panel of judges tested the content validity of the items and showed total agreement. The items were divided equally between positive and negative aspects of each ego stage. Thus for each ego stage there were ten positive and ten negative items. Undergraduate and graduate students were asked to respond to the items in two ways: 1) "Like-Unlike Me"; and 2) "Concern- No Concern For Me" using a six-point Likert scale for both ways of responding. The

⁴N.V. Ciaccio, "A Test of Erikson's Theory of Ego Epigenesis," Developmental Psychology, 4(1971), 306-311

Like-Unlike scale measured the subject's perception of his behavior in relation to the particular content of the item. The latter or Pertinency approach was a means to obtain a hierarchy of concern among the eight stages. The internal consistency of the Like-Unlike and the Concern-No Concern scales ranged from .61 to .89, and .67 to .80, respectively. Using the Self-Description Questionnaire, they hypothesized and found that students in a given ego stage, as defined by their chronological age, produced a higher pertinency score on the items pertaining to that or the adjacent ego stage than to items from other ego stages. Their rationale in including the adjacent stage was that there is a considerable range of individual difference in the time at which a given crisis becomes phase-specific. Since an ego crisis does not begin and end at the same chronological age for each person, the ego stages were grouped in sets of twos. However, it is important to note that the sample was primarily university students. As a result, their procedure established the predictive validity of only Stages 5 and 6.

Boyd and Koskela also computed a correlation matrix of the ego stage scores for scales 1 thru 8, resulting in 28 correlation coefficients. The correlations ranged from .12 to .60. They found that for every correlation coefficient, except between ego stages 2 and 8, the null hypothesis that the population ρ is equal to 0 could be rejected. Multiple regression equations were also derived using previous ego stages as predictors for ego stages 3, 4, 5, and 6. Ego

stages 7 and 8 were not examined since the sample was composed mainly of college students; stages 1 and 2 were not studied since the correlation between them was only .21. The multiple correlation coefficients were .47, .63, .67, and .68 for Stage 3, 4, 5, and 6, respectively. They found that both stages 1 and 2 were significant partial predictors of Stage 3 and the two variables accounted for 22 percent of the variance. Ego stages 1 and 3 were significant predictors of ego stage 4. Using all previous stages as partial predictors accounted for 40 percent of the variance. Ego stage 5 had three significant predictors, namely ego stages 1, 3, and 4. The total regression equation accounted for 45 percent of the variance. The five predictors of ego stage 6 were able to account for 46 percent of the total variance. The significant predictors were stages 1, 3, and 5. The findings indicated that there were 10 of 14 t values significant at or above the .05 level. On these grounds they concluded that there was sufficient evidence to support Erikson's contention that the measure of resolution of an ego crisis is a positive monotonic function of the resolution of the preceeding ego crisis.⁵

A limiting factor of Boyd and Koskela's work was that the subjects were primarily undergraduate students and were

⁵Robert D. Boyd and Robert N. Koskela, "A Test of Erikson's Theory of Ego-Stage Development By Means of a Self-Report Instrument," The Journal of Experimental Education, 38 (Spring, 1970), 1-14.



thus clustered in the identity (stage 5) and intimacy (Stage 6) stages. Only some of the graduate students had children and were involved with generativity (Stage 7) issues. A comprehensive examination of Erikson's eight stages cannot be conducted with undergraduate students. However, the study was the first and only attempt to measure all eight ego stages in an objective manner. Through the use of the Pertinency scale, the study supported Erikson's contention that the ego stage crises are ordered chronologically for a university population. Finally, it provided some evidence that the resolution of an ego crisis is systematically related to the resolutions of the preceeding ego crises.

Stages 1 Thru 7

Wessman and Ricks constructed 60 Q-sort items, 5 reflecting successful and 5 unsuccessful resolutions of each of Erikson's first six stages of psychological development.⁶ The items consisted of single words or short phrases. Evans simplified the language used by Wessman and Ricks and added items for Stage 7 (Generativity vs Stagnation). The revised test contained 70 items divided equally over seven stages to represent developmental conflict resolution and failure. The test-retest reliability after 6 weeks with 50 urban college undergraduates of both sexes ranged from .48 for Intimacy-Isolation to .76 for Trust-Mistrust; the mean

⁶A. Wessman and D. Ricks, Mood and Personality (New York: Holt, Rinehart and Winston, 1966), pp. 107-109.

correlation was .61. To establish construct validity for the scales, he found with the exception of Autonomy vs Shame and Doubt (Stage 2), the following correlations with other personality measures: Family Concept Inventory, .36 to .64; Tyron's MMPI Depression, -.59 to -.83; Tyron's MMPI Aggression, -.51 to -.66; and California Personality Inventory Sense of Personal Worth, .52 to .70. Stage 2 (Autonomy vs Shame and Doubt) was only marginally associated with other non-Eriksonian measures. In addition, using the scale he found that abusive mothers scored significantly lower on measures of the first six developmental stages than nonabusive mothers.⁷ The scale has not appeared in the literature since Evans' original work.

Stages 1 Thru 6

There have been three attempts to operationalize the first six ego development stages. They were: (1) Ego Identity Scale; (2) Self-Description Blank; and (3) Inventory of Psychosocial Development.

Ego Identity Scale. Rasmussen devised the Ego Identity Scale (EIS) consisting of 72 items that reflected the first six developmental stages. A total ego identity score was obtained as well as a score for each of the six psychological crisis stages. The reliability of the EIS

⁷Alan L. Evans, "An Eriksonian Measure of Personality Development," Psychological Reports, 44(1979), 963-966.

using the Spearman-Brown prophecy formula on two samples of Navy male recruits was .849 and .851. For the study two groups of subjects were selected from a Naval recruit population. One group was composed of recruits making a highly adequate psychosocial adjustment to training; the second group contained individuals who demonstrated a minimally adequate adjustment. Highly significant differences between the two groups on the EIS were found. They also predicted and found a positive relationship between the measures of ego identity and self acceptance. Discriminant validity for the instrument was seen in the fact that subjects meeting two different criteria of psychological adjustment were differentiated in the predicted manner using the EIS. The results lent support to Erikson's position that an adequate ego identity is necessary for a person to cope effectively with his environment.⁸

Bauer and Synder used the EIS to support Erikson's contention that individuals who manifest high motivation, both in affiliation and achievement as measured by the Thematic Apperception Test, show a more satisfactory ego identity than individuals who manifest lower levels of

⁸John E. Rasmussen, "Relationship of Ego Identity to Psychological Effectiveness," Psychological Reports, 15(1964), 815-25.



achievement and affiliation motivation.⁹ Using the EIS as the measure of ego identity, Protinsky tested the Eriksonian epigenetic concept that older adolescents would have a greater degree of ego identity than would younger adolescents. There was an equal distribution of males and females. He found that age was the main variable in determining ego identity and that both males and females are involved in the identity crisis.¹⁰

Self-Description Blank. McClain devised the Self-Description Blank, consisting of 70 Likert type items designed to measure the first six Eriksonian stages. The 70 items were divided into 14 separate scales of five statements each. A success scale and a failure scale for each of the six Eriksonian dimensions make up 12 of these while the other 2 are defense scales designed to identify subjects whose self-protection attitudes might invalidate their responses to the whole instrument. Test and retest after seven days with university students provided reliability coefficients ranging from .77 to .93 for individual scales. The scale was also able to assess differences among subjects already identified as living at differing

⁹Rudolph Bauer and Robert Synder, "Ego Identity and Motivation; An Empirical Study of Achievement and Affiliation in Erikson's Theory," Psychological Reports, 30 (1972), 951-955.

¹⁰Howard O. Protinsky, Jr., "Eriksonian Ego Identity in Adolescence," Adolescence, 10 (1975), 428-432.



levels of maturation and fulfillment. The Self Description Blank was used to make cross-cultural comparisons. The subjects consisted of 2609 adolescents ranging from 12 to 18 years of age. There were about equal proportions of males and females within each community. They found that subjects and from Brussels, Belgium, Munich, Germany, and white Knoxville, Tennessee scored higher on all 6 scales than those from black Knoxville, Tennessee, Charleville-Mezieres, France, and Malaga, Spain. It appeared that socioeconomic conditions and psychological development were related.¹¹ It appears that McClain's finding is consistent with Maslow's hierarchy of needs, such that, basic conditions (food and shelter) must be met before higher-order functioning (self-esteem, love, and self-actualization) can take place.¹² The Self-Description Blank has not appeared in the literature since McClain's work.

Inventory of Psychosocial Development. Constantinople substituted a 7-point scale for Wessman and Ricks' Q-sort items¹³ and named the instrument the Inventory of Psychosocial Development. The subjects consisted of 539 male and 439 female undergraduates. They were asked to circle the

¹¹Edwin W. McClain, Jr., "An Eriksonian Cross Cultural Study of Adolescent Development," Adolescence, 10 (1957), 527-541.

¹²A.H. Maslow, Motivation and Personality. 2nd Edition, (New York: Harper and Row, 1970).

¹³Wessman and Ricks, pp. 330-301.



number from 7 to 1 which described how characteristic or uncharacteristic that phrase was for them. The ratings on the 5 items for each of the 12 subscales were summed to obtain 12 subscale scores. High scores on the positive scales and low scores on the negative scales were indicative of successful resolutions. The six test-retest r 's, with six weeks between administrations, ranged from .45 on identity diffusion to .81 on intimacy, with a median of .70 ($n=150$). No validity estimates were made on the subscales. A social desirability response set did have an influence on the questionnaire. In a pilot study with 50 males and 50 females, scores on the Crowne-Marlowe measure of social approval were correlated with a total positive and a total negative score, obtained by summing across the respective 15 items for the fourth, fifth and sixth stages. For the females, the correlations were .20 and -.25 for the positive and negative items, respectively, neither of which were significant. For the males, however, the correlations were .38 and -.52 both of which were significant. It appears that the scale is contaminated by social desirability when males are tested. Using the Inventory of Psychosocial Development with 952 undergraduate subjects, she found significant differences between freshmen and senior scores on industry, inferiority and identity for both sexes and for males on identity diffusion. Two follow-up studies indicated that, within the same subjects, changes in the expected direction occurred on identity, identity diffusion,



and isolation, but not on industry and inferiority. In addition, the males showed a clearer pattern of increasing maturity over the four years than did females.¹⁴

Using the Inventory of Psychosocial Development, Santrock examined the influence of paternal absence on the first four Eriksonian stages with fifth grade boys. He found that father absence at an early age (0-2 years) resulted in more detrimental personality characteristics at age 10 than father absence at a later age. The finding provided support for Erikson's contention that the development of basic trust in the child's early years served as a foundation on which ensuing stages are built.¹⁵ Waterman employed the Inventory of Psychosocial Development to investigate the relationship between the psychosocial maturity of entering college freshmen and their expectations about college. He found that successful psychosocial development is related to high expectations concerning the faculty, the administration, the students, and the major field.¹⁶

¹⁴Anne Constantinople, "An Eriksonian Measure of Personality Development in College Students," Developmental Psychology, 1 (1969), 357-372.

¹⁵John W. Santrock, "Influence of Onset and Type of Paternal Absence on the First Four Eriksonian Developmental Crises," Developmental Psychology, 3 (1970) 273-274.

¹⁶Alan S. Waterman, "Relationship Between the Psychosocial Maturity of Entering College Freshmen and Their Expectations about College," Journal of Counseling Psychology, 19 (1972), 42-46.

Munley studied the relationship between psychosocial development and vocational behavior using the Inventory of Psychosocial Development. The sample consisted of 123 male college students between 18 and 21 years of age. He found that individuals who show adjusted vocational choices demonstrate a higher level of psychosocial development across Erikson's first six stages than do individuals with problem vocational choices. The findings substantiate Erikson's claim that individuals who are more successful in resolving the stage crises and developing positive stage resolution attitudes are more successful in coping with age-appropriate decisions and developmental tasks.¹⁷

Bach and Verdile compared Rasmussen's Ego Identity Scale (EIS)¹⁸ and Constantinople's Inventory of Psychosocial Development (IPD)¹⁹. The sample consisted of 279 male and female high school seniors. Significant positive relationships ($r=.45$) were found between the identity scores obtained from the two scales. However, while the relationship between the EIS and IPD measures of identity were significant, eighty percent of the associated variance was unaccounted for. Three patterns of scores emerged from the IPD: Pseudoidentified (high scores on identity but a lack of

¹⁷Patrick A. Munley, "Erik Erikson's Theory of Psychosocial Development and Vocational Behavior," Journal of Counseling Psychology, 22 (1975), 314-319.

¹⁸Rasmussen, p. 818.

¹⁹Constantinople, p. 359.



resolution in the previous stage, Industry); Identified (high scores on all scales); and Nonidentified (low scores on all scales). The pattern of scores on the IPD revealed differences on the EIS measure, such that, those classified as Pseudoidentified emerged as the most EIS identified.²⁰ The finding implies that a single stage questionnaire may be less valid and lead to misclassification of subjects. It also lends support to Schilling's contention²¹ that there is a need for subscales representing distinct constructs within each stage.

Whitbourne and Waterman conducted a 10-year follow-up of Constantinople's original sample and a simultaneous testing of current undergraduates attending the same private university. They found that there were significant increases in overall scores on the longitudinal analysis and significantly higher scores for alumni on the crosssectional analysis. In addition, the largest increase appeared on Stage 4 (Industry vs Inferiority), suggesting that orientation to the work ethic may be of particular concern during this portion of the adult years.²²

²⁰Thomas R. Bach and Robert Verdile, "A Comparison of Two Measures of Ego Identity in High School Adolescents," The Journal of Psychology, 90 (1975), 269-274.

²¹Karl Lewis Schilling, "Ego Identity Status: A Re-Evaluation and Extension of Construct Validity," Diss., Univ. of Florida, 1975.

²²Susan Krauss Whitbourne and Alan S. Waterman, "Psychosocial Development During Adult Years: Age and Cohort Comparisons," Developmental Psychology, 15 (1979), 373-378.

Single Stage Studies

Most of the research surrounding Erikson's developmental theory centers around the fifth stage of identity vs role diffusion. In fact, of the single stage studies, only Stages 5 and 6 have received any attention.

Stage 5

The emphasis on Stage 5 has resulted in an assortment of procedures to operationalize the constructs of the stage and a validation of many of Erikson's conceptualizations concerning identity formation. The following is a review of the studies pertaining to the fifth stage that takes place from approximately age 12 to 18. The following is a review of the general identity studies, the ego identity status as conceptualized by Marcia, identity status scales and general ego identity questionnaires.

General Identity Studies. Bronson postulated that persons in a state of identity diffusion should: a) be less certain about the relationship between their past and current notions of self; b) show a higher degree of internal tension or anxiety; c) be less certain about dominant personal characteristics; and d) fluctuate more in their feelings about self. He conducted 20 minute interviews to assess continuity with the past (a) and the degree of tension and anxiety (b). Bronson used an adaptation of the semantic differential technique to measure the certainty of self (c) and temporal stability of self-ratings (d). The

technique consisted of the subjects rating themselves on five key concepts at two different administrations sequenced a month apart. It was predicted and found that these various aspects of identity diffusion were intercorrelated.²³

Gruen employed a Q-sort measure of ego identity which was defined as the discrepancy between the individual's perception of his real and ideal self. The subjects were asked to sort 100 Q sort items using first real self and then ideal self instructions. After one week they were asked to assess a fake personality sketch. Subjects with low ego identity accepted significantly more personality descriptions from the personality sketch than did high ego identity subjects.²⁴

Block focused on the dimension of role variability from Erikson's concept of ego identity. He hypothesized that excessive role variability ("diffusion") and insufficient role variability ("rigidity") would be associated with maladjustment. Subjects ranked a set of twenty adjectives on eight different occasions to characterize their behavior with eight "significant others" in their lives. He found

²³Gordon W. Bronson, "Identity Diffusion in Late Adolescents," Journal of Abnormal and Social Psychology, 59 (1959), 414-417.

²⁴Walter Gruen, "Rejection of False Information about Oneself as an Indication of Ego Identity," Journal of Consulting Psychology, 24 (1960), 231-33.

that excessive role variability (i.e., low ego identity) was related to poor adjustment and susceptibility to anxiety as measured by the Minnesota Multiphasic Personality Inventory and the California Psychological Inventory. However, role rigidity did not relate to maladjustment.²⁵

Heilbrun used Block's ranking procedure to obtain a measure of perceived role consistency, which he considered to be an important characteristic of ego identity. He found that male adolescents whose behaviors tended to conform to cultural stereotypes of masculinity showed higher role consistency than less masculine males. Females who were either measured to be high or low in femininity were more consistent than girls who were only moderately feminine.²⁶ It should be noted that Heilbrun's findings predated the raised consciousness of both sexes that resulted from the Women's Movement. The construct validity of the Ego Identity vs Role Diffusion Stage receives support from these studies.

Ego Identity Status. Marcia focused on the construct of ego identity. He developed a semi-structured interview to evaluate and categorize four styles of meeting the identity crisis. In addition, he used an incomplete

²⁵Jack Block, "Ego Identity, Role Variability, and Adjustment," Journal of Consulting Psychology, 25 (1961), 392-397.

²⁶Alfred B. Heilbrun, Jr., "Conformity to Masculinity-Femininity Stereotypes and Ego Identity in Adolescents," Psychological Reports, 14 (1964), 351-357.



sentence blank designed to elicit information about commitment in occupational, religious and political areas. The criteria for inclusion in the identity statuses were the presence of crises and commitments in the areas of occupation and ideology. The four styles he found were: 1) identity achievement - individuals experienced a decision-making period about their occupation and ideology and have made commitments to them; 2) moratorium - those persons currently in an identity crisis with commitments present but vague; 3) foreclosure - subjects who are generally committed to parental values having made few decisions of their own; and 4) identity diffusion - individuals who are largely uncommitted. Marcia found that subjects high in identity achievement set more realistic goals and performed better in a stressful concept attainment task than subjects low in identity. Subjects in the foreclosure status set goals unrealistically high and subscribed significantly more to authoritarian values as measured by the California Psychological Inventory.²⁷ Marcia's replication of his initial study provided additional validation for the four styles of coping with the identity crisis. In the replication subjects were exposed to a self-esteem manipulation condition. It was found that the individuals low in ego identity

²⁷James E. Marcia, "Development and Validation of Ego-Identity Status," Journal of Personality and Social Psychology, 3(1966), 551-558.

(identity diffusions and foreclosures) changed more in self-esteem than the high ego-identity individuals (identity achievements and moratoriums).²⁸ Subsequent research employing Marcia's instrument have either used the device as conceived or refined the procedure.

In the former case Waterman and Waterman studied the relationship between ego identity status and satisfaction with college. They found that students going through an identity crisis over occupational choice had the least favorable evaluation of their education.²⁹ In 1972, they examined the relationship between freshmen ego identity status and subsequent academic behavior. They found that there was no difference among the statuses in academic performance. However, the results indicated that students who entered college in the achiever category and later withdrew left in good standing, while students who entered as foreclosures or diffusions and subsequently withdrew, were generally forced to do so because of poor academic work. They considered these results as support for the predictive validity of Marcia's categorization system for identity

²⁸James E. Marcia, "Ego Identity Status: Relationship to Change in Self-Esteem, 'General Maladjustment' and Authoritarianism, Journal of Personality, 35(1967), 120-133.

²⁹Alan S. Waterman and Caroline K. Waterman, "The Relationship Between Ego Identity Status and Satisfaction with College," The Journal of Educational Research, 64(1970), 165-68.



status.³⁰

Waterman, Geary and Waterman followed freshmen through their academic career and observed changes in ego identity status. As hypothesized, significant differences in the frequency of students in the identity achiever status were observed for both occupational and ideological identity. Also, as predicted, the achiever status was found to be the most stable status from the end of the freshman year to the senior year, while the moratorium status was the least stable.³¹

Marcia also conducted a follow-up study on ego identity status with 30 male subjects after a 6-year period. In addition to identity status he focused on intimacy, life style, and participation in the 1969-1970 campus demonstrations. He found that high identity status (achievements and moratoriums) appeared more vulnerable to change than did low (foreclosures and diffusions), which is contrary to Waterman, Geary and Waterman's results. It suggests that achieving an identity during the college years may or may

³⁰Alan S. Waterman and Caroline K. waterman, "Relationship Between Freshman Ego Identity Status and Subsequent Academic Behavior: A Test of the Predictive Validity of Marcia's Categorization System for Identity Status," Developmental Psychology, 6 (1972), p.179.

³¹Alan S. Waterman, Patricia S. Geary, and Caroline K. Waterman, "Longitudinal Study of Changes in Ego Identity Status from the Freshman to the Senior Year at College," Developmental Psychology, 10 (1974), 387-392.

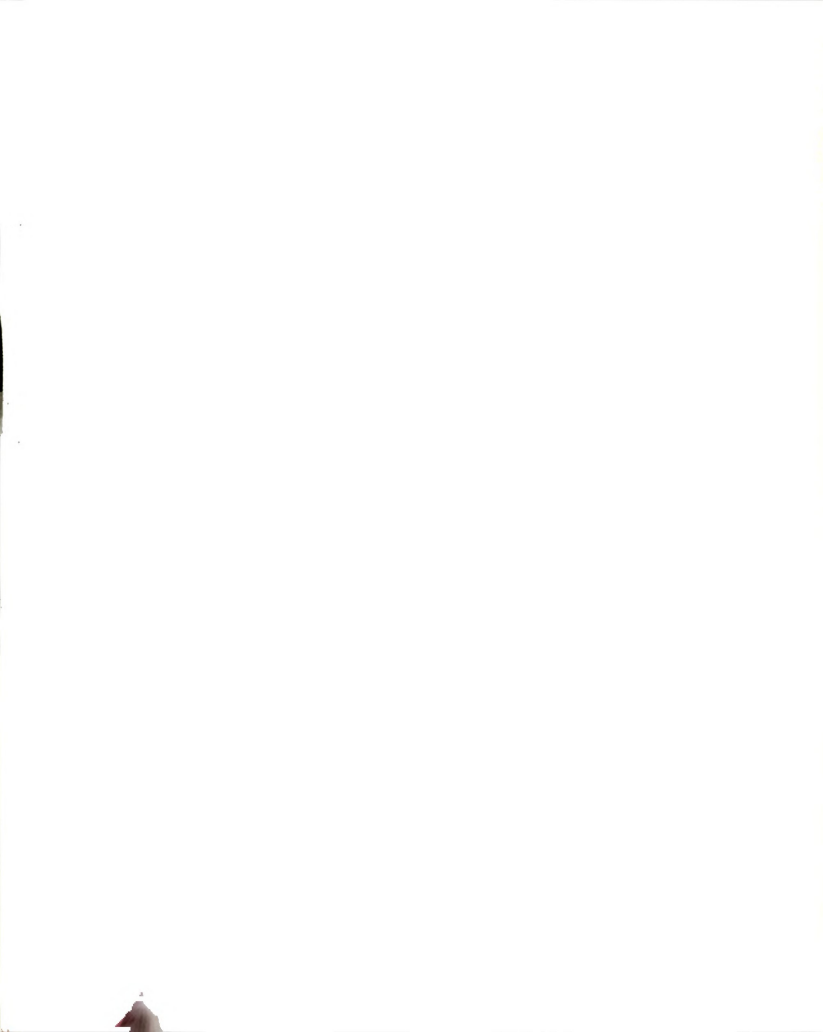
not result in continued identity achievement.³² However, there is some indication that the identity issues reappear as one enters the Intimacy vs Isolation Stage (Stage 6). It was Erikson's contention that unresolved matters from previous ego crises reemerge when the individual approaches the next developmental stage. It appears that Marcia's follow-up occurs during the transition into the Intimacy (Stage 6) and possibly Generativity (Stage 7) Stages.

Marcia and Friedman related ego-identity status for a sample of college women to difficulty of college major, self-esteem, authoritarianism and anxiety. They found that identity achievers had more difficult majors than identity diffusions. As predicted, foreclosures were highest in self-esteem and authoritarianism and lowest in anxiety. Moratoriums were lowest in authoritarianism while the identity diffused students were the most anxious.³³ Podd using Marcia's scales to investigate ego identity status and level of moral judgment, found that those individuals undergoing an identity crisis were unstable and inconsistent in their moral reasoning.³⁴ Toder and Marcia examined the

³²James E. Marcia, "Identity Six Years After: A Follow-Up Study," Journal of Youth and Adolescence, 5 (1976), 145-160.

³³James E. Marcia and M.L. Friedman, "Ego Identity Status in College Women," Journal of Personality, 38 (1970), 249-263.

³⁴Marvin H. Podd, "Ego Identity Status and Morality: Relationship Between Two Developmental Constructs," Developmental Psychology, 6 (1972), 497-507.



relationship between ego identity status and response to conformity pressure in college women. They found that women in "stable" identity statuses (achievements and foreclosures) conformed less than those in "unstable" statuses (moratoriums and diffusions) and felt less comfortable.³⁵ It appears from these studies that the identity stage can be broken down into four separate styles of responding to the crisis.

Orlofsky, Marcia and Lesser added alienated achievement status to the previous four conceptualizations. Alienated achievement individuals express a lack of occupational commitment but it is due to a strongly committed ideological rationale that precludes an occupational commitment. It is equivalent to an individual who "drops out of the job scene" to avoid conventionality due to philosophical and moral beliefs.

Orlofsky, et al. hypothesized and found that the fifth identity status, alienated achievement, correlated with low social desirability, a low need for approval and a high need for autonomy. The findings were consistent with their conceptualization of these individuals as self-reliant and defiant toward conventionality.³⁶

³⁵Nancy L. Toder and James E. Marcia, "Ego Identity Status and Response to Conformity Pressure in College Women," Journal of Personality and Social Psychology, 26 (1973), 287-294.

³⁶Jacob L. Orlofsky, James E. Marcia and Ira Lesser, "Ego Identity Status and the Intimacy Versus Isolation Crisis of Young Adulthood," Journal of Personality and Social Psychology, 27(1973), 211-219.

Although Marcia's work has been useful in delineating the typical styles of responding to the ego identity crisis, there are two major problems with his procedures: 1) they are time consuming to administer and score; and 2) they require extensive subjective judgments while scoring the protocols. As a result, there have been a number of attempts to develop a more objective means to assess identity statuses.

Identity Status Scales. Simmons developed a 24-item objectively scorable scale for assessing Identity Achievement Status (IAS) through modification of Marcia's incomplete sentence blank. The IAS scale revealed a one week test-retest reliability coefficient of .76. In addition, scores were significantly related to interview-based ratings of identity crisis and identity commitment.³⁷ Schilling, while replicating and extending the construct validity of the ego identity statuses, designed a paper-and-pencil measure of Ego Identity Status. Half of the Ego Identity Questionnaire (EIQ-A) assessed identity based on occupational, political and religious concerns, as did Marcia's interview technique. The second half of the questionnaire (EIQ-B) looked at interpersonal issues as the basis for identity formation. The Ego Identity Questionnaire (EIQ) had a test-retest reliability of .78. The EIQ

³⁷Dale D. Simmons, "Development of an Objective Measure of Identity Achievement Status," Journal of Projective Techniques and Personality Assessment, 34(1970), 241-244.

replicated the previous findings which had shown foreclosed individuals to be significantly higher in authoritarianism. In order to extend the construct validity of the Ego Identity Status concept, the study used the Thematic Apperception Test (TAT) and Role Construct Repertory Grid to assess the students' perceptions of their parents. As predicted, moratorium subjects more frequently than the other statuses gave stories in which the parent-figures were portrayed as disapproving and disappointed in the child.³⁸

Adams, Shea and Fitch further refined Marcia's assessment technique for measuring ego identity statuses. They indicated that a need existed to change from a typological perspective, as was Marcia's approach, to one of a developmental process. With this type of instrument they would be able to assess one's inclinations toward self-perceived diffusion, foreclosure, moratorium and achievement rather than one which classifies an individual solely into one of the four identity statuses. As a result, they devised the Objective Measure of Ego Identity (OM-EIS). The OM-EIS scale consisted of 24 Likert-type items, with 6 items reflecting each of the four statuses. The internal reliability for the four identity statuses ranged from .67 to .78 using Cronbach's alpha coefficient. Test-retest

³⁸Karl Lewis Schilling, "Ego Identity Status: A Reevaluation and Extension of Construct Validity," Diss., Univ. of Florida, 1975.

reliability after 5 days ranged from .71 to .93. Concurrent validity was established by comparing the OM-EIS scale and Marcia's Incomplete Sentence Blank. In comparison to Marcia's interview scale, the OM-EIS controls for potential rater bias and possible interviewer effect due to its more objective approach. Furthermore, the scale provides the researcher with the option to use either a typology or a distribution of stage responses.³⁹ The questionnaire focuses on only Marcia's ego identity statuses. However, the need for subscales representing distinct constructs within each stage is an important consideration in any comprehensive attempt to measure Erikson's ego-development theory.

Ego Identity Questionnaires. There have been other attempts to operationalize the ego identity stage. Dignam developed the Ego Identity Scale from items adapted from self-report inventories and derived from Erikson's concept of ego identity. The test consists of 50 items with different forms for males and females. Each item is given a weight of one. The higher the score, the greater the ego identity crystallization. No reliability information for the scale was provided. Using this scale, she hypothesized and found that the psychosocial crisis of ego identity crystallized within late adolescence and that diffused ego

³⁹Gerald R. Adams, Judy Shea and Steven A. Fitch, "Toward the Development of an Objective Assessment of Ego-Identity Status," Journal of Youth and Adolescence, 8(1979), 223-237.

identity was correlated with anxiety.⁴⁰

Using the Ego Identity Scale, Howard and Kubis reported odd-even reliability coefficients of .74 and .64 for 130 freshmen and 115 college sophomores, respectively. The test-retest coefficients for a one-week interval were .72 and .78 for a smaller group of 83 freshmen and 96 sophomores. From this smaller group of subjects, an estimate of the validity of the Ego Identity Scale was obtained by correlating ego identity scores with self ratings on the Rating Scale for Identity Traits. The freshmen coefficient was .34 and the sophomore coefficient was .60. They found using this scale that ego identity manifests a strong, consistent inverse relationship to anxiety.⁴¹

Stark and Traxler extended the use of Dignam's scale to provide empirical support for the role of sex differences in identity formation. They found significant differences between age groups and grade levels, supporting Dignan's contention that identity processes crystallize within late adolescence. Significant differences were also apparent between the sexes, with females reporting less ego diffusion than males.⁴²

⁴⁰Sister Mary Dignam, "Ego Identity, Identification and Adjustment in College Women," Diss., Fordam University, 1963.

⁴¹S.M. Howard and J.F. Kubis, "Ego Identity and Some Aspects of Personal Adjustment," The Journal of Psychology, 58(1964), 459-466.

⁴²Patricia A. Stark and Anthony Traxler, "Empirical Validation of Erikson's Theory of Identity Crises in Late Adolescence," The Journal of Psychology, 86(1974), 25-33.

Baker derived four aspects of ego identity from Erikson's writings. They were: 1) knows who he is; 2) knows where he is going; 3) perceives self as having "inner sameness and continuity"; and 4) certain about the way his perception of himself compares to the perceptions which others have of him. An eight item Likert-type scale was designed for each of the four aspects of ego identity. The Kuder-Richardson reliability coefficients of the four measures ranged from .28 to .48. In addition, Baker devised a sentence-completion instrument which consisted of eight sentence stems for each of the four aspects of identity. A scoring manual was devised and adopted. The Kuder-Richardson reliability coefficients of the four measures using the sentence completion instrument ranged from .28 to .55. He intercorrelated the total scores of the four aspects of identity, as measured by the Likert-type scale and the sentence completion instrument. A matrix of intercorrelations resulting when each of several traits or constructs is measured by each of several methods is known as a multitrait multimethod matrix. Using this method he found that three of the four aspects of ego identity were significantly correlated. "Inner sameness and continuity" appeared to be unrelated to the other measures.⁴³

⁴³Frank Baker, "Measures of Ego Identity: A Multitrait Multimethod Validation," Educational and Psychological Measurement, 31(1971), 165-174.

Recently, Tan, Kendis, Fine and Porac devised the Ego Identity Scale (EIS), a 12-item scale with a forced choice format to measure ego identity. Their scale had an average inter-item correlation of .114 and an odd-even split-half reliability of .68. The Ego Identity scores based on the 12 items correlated .136 with the Crowne-Marlowe Social Desirability Scale. Two studies were conducted to test the validity of the scale. The studies showed that the EIS correlated positively with measures of locus of control, intimacy and Tomkins' Left and negatively with dogmatism. Tomkins' Left is a test which reflects the extent to which an individual derives his values from his own life experiences rather than adopting the values held by various reference groups.⁴⁴

Most of the research pertaining to Erikson's developmental theory focused on the Identity Stage. Attempts were made to measure the constructs of the stage using such procedures as semantic differentials, Q-sorts, adjective ranking, semi-structured interviews and six Likert-type scales designed exclusively to operationalize the ego identity stage. A summary of the questionnaires with their respective reliability and validity data appears in Table 2-2 in the Summary Section of this chapter. Although some of the questionnaires have strong reliability and validity

⁴⁴Allen L. Tan, Randall Jay Kendis, Judith T. Fine, and Joseph Porac, "A Short Measure of Eriksonian Ego Identity," Journal of Personality Assessment, 41(1977), 279-284.

support, notably the Objective Measure of Ego Identity Status⁴⁵ and Rasmussen's Ego Identity Scale⁴⁶, none of the instruments are used consistently in the literature as research tools or as clinical assessment instruments. However, using these various devices it has been found that ego diffusion is generally associated with anxiety, a lack of continuity with the past, uncertainty about personal characteristics, poor adjustment and inconsistent moral reasoning. It has been established that ego identity is correlated with affiliation and achievement motivation, self-esteem, knowing oneself and knowing where one is going. A summary of the results relating to the ego identity stage can be found in Table 2-3.

Stage 6

While studying ego identity status, Orlofsky, Marcia and Lesser made an attempt to operationalize Erikson's sixth stage of Intimacy vs Isolation by devising a scale to measure these constructs and by proposing five styles of coping with the crisis. The five intimacy statuses were intimate, preintimate, pseudointimate, stereotyped relationships and isolate. The sample consisted of 53 male undergraduate students. The procedure to determine the

⁴⁵Adams, Shea, and Fitch, p. 234.

⁴⁶Rasmussen, p. 118.

status consisted of a 20-30 minute semi-structured interview that evaluated the presence or absence of close interpersonal relationships with peers and the extent to which openness, responsibility, closeness, mutuality and commitment was found in the subjects' most significant relationships. The intimacy-isolation scale consisted of 20 intimacy items (e.g., talking with people about their innermost problems and difficulties, being constant in the subject's affections) and 20 isolation items (e.g., avoiding excitement or emotional tension, remaining unnoticed in a group, picking someone else's argument to pieces). In addition, they focused on the association between the Intimacy vs Isolation Stage and the Identity vs Role Diffusion Stage that precedes it. Concerning the intimacy status rating, interjudge agreement between two independent raters was .81%. No reliability or validity data were presented concerning the intimacy-isolation scale. As predicted, the identity diffused subjects scored the lowest on the intimacy-isolation scale, while subjects high on identity (achievement and alienated achievement) had the highest scores on the intimacy-isolation scale. The association between intimacy status and the intimacy scale was as expected. Intimate and preintimate subjects scored significantly higher on the scale than pseudointimate and stereotyped relationships subjects.⁴⁷

⁴⁷Orlofsky, Marcia, and Lesser, pp. 211-219.

The Orlofsky, et. al.'s study supported Erikson's theory that intimacy generally occurs only after a reasonable sense of identity has been established. Although the study was a fine beginning in investigating the intimacy-isolation stage, there has been no subsequent research dealing with the intimacy statuses or the scale that was devised.

Summary

The summary focuses on the non-questionnaire assessment formats, the single and multiple stage questionnaire formats and a review of the findings from the Stage 5 and multiple stage studies.

Non-Questionnaire Assessment Formats

A variety of non-questionnaire formats have been used to operationalize Erikson's ego stages with the Stage 5 issues of identity and role diffusion receiving the most attention. Bronson used a semantic differential to measure "continuity of self conception" by having the subject rate 15 concepts at two different administrations.⁴⁸ To measure ego identity discrepancy Gruen used a Q-sort of 100 items and instructed adolescents to sort them in terms of how they view their real and ideal selves.⁴⁹ Block had subjects rank 20 adjectives with respect to 8 "relevant others" in their

⁴⁸Bronson, pp. 414-417.

⁴⁹Gruen, pp. 231-233.

lives to devise an index of role variability.⁵⁰ Marcia conducted semi-structured interviews focusing on crisis and commitment to assess four styles of coping with the identity stage.⁵¹

There were a number of procedures used to measure other stages besides Identity vs Role Diffusion. Boyd conducted unstructured interviews with adults and used projective pictures with children to initiate the interviews. He then analyzed the interviews into "unit utterances" as a means to count the number of references to the first six developmental stages.⁵² Wessman and Ricks, like Gruen, used a Q-sort with real and ideal instructions to assess Stages 1 thru 6.⁵³ Orlofsky, Marcia and Lesser conducted semi-structured interviews to measure an individual's style of dealing with the Intimacy-Isolation issues of Stage 6.⁵⁴ A listing of the non-questionnaire formats used and the stages and concepts measured are presented in Table 2-1.

Questionnaire Formats - Stages 5 and 6

The non-questionnaire formats resulted in scoring procedures that were time-consuming and often subjective. A number of questionnaires were devised to eliminate these

⁵⁰Block, pp. 392-397.

⁵¹Marcia, 1966, pp. 551-558.

⁵²Boyd, pp. 249-257.

⁵³Wessman and Ricks, pp. 107-109.

⁵⁴Orlofsky, Marcia, and Lesser, pp. 211-219.

Table 2-1

Non-Questionnaire Formats Used To Measure
Erikson's Stages of Development

Type of Format	Stage(s) Studied	Concepts Measured	Procedure	Author, Year
Unstructured Interview with Adults	1-8	All Eight Stage constructs	Analysis of interview into "unit utterances"	Boyd, 1966.
Q-sort	1-6	First six ego stage constructs	Real vs Ideal instruction to sort items	Wessman & Ricks, 1966
Projective Pictures and Semistructured Interview with Children	1-6	First six ego stage constructs	Analysis of interview into "unit utterances"	Boyd, 1966
Semantic Differential	5	Identity Diffusion	Rate 15 concepts on 5-point scale, 2 administrations	Bronson, 1959
Q-sort	5	Ego Identity	Real vs Ideal instructions to sort 100 items	Gruen, 1960
Adjective Ranking	5	Role Variability	Rank 20 Adjectives with respect to 8 significant others	Block, 1961
Semi-Structured Interview	5	Ego Identity Status	Interviews focusing on crisis and commitment	Marcia, 1966
Semi-Structured Interview	6	Intimacy-Isolation Status	20-30 minute interview to assess openness, responsibility, closeness, mutuality, and commitment in subjects' relationships	Orlofsky, Marcia, & Lesser, 1973

difficulties. As was the case with the non-questionnaire formats, most of the objective procedures dealt with Identity-Role Diffusion Stage. Six different questionnaires were designed to measure the constructs of the fifth stage. Simmons devised the Identity Achievement Status scale (IAS) consisting of 24 items with a forced choice format. He reported a test-retest reliability of .764 with college sophomores.⁵⁵ Schilling designed the Ego Identity Questionnaire (EIQ) and reported test-retest of .78 with a college population.⁵⁶ Baker developed a 32 item questionnaire (unnamed) to measure four constructs of ego identity. The internal consistency of the 4 subscales using the Kuder-Richardson formula ranged from .23 to .43.⁵⁷ Dignan designed the Ego Identity Scale consisting of 50 items. She reported odd-even reliability coefficients of .74 and .64, and test-retest coefficients of .72 and .78 with college freshmen and sophomores, respectively.⁵⁸ Adams, Shea and Fitch devised the Objective Measure of Ego-Identity Status (OM-EIS) to replace Marcia's semi-structured interview to measure ego identity status. The OM-EIS consisted of 24 items and he reported test-retest reliability coefficients

⁵⁵Simmons, pp. 241-244.

⁵⁶Schilling, 1975.

⁵⁷Baker, pp. 165-174.

⁵⁸Howard and Kubis, pp. 459-466.



of .71 and .93 with college students.⁵⁹ Tan, Kendis, Fine and Porac designed the Ego Identity Scale (EIS) which consisted of 12 items. They reported an odd-even reliability coefficient of .68 with college students.⁶⁰

Orlofsky, Marcia and Lesser designed 40 Intimacy-Isolation items to measure the sixth stage. No reliability or validity data were reported.⁶¹ This study was the only attempt to measure exclusively the Intimacy vs Isolation Stage.

Questionnaire Formats - Multiple Stages

Constantinople's Inventory of Psychosocial Development focused on the first six ego stages. There were 10 items per stage scored on a 7-point Likert scale. Test-retest coefficients with college students ranged from .45 to .81. The scale was contaminated for males by a social desirability response set.⁶² McClain devised the Self-Description Blank, consisting of 70 items, which also measured the first six developmental stages. He reported test-retest coefficients of .77 to .93 with a college population.⁶³ Evans adapted Wessman and Ricks'⁶⁴ Q-sort

⁵⁹Adams, Shea, and Fitch, pp. 223-237.

⁶⁰Tan, Kendis, Fine and Porac, pp. 279-284.

⁶¹Orlofsky, Marcia, and Lesser, pp. 211-219.

⁶²Constantinople, pp. 357-372.

⁶³McClain, pp. 527-541.

⁶⁴Wessman and Ricks, pp. 107-109.

items as a means to measure the first seven stages. The test-retest coefficients on the scale scores ranged from .48 to .76.⁶⁵ The Self-Description Questionnaire by Boyd and Koskela has been the only objective format to assess all eight developmental stages as of this date. Subjects respond to 160 items using two six-point scales with the following instructions: 1) Like-Unlike Me; and 2) Concern-No Concern For Me. The test-retest and the internal consistency coefficients for the individual scales ranged from .45 to .85, and .76 to .84, respectively. Predictive validity for the scale was established by correlating the subjects ego stage, as defined by the age of the respondents, with the Pertinency scores (Concern-No concern measure).⁶⁶ As was the case with the other procedures to operationalize Erikson's theory, Boyd and Koskela used primarily a college population. With this approach, the range of developmental issues was restricted to Stage 5 (Identity) and 6 (Intimacy). There was also no attempt to measure consistency or a social desirability response set. A listing of the questionnaire formats with their respective reliability and validity data can be found in Table 2-2.

Stage 5 Identity Studies

It has been noted that the majority of the studies have focused on the Identity-Role Diffusion Stage. A summary of

⁶⁵Evans, pp. 963-966.

⁶⁶Boyd and Koskela, pp. 1-14.

the results pertaining to Stage 5 can be found in Table 3. In general, it has been found that ego diffusion is associated with anxiety, a lack of continuity with the past, uncertainty about personal characteristics, poor adjustment and inconsistent moral reasoning. On the other hand, it has been established that ego identity is correlated with affiliation and achievement motivation, self-esteem, knowing oneself, and knowing where one is going.

Concerning ego identity statuses, Marcia proposed and validated four styles of coping with the identity crisis: achievement, moratorium, foreclosure and diffusion. Identity achieved individuals experienced a decision-making period about their occupation and ideology and have made commitments to them. Moratorium adolescents are currently in an identity crisis with commitments present but vague. Foreclosure individuals are generally committed to parental values having made few decisions of their own. Identity diffused adolescents are largely uncommitted.⁶⁷ Orlofsky, Marcia and Lesser found evidence to include alienated achievement status to the previous four conceptualizations. Alienated achievement individuals expressed a lack of occupational commitment but it is due to a strongly committed ideological rationale that precludes an occupational commitment.⁶⁸

⁶⁷Marcia, 1966, pp. 551-558.

⁶⁸Orlofsky, Marcia and Lesser, pp. 211-219.

Table 2-2

Questionnaire Formats Used to Measure
Erickson's Stages Of Development

Name of Measure	Stage (s)	Sample	Relia- bility*	Validity	Valida- tion Group	No. of Items	Scale	Author Year
Self-Description Questionnaire	1-8	college students	TRT .48-.85 IC .76-.84	Predic- tive	college students	160	6-pt Like- Unlike Me; 6- pt. Concern- No Concern	Boyd & Koskela, 1970
Unnamed (adaptation of Wessman & Ricks' Q-sort)	1-7	college students	TRT .48-.76; Mean=.61	Construct Predictive	abusive mothers	70	7-pt Likert- Scale	Evans, 1979
Ego Identity Scale	1-6	Navel Recruits	SB .849-.851	Construct Predictive	Navel recruits	72	0,1 Agree, Disagree	Rasmussen 1964
Self-Description Blank	1-6	college students	TRT .77-.93	Predictive	Juvenile delinquents, gifted children, counseling center	70	10-pt Likert, Always- Never	McClain, 1979
Inven- tory of Psychosocial Development	1-6	college students	TRT .45-.81	Concurrent	college students	60	7-pt Likert	Constan- tinople 1969
Objective Measure of Ego Identity Status (OM-EIS)	5	freshmen	TRT .71-.93, IC .67-.78	Construct Predictive & concurrent	college students	24	5-pt Likert	Adams, Shea & Fitch, 1979
Unnamed	5	freshmen males	KR .23-.48	Concurrent	college students	32	5-pt Likert	Baker, 1971
Dignan Ego Identity Scale	5	college freshmen sophmores	OE .74-.64 TRT .72-.78	Construct concurrent	college students	50	0,1 True- False	Dignan, 1963 & Howard & Kubis, 1964

Table 2-2 (cont.)

Questionnaire Formats Used to Measure
Erikson's Stages of Development

Name of Instrument	Stage (s)	Sample	Reliability*	Validity	Validation Group	No. of Items	Scale	Author,
Ego Identity Questionnaire (EIQ)	5	college students	TRT .78	Construct	Construct students	?	?	Schilling, 1975
Identity Achievement Status Scale (IAS)	5	freshmen	TRT .764	Concurrent & Construct	sophmores	24	0,1 Forced Choice Format	Simmons 1970
Ego Identity Scale (EIS)	5	college students	OE .68	Construct Predictive	college students	12	0,1 Forced Choice Format	Tan, Kendis Fine & Porac, 1977
Intimacy-Isolation Scale	6	college students	not investigated	Content rated by judges	none	40	0,1 True-False	Orlofsky Marcia, Lesser, 1973

*TRT - Test-Retest

IC - Internal Consistency

SB - Spearman-Brown

KR - Kuder-Richardson

OE - Odd-Even



Table 2-3

Findings Related to Stage 5
(Identity vs Role Diffusion)

Author, year	Findings
Bronson, 1959	Identity diffusion was correlated with anxiety, lack of continuity with the past, uncertainty about personal characteristics and a fluctuation of feelings about self.
Gruen, 1960	Ego Identity was associated with rejection of false information about oneself.
Block, 1961	Excessive role variability (i.e., diffusion) was related to poor adjustment and anxiety.
Dignan, 1963	Developed the Ego Identity Scale. Found that ego identity crystallized within late adolescence; role diffusion and anxiety were associated.
Heilbrun, 1964	Ego Identity was associated with conformity to masculinity-femininity stereotypes.
Howard & Kubis, 1964	Provided reliability information on Dignan's Ego Identity Scale; found a strong inverse relationship between ego identity and anxiety.
Rasmussen 1964	Devised Ego Identity Scale (EIS); found that ego identity and coping effectively were associated.
Marcia, 1966 1967	Four styles of meeting the identity crisis were validated: achievement, moratorium, foreclosure and diffusion.
Marcia & Friedman, 1970	Identity achievers had more difficult majors; foreclosures were highest in self-esteem and authoritarianism; and identity diffused were the most anxious.
Simmons, 1970	Devised the Identity Achievement Status (IAS) Questionnaire to assess ego identity status.

Table 2-3 (continued)

Author, year	Findings
Waterman & Waterman, 1970	Identity diffused college students had the least favorable evaluations about their education.
Baker, 1971	Using a multitrait, multimethod correlation matrix, found that ego identity was associated with: 1) knowing oneself; 2) knows where one is going; and 3) congruity between one's perception of self and others' perception of oneself.
Bauer & Synder, 1972	Used Rasmussen's EIS; found that ego identity and motivation, both in affiliation and achievement, were related.
Podd, 1972	Role diffused individuals were unstable and inconsistent in their moral reasoning.
Waterman & Waterman, 1972	No relationship between ego identity status and academic performance.
Waterman, Geary & Waterman, 1972	Ego identity achievement increases from freshman to senior years.
Orlofsky, Marcia & Lesser, 1973	Validated alienated achievement as an identity status; found that intimacy-isolation crisis (Stage 6) is related to successful resolution of the identity status.
Toder & Marcia, 1973	Stable ego identity statuses conformed less to pressure and felt more comfortable than less stable statuses.
Stark & Traxler, 1974	Found significant differences in ego identity between age groups and grade levels; sex differences in ego identity with females reporting less diffusion.
Protinsky, 1975	Found that ego identity is a function of age; no sex difference was found.
Schilling, 1975	Devised the Ego Identity Status Questionnaire (EIQ); replicated and extended construct validity of the ego identity statuses.

Table 2-3 (continued)

Author, year	Findings
Marcia, 1976	High identity status students were more vulnerable to change when measured 6 years after college graduation.
Tan, Kendis, Fine & Porac, 1977	Devised the Ego Identity Scale; provided reliability and validity data.
Adams, Shea, & Fitch, 1979	Devised the Objective Measure of Ego Identity (OM-EIS); provided a typology and a distribution of stage responses.

Multiple Stage Studies

There have been several studies focusing on the entire ego development. Boyd,⁶⁹ Ciaccio,⁷⁰ Whitbourne and Waterman⁷¹ and Constantinople⁷² provided support for Erikson's contention that ego stage development is a function of age. McClain found a positive relationship between socioeconomic levels and psychological development.⁷³ Santrock focused on father absence at different age levels and found that absence at the ages 0 to 2 resulted in more detrimental personality characteristics at age 10 than father absence at a later age. He felt that the finding supported Erikson's contention that trust serves as a foundation for the ensuing stages.⁷⁴ A positive relationship between psychosocial development and vocational behavior was established by Munley.⁷⁵ Evans found that abusive mothers scored significantly lower on the ego stage scales than nonabusive mothers.⁷⁶ The most comprehensive study was conducted by Boyd and Koskela. They found that the ego crises were

⁶⁹Boyd, pp. 249-257.

⁷⁰Ciaccio, pp. 306-311.

⁷¹Whitbourne and Waterman, pp. 373-378.

⁷²Constantinople, pp. 357-372.

⁷³McClain, pp. 527-541.

⁷⁴Santrock, pp. 273-274.

⁷⁵Munley, pp. 314-319.

⁷⁶Evans, pp. 963-966.

ordered chronologically for a university population. In addition, they found that the resolution of an ego crisis is systematically related to the resolutions of the preceeding ego crises.⁷⁷ A summary of the findings relating to non-Stage 5 studies can be found in Table 2-4.

In short, there has been only one objective device designed to measure all eight Eriksonian stages, namely the Self-Description Questionnaire by Boyd and Koskela. It has only appeared in the literature on one occasion and it consisted of a sample of college students restricted to Stages 5 and 6. It is important to note that the questionnaire does not have a consistency or a social desirability response set to assess the individual's test-taking attitude. In addition, the constructs underlying the ego stages, other than the Stage 5 issues of Identity and Role Diffusion, have been largely ignored. The AAAP- Assessment of Adult Adjustment Patterns- operationalizes all eight of the stages, as well as including validity indexes measuring social desirability and test-taking consistency. In addition, a factor analysis was conducted on each ego stage to investigate the construct(s) that underlie each scale.

⁷⁷Boyd and Koskela, pp. 1-14.

Table 2-4

Findings Associated with Non-Identity Stages

Author, year	Findings
Boyd, 1964	Developed "unit utterance" approach to measure all ego stages. With children he found that ego-stage development was a function of age.
Constantinople, 1969	Developed the Inventory of Psychosocial Development (IPD) to measure Stages 1 thru 6. The scale had a social desirability response bias when used with men; found that ego stage progression was a function of age.
Boyd & Koskela, 1970	Designed the Self-Description Questionnaire to measure all eight stages. Found that ego crises are ordered chronologically for a university population and that the resolution of an ego crisis is systematically related to the resolutions of the preceeding ego crises.
Santrock, 1970	Using the IPD he found that father absence at an early age (0-2) resulted in more detrimental personality characteristics at age 10 than father absence at a later age. Provided support for Erikson's contention that trust serves as a foundation for the ensuing stages.
Ciaccio, 1971	Used "unit utterance" approach with children and replicated Boyd's finding that ego stage progression is a function of age.
Bach & Verdile, 1975	Compared IPD and Rasmussen's Ego Identity Scale (EIS). Although the scales were positively associated, he found that misclassification of subjects resulted when the EIS was used alone.
McClain, 1975	Devised Self-Description Blank to measure first six ego stages. In a cross-cultural comparisons, he found a positive relationship between socioeconomic conditions and psychological development.
Munley, 1975	Found a positive relationship between psychosocial development using the IPD and vocational behavior.

Table 2-4 (continued)

Author, year	Findings
Whitbourne, & Waterman, 1978	Conducted a 10-year follow-up of Constantinople's original sample; found significant increases in overall scores and provided further support that ego stage progression is a function of age.
Evans, 1979	Devised a scale to measure the first seven stages; found that abusive mothers scored significantly lower on the ego stage scales than nonabusive mothers.

CHAPTER III

METHODOLOGY OF THE STUDY

In Chapter 3 a description of the AAAP- the Assessment of Adult Adjustment Patterns- Instrument is presented. In addition, the sample, design, item criteria and the analytic procedures are discussed.

Description of the Development of the AAAP

The approach used by Farquhar, Wilson and Parmeter⁷⁸ in devising the AAAP was modeled on that used by Jackson⁷⁹ during the development of the acclaimed Personality Research Form.⁸⁰ Jackson proposed that personality measures would have a broader import and substantial construct validity when they are derived from an explicitly formulated, theoretically based definition of the constructs.⁸¹ As a result, the first activity in the formulation of the AAAP consisted of closely examining Erikson's writings to find descriptions that related to each of the developmental stages. The outline presented in Figure 3-1 resulted from

⁷⁸Farquhar, Wilson, Parmeter, 1977.

⁷⁹Douglas N. Jackson, Current Topics in Clinical and Community Psychology, Vol. 2, ed. C.D. Spielberger (New York: Academic Press, 1970), pp. 229-248.

⁸⁰Douglas N. Jackson, Personality Research Form Manual (Goshen, New York: Research Psychologists Press, 1967).

⁸¹Douglas N. Jackson, "The Dynamics of Structured Personality Tests: 1971," Psychological Review, 78(1971), pp. 229-248.

FIGURE 3-1

Elaboration of Erikson's Epigenetic Model

1. Trust-Mistrust (Hope)
Age: 0 - 1 1/2

Mutual recognition vs autistic isolation Capacity for faith Oral incorporative & sadistic Assured reliance on parent's integrity	Ease of feeding Depth of sleep Relaxation of bowel Let mother out of sight Rely on sameness, consistency, constancy Trust self to cope with bodily urges Basic faith in existence, law & order
---	---

2. Autonomy-Shame & Doubt (Will)
Age: 1 1/2 - 3

Will to be oneself Holding on-letting go	Control from outside is firmly reassuring Stand on own feet Guidance gradually encourages independent choice
---	---

3. Initiative-Guilt (Purpose)
Age: 3 - 5

Anticipation of roles vs inhibition Motor movement Language Intrusive (phallic) mode Rivalry Conscience (family)	Pleasure in conquest Self-Observation Self-Guidance Self-Punishment Sense of Responsibility Obedience
--	--

4. Industry-Inferiority (Competence)
Age: 5 - 12

Task identification vs Sublimation of drives I am what I make work Identification Trust of adults (other than parents)	Win recognition by producing things Renunciation of wish to live forever in the family Apply self to tasks Perseverance, diligence Submit to instruction "What works"
---	---

FIGURE 3-1 (continued)

5. Identity-Confusion (Fidelity)

Age: 12 - 18

Trust in peers	Fidelity tests
Occupational search	Cliques-heroes
Identification without heroes	Stereotyping self
Social group pressures	Ideological mind
Ideological thought	Rituals, creed, programs
	Molding identity

6. Intimacy-Isolation (Love)

Age: 18 - 30

Uses of identity	Fusion with another
Genital maturity	Commitment to affiliation
Sensitivity of sex organs	Ethical strength to honor commitment
Mutual regulation of work, procreation, recreation	Orgastic potency
	Heterosexual mutuality

7. Generativity-Stagnation (Care)

Age: 30-45

Maturity	Belief in the species
Establishing and guiding next generation	Charity-Supplements but doesn't replace
Productivity & creativity	generativity

8. Integrity-Despair (Wisdom)

Age: 45+

Order & meaning
 Acceptance of one's life cycle
 Acceptance of others significant to it vs disgust, regret
 "I am what survives of me"
 Accrued assurance of order & meaning
 Love of the "human ego"
 Defend dignity of one's own life cycle
 Consolidation of meaning
 Acceptance of death

Note. Prepared by Fredrick R. Wilson and William W.
 Farquhar, Michigan State University, 1977.

reviewing Erikson's work.

Using the outline, a research team consisting of a Ph.D. Counseling Psychologist, a Ph.D. Educational Psychologist and three doctoral-level, counseling psychology students, all of whom were well versed in Erikson's epigenetic theory, generated a pool of about 2500 items over a period of two years. These items were either written by the research team or were adapted from other personality inventories. An attempt was made to write items that were: 1) non-sexist; 2) written in common language; 3) non-pathological; 4) affirmatively stated; and 5) not a cardinal virtue, i.e., not highly correlated with social desirability. An initial screening of the items with respect to the above five criteria took place. Additionally, any item which appeared to reflect more than one stage issue were rewritten, usually by splitting it into two items. Items were then categorized according to an 8 x 8 matrix in an attempt to select only items which were pure examples of the stage rather than reflecting remnants of previous or future stages. Once the items were initially selected, the members of the writing team cross-validated the sorting procedure. An item was retained if it was sorted into the same category both times. During item editing and selection, all work by any team member was cross-checked by all other members; only items which were consensually validated by all five members were included in the instrument. There were 666 retained items which formed the basis of the

Assessment of Adult Adjustment Patterns (AAAP).⁸²

The AAAP items were written to reflect positive and negative aspects of each ego stage in an attempt to measure mastery and non-mastery of the relevant developmental issues. It was assumed that an individual would proceed through the stages in one direction, namely from non-mastery to mastery.

Subsequent Work with the AAAP

Upon examining the AAAP items it became apparent to the present investigator that in some cases individuals prior and subsequent to the stage would respond differently than individuals in that stage. These items were labelled stage-specific items. At that point, all of the items were reexamined with the intent of placing them into two groups: mastery and stage-specific.

A mastery item corresponded to a developmental issue that remains resolved once it is resolved. The point at which the individual proceeds from non-mastery to mastery should correspond to the stage that the item is representing. For example, a Stage 5 mastery item should be consistently responded to in one direction (non-resolution) by individuals in Stage 1 thru 4, and in the opposite direction (resolution) by those in Stages 6 thru 8. The item could be responded to in both directions by individuals in

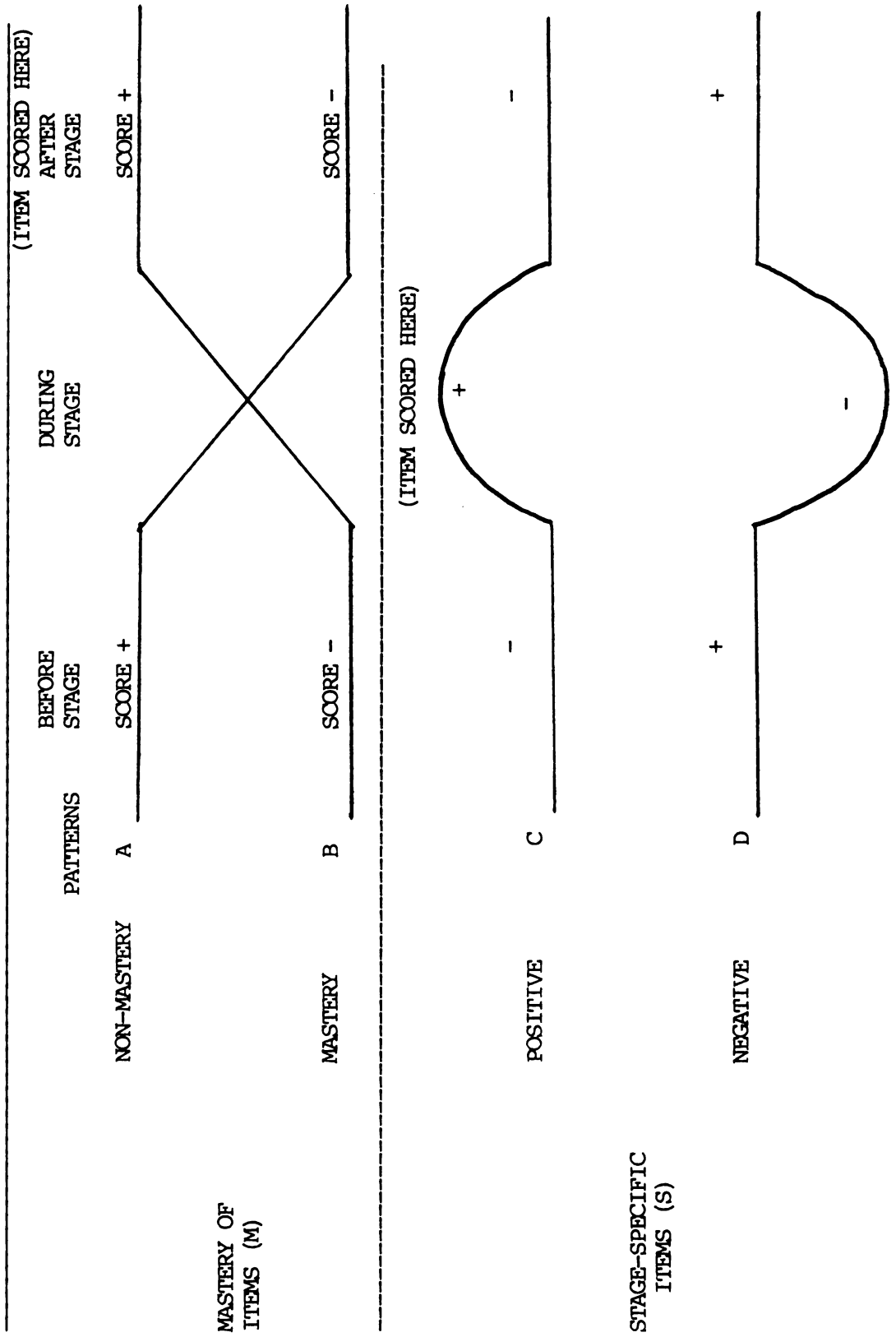
⁸²Farquhar, Wilson and Parmeter, p. 1-27.

Stage 5 depending on the respondent's level of development in that stage. With a stage-specific item, an individual in that stage should respond to the statement differently than an individual in a prior or subsequent developmental stage. It is as if the individual is embedded in the issues of that stage. For example, with a Stage 5 specific item, individuals in Stages 1 thru 4 would not have encountered the developmental issue that the item addresses, while individuals in Stages 6 thru 8 would have had resolved it. Stage 5 individuals respond in the opposite direction (embedded).

Some of the items contained negative aspects of the constructs to reduce the possibility of a response set from occurring. In the process of differentiating the items into mastery and stage-specific groups, four possible response patterns were conceptualized. The four patterns were the result of the two forms (positive and negative aspects of the constructs) and the two types (mastery and stage-specific) of items. The four response patterns are illustrated in Figure 3-2. As can be seen, Pattern A results with a non-mastery item. The proposed scenario is that a person prior to the stage would respond "True of Me" (+) and after resolving the developmental tasks of the stage, respond "Not True of Me" (-). Pattern B corresponds to a positive mastery item, whereby the individual initially responds "Not True of Me" (-) and then "True of Me" (+) after the related issues are resolved. Pattern C results with a

FIGURE 3-2

DIAGRAM OF SCORING AND CLASSIFICATION OF ITEMS
IN A HIERARCHICAL CLASSIFICATION OF
ERIKSON'S EPIGENETIC MODEL



stage-specific item, such that, only an individual in the stage would respond "True of Me" (+). A negative stage-specific item would be responded to negatively ("Not True of Me") by only individuals embedded in that stage. Individuals whom are developmentally before or after the stage would respond positively ("True of Me"), since they are not engaged with the issue that the item addresses. This response pattern would be characteristic of Pattern D.

Using these four response patterns as a model, the items were differentiated into groups for determining the scoring direction. The item breakdown by stage, type (mastery and stage-specific) and form (positive and negative aspects of the constructs) is found in Table 3-1. It can be seen that 81% of the items were either mastery or nonmastery items. This finding was expected since the items were originally constructed to reflect the resolution or non-resolution of the issues of each developmental stage. The stage-specific pattern was conceptualized when the scoring direction was being established which was after the item-construction stage.

In the item construction process in the initial development of the AAAP, the team members experienced difficulty in writing mastery items that reflected inclusion in the stage. It was easier to write items that excluded an individual from a particular developmental period. However, an instrument's content validity vastly improves when items reflect the constructs of the stage rather than reflecting

Table 3-1

Distribution of Items by Stage, Type and Form

STAGE	MASTERY		STAGE-SPECIFIC		TOTAL
	MASTERY	NON-MASTERY	POSITIVE EMBEDDED	NEGATIVE EMBEDDED	
1	25	8	1	1	35
2	65	42	14	2	123
3	34	33	19	1	87
4	70	26	14	1	111
5	64	16	54	7	141
6	31	13	8	1	53
7	39	3	1	0	43
8	59	11	2	1	73
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	387	152	113	14	666

what is not a part of the stage. As a result, the team members strove to write more mastery items, which accounts for the imbalance between the number of mastery and non-mastery items. An example of mastery and stage-specific items can be found in Table 3-2 for each stage.

To permit control for social desirability responding, the Crowne-Marlowe desirability measure was modified to correspond to the AAAP item structure and response scaling.⁸³ A unpublished study by Farquhar and Wilson⁸⁴ verified the acceptability of the modification. The Modified Crowne-Marlowe was administered to a sample of 380 university students and found to yield results similar to the original Crowne-Marlowe administered contiguously. The correlation between the two forms was .96. Every twentieth item and items 709 to 719 in the AAAP are Modified Crowne-Marlowe items. The following are examples of the Crowne-Marlowe items: "My table manners at home are as good as they are as when I eat out in a restaurant", and "I have almost never felt the urge to tell someone off". Responding "True of Me" to these items is indicative of a high need to respond in a socially desirable manner.

Each scale had at least one pair of consistency items. These items have the same content but are phrased slightly

⁸³D.P. Crowne and D. Marlowe, "A New Scale of Social Desirability Independent of Psychopathology," Journal of Consulting Psychology, 24 (1960), pp. 349-354.

⁸⁴William M. Farquhar and Frederick R. Wilson "Development of the Modified Crowne-Marlowe Scale", Unpublished Manuscript, 1977.

Table 3-2

Examples of Mastery and Stage-Specific Items

Stage	Type*	Item
1	M	I feel optimistic about life.
	SS	I can tell right away whether I can trust a stranger.
2	M	I make my own decisions.
	SS	No matter what the task, I prefer to do it myself.
3	M	I am happy with the pace or speed with which I make decisions.
	SS	When I do something wrong, I know I'll get caught.
4	M	I do many things well.
	SS	I am more inclined to compete than I am to cooperate.
5	M	I am determined to be the kind of person I am.
	SS	I'm a friend to everyone.
6	M	With the person I am closest to, I share my inner feelings of tenderness.
	SS	I get so lonely I find myself desperately trying to impress the opposite sex.
7	M	I work to make my community better for children.
	SS	Children should play mostly with children, not with adults.
8	M	My life is a delightful mixture of work and play.
	SS	When I stop to look at something, I find that I am fascinated by what I see.

* M - Mastery
 SS - Stage-Specific

different and appear in different places in the questionnaire. They are used to check an individual's consistency in responding to the items. There were 12 consistency pairs in the AAAP. The following pairs are examples:

Stage 1 Trust vs. Mistrust

- # 287 I find people are consistent. (+)
- # 407 I do not expect people to be consistent. (-)

Stage 2 Autonomy vs. Shame and Doubt

- # 297 No matter what the task I prefer to get someone
 to do it for me. (-)
- # 604 No matter what the task I prefer to do it
 myself. (+)

There were 719 items in the AAAP of which 666 items pertained to the ego stages (a breakdown can be seen in Table 3-1). In the process of differentiating the items into mastery and stage-specific groups, seven items were eliminated because, on reexamination, these items appeared not to reflect the constructs they were intended to measure. The Modified Crowne-Marlowe items accounted for the remaining 46 items. The 12 pairs of consistency items are a part of the 666 item pool.

In summary, the items of the AAAP reflect the progression of development in both intrapsychic and socio-adaptive domains. The AAAP operationalizes Erikson's constructs in a way that permits the collection of norms and

the examination of developmental trends. Items included in the final version of the AAAP were randomly ordered, typed on masters and printed on machine readable answer forms. The twenty-seven pages of questions were assembled into a bound booklet for ease of administration (see Appendix A).

Sample

The sample of the study consisted of two groups: staff and faculty at Michigan State University (n=322) and psychiatric patients (n=32) at Pine Rest Christian Hospital in Grand Rapids, MI. The mean and median age of the respondents were 42 and 39 years old, respectively. The subjects ranged in age from 19 to 69 and the standard deviation was 12.04. Most of the testees were Caucasian (91.5%) with an under representation of Orientals (1.1%) and Blacks (1.7%). There were also slightly more males (55.1%) than females (42.7%). This demographic information can be found in Table 3-3 to 3-5, respectively.

Most of the subjects had children (69.8%) with the mean number of children approaching 2. The mean age of the oldest and youngest child was approximately 14 and 19, respectively. The predominant marital statuses were married (76%), never married (9.3%), and divorced (8.2%). Few of the respondents had been married more than once (12.2%). In Table 3-6 thru 3-9 one can find an expansion of this demographic information.

The median income of the respondents was between

Table 3-3

Age of Respondents

Mean	41.64
Median	39
Range	50
Standard Deviation	12.04

Table 3-4

Race of Respondents

Race	Number	Percent
Oriental	4	1.1
Caucasian	324	91.5
Black	6	1.7
Other	10	2.8
No Response	10	2.8

Table 3-5

Sex of Respondents

Sex	Number	Percent
Male	195	55.1
Female	151	42.7
No Response	8	2.3

Table 3-6

Respondent's Number of Children

Number/Category	Frequency	Percent
None	107	30.2
1	36	10.2
2	95	26.8
3	59	16.7
4	38	10.7
5	11	3.1
6	5	1.4
7	1	.3
8	1	.3
13	1	.3

Mean Number of Children = 1.887

Table 3-7

Age of Respondent's Children*

Category	Frequency	Mean	Standard Deviation
Age of Youngest Child	212	13.92	8.91
Age of Oldest Child	247	18.57	10.07
No Children	107	N/A	N/A

* If respondent has only one child, then the child was placed in the age of the oldest child category.

Table 3-8

Marital Status of Respondents

Category	Frequency	Percent
Married	269	76.0
Pair Bonded	10	2.8
Divorced	29	8.2
Widowed	3	.8
Never Married	33	9.3
Never Pair Bonded	2	.6
No Response	8	2.3

Table 3-9

Respondent's Number of Marriages

Category	Frequency	Percent
0 or 1	303	85.6
2	41	11.6
4	1	.3
5	1	.3
No Response	8	2.2

\$20,000 and \$25,000. The educational level of the subjects was high, such that, approximately 50% had obtained a Ph.D. or a Medical Degree. Only 28.4% had obtained a Bachelor of Arts Degree or less. This information is presented in Table 3-10 and 3-11.

Seventy-three percent of the respondents rated their social standing as middle class (see Table 3-12). Most of the respondents rated themselves as healthy (78%) and happy (70%). Likewise, most of the respondents were satisfied with their jobs (67%) and their personal relationships (69%). There is an expansion of this demographic information in Appendixes B thru E.

Procedures

The staff and faculty of Michigan State University received a letter requesting their participation in the study (see Appendix F). If they were willing to participate, they received the AAAP instrument and a consent form (see Appendix G). The respondents were instructed that due to the length of the AAAP, it was necessary to answer it over a number of sittings. They were also notified that the questionnaire would be coded and that the names and codes would be kept under tight security. The first page of the AAAP consisted of a fact sheet (see Appendix H) that was used to describe the characteristics of the sample (see Table 3-3 to 3-13 and Appendixes B thru E). The respondents returned the AAAP and the consent form upon completion.

Table 3-10

Income of The Respondents

Category	Frequency	Percent
Under \$4000	6	1.7
\$4 - \$6,000	6	1.7
\$6 -\$10,000	31	8.8
\$10-\$15,000	35	9.9
\$15-\$20,000	45	12.7
\$20-\$25,000	67	18.9
\$25-\$30,000	46	13.0
\$35-\$40,000	69	19.5
Over \$40,000	39	11.0
No Response	10	2.8

Median Income = \$20-\$25,000

Table 3-11

Education of Respondents

Category	Frequency	Percent
Junior High	2	.6
High School	53	15.0
Trade School	13	3.7
Bachelor of Arts	30	8.5
Master of Arts	62	17.5
Educational Specialist	4	1.1
Ph.D./M.D.	178	50.3
No Response	9	2.5

Table 3-12

Social Standing As Rated By The Respondents

Respondent	Frequency	Percent
1	0	0.0
2 Lower	1	0.3
3	7	2.0
4	37	10.5
5 Middle	110	31.1
6	111	31.4
7	52	14.7
8 Upper	18	5.1
9	7	2.0
No Response	11	3.1

Psychiatric patients at Pine Rest Christian Hospital were asked to respond to the AAAP. An assessment of their reading ability was made and if it was adequate, they were given a copy of the AAAP. As was the case with the normal population, a consent form was required (see Appendix I) and confidentiality was assured. The directions for the two groups were virtually identical.

Design

The design of this study was primarily correlational. An item was examined by investigating its correlation to the total scores for each of the eight ego stages, as well as to the Modified Crowne-Marlowe Social Desirability Scale. The factor analysis of the retained items for each ego scale was also correlational in nature. The social desirability and consistency validity indexes were based on correlations, while the 'faking' or F Scale index was obtained by computing item frequencies.

Testable Criteria

The hypotheses were formulated as criteria, not in classical null form.

1. All items are responded to in either the mastery or nonmastery direction by more than 5% of the respondents. The items that have a frequency of less than 5% in any direction will be eliminated from the stage scale and be considered for a validity index to detect faking or responding in a disfavorable light.

2. Each item correlates higher with the total stage score for which it was written than it does to the Modified Crowne-Marlowe Social Desirability Scale embedded in the AAAP.

3. Each item correlates higher with the total stage score for which it was written or to a previous stage total score than it does to a subsequent ego stage.

4. Each item increases the internal consistency of the scale when it is a part of that scale as opposed to when it is not.

5. Respondents who have mastered an ego stage, as defined by responding in the resolution direction to over 80% of the items, respond in the mastery direction to the individual items in the stage. Likewise, the respondents who have not mastered an ego stage will fail the items in that stage, i.e., respond in the non-mastery direction.

6. A factor analysis of the items screened through tests of hypotheses 1 thru 5 yields an interpretable structure for each stage which corresponds to the constructs outlined by Erikson's theory. The items were factor analyzed stage by stage.

7. Each item increases the internal consistency of the stage factor.

8. The AAAP has Guttman-like properties, that is, scales are mastered in ascending order from Stage 1 to Stage 8.

9. The social desirability items correlate higher with

the total Modified Crowne-Marlowe Social Desirability Scale than to any of the ego stage scales.

10. Every pair of consistency items, i.e., items reflecting the same content but placed in different locations in the AAAP, are responded to in a similar way and are highly correlated.

Analysis

The data analysis was conducted using Jackson's sequential system for personality scale development.⁸⁵ The first activity consisted of examining the item difficulty to determine whether the proportion of subjects endorsing the item was within an acceptable range. Items with a *p* value below .05 or above .95 were eliminated as too weak in informational value. The rationale was that an item which only a small percent of the respondents endorsed would have a very small variance and would fail to add appreciably to scale reliability and validity. However, some of these items were retained and constituted a validity index. The purpose of the scale was to detect respondents attempting to respond in a disfavorable light. This function is identical with the F Scale in the Minnesota Multiphasic Personality Inventory.⁸⁶

⁸⁵Jackson, 1970, pp. 229-248.

⁸⁶Roger L. Greene, The MMPI: An Interpretative Manual (New York: Grune and Stratton, 1980), pp. 36-39.

The second activity was an evaluation of the degree to which an item elicited an individual's tendency to respond in a socially desirable fashion. If an item correlated higher with the total social desirability score than it did to its own total stage score, then it was eliminated. Social desirability responding will often make individual scales within a test more highly correlated than they should be. By suppressing desirability, inflated scale inter-correlations should be reduced because the correlation between each ego scale and desirability is lowered.

The third activity was an evaluation of the items' convergent and discriminant validity. If an item correlated higher with any ego stage total score beyond the one for which it was written, it was eliminated. Since the stages are organized in a hierarchical manner, an item should correlate higher with its intended or with a previous stage than with the subsequent ego stages.

The fourth activity consisted of computing the reliability of the total stage score when the item was removed from the stage and when it was retained. If the reliability of the scale was higher by .005 or more when the item was a component of the stage, it was retained. Choosing .005 as the cut-off point was an arbitrary decision. The rationale was that a decrease in the reliability of less than .005 would imply that the item was having little effect on the internal consistency of the scale. Since the item may have provided some useful information during the factor analysis

stage, it was retained. On this basis as well as the fact that the reliability of the factors were examined in Criterion 7 and that the item was reevaluated at that time, the .005 decision point was considered appropriate.

The item analysis procedures proposed by Jackson and used in the AAAP analysis were directed at increasing within scale homogeneity. The aim was to increase the internal consistency of the scale and decrease the independence between scales. Further, it was designed to eliminate social desirability responding as an extraneous source of covariance.

An item discrimination procedure was also used. For this analysis responses that reflected mastery was scored as '1' and non-mastery as '0'. In other words, the 4-point scale was converted into a 2-point scale. Respondents who had mastered an ego stage were expected to pass the individual items in the stage as compared to respondents who had not mastered the ego stage. Mastery was defined as responding in the resolution direction, i.e., positively to the mastery items and negatively to the non-mastery items, over 80% of the time. The 80% standard is adapted from the mastery learning model.⁸⁷ A two-by-two Chi-Square was used for this test. The respondents were separated into "should pass" and "should fail" as defined by their resolution score. These groups were compared to the actual responses

⁸⁷Benjamin S. Bloom, "Learning For Mastery," UCLA-CSEIP Evaluation Comment, 1, No. 2, 1968.

on the individual items. The design of the two-by-two Chi Square can be seen in Figure 3-3. An item was retained if the Chi-Square was significant at the .05 level.

The items for each scale that had survived the previous analytic procedures underwent a factor analysis to examine the constructs of each ego stage. Factor analysis is the traditional method of identifying specifically how responses to items relate to each other. A principal factor solution was used. Use of a principal factor solution allows the investigator to examine the relationships among items and to find how item responses relate to each other. This method of analysis uses common variance or variance shared by items to arrive at a solution. Typically, one general factor will emerge from this analysis with other factors which account for smaller proportions of common variance. A varimax rotation was executed following the principal factor analysis. This procedure maximizes the within factor loading for any one item. Only those factors which had a sum of squares (Eigenvalue) in excess of one were rotated. Rotation was continued until: 1) at least three items or more remained on all factors; and 2) the results made psychological sense. Items that did not load onto a factor were considered for elimination. The reliability of each of the factors was computed. If an item lowered the reliability of the factor by .005, it was eliminated from the factor and the scale.

Figure 3-3

Chi-Square Design To Test Item Discrimination

	Passed The Item	Failed The Item
Should Pass (Passed Over 80% of The Items)		
Should Fail (Passed Less Than 80% of The Items)		

The fundamental concept of Erikson's ego stage theory is its hierarchical nature, i.e., the stages build upon each other as a function of psychological development. Erikson's theory is that Stage 1 issues need to be resolved before successful resolution of Stage 2 issues. A scale which attempts to operationalize Erikson's theory would appear to closely approximate a Guttman scale or scalogram due to the hierarchical configuration of the ego stages. As a result, the final analytical procedure consisted of a scalogram analysis. The assumption was that individuals who have mastered a particular stage should have resolved the issues of the previous stages. Again, the criteria of mastery consisted of responding in the resolution direction, i.e., positively to the mastery items and negatively to the non-mastery items, over 80% of the time.

The internal consistency of the items composing the ego scales that had survived tests of criteria 1 thru 7 were computed using Cronbach's alpha coefficient.

An examination of the validity indexes was also made. The items from the Modified Crowne-Marlowe Social Desirability Scale were inspected. Items that correlated higher with the scale than with the ego stage scales were retained. Since the size of the AAAP was a factor, the highest 20 correlations were retained for the validity index.

The items that were responded to in either the mastery or non-mastery direction by less than 5% of the subjects

qualified for a validity scale to detect "faking". These items would be used to identify subjects attempting to respond in a disfavorable manner. Again, due to size constraints, only 20 items were selected from the pool of qualifying items.

The twelve pairs of consistency items were examined. If the correlation between the pair of items was greater than .75 they were retained. A flow-chart of analytic procedures can be found in Figure 3-4.

Summary

Erik Erikson's writings were studied with the intent of designing items that operationalized each of the ego developmental stages. An outline of the constructs for each ego period served as a model in the item construction process. A five-member item-writing team generated over 2000 items and mutually agreed upon 673 items that reflected positive and negative aspects to the eight Eriksonian stages. The resulting instrument was named the Assessment of Adult Adjustment Patterns (AAAP). To permit control for responding in a socially desirable manner, the Crowne-Marlowe social desirability response scale was modified to correspond to the AAAP structure and response scaling. A study was conducted and verified the acceptability of the modification. The last eleven items, as well as every twentieth item in the AAAP, were the Modified Crowne-Marlowe items. There were 46 Modified Crowne-Marlowe items. In addition, there were twelve pairs of items reflecting the

FIGURE 3-4

FLOW CHART OF ANALYTIC PROCEDURES

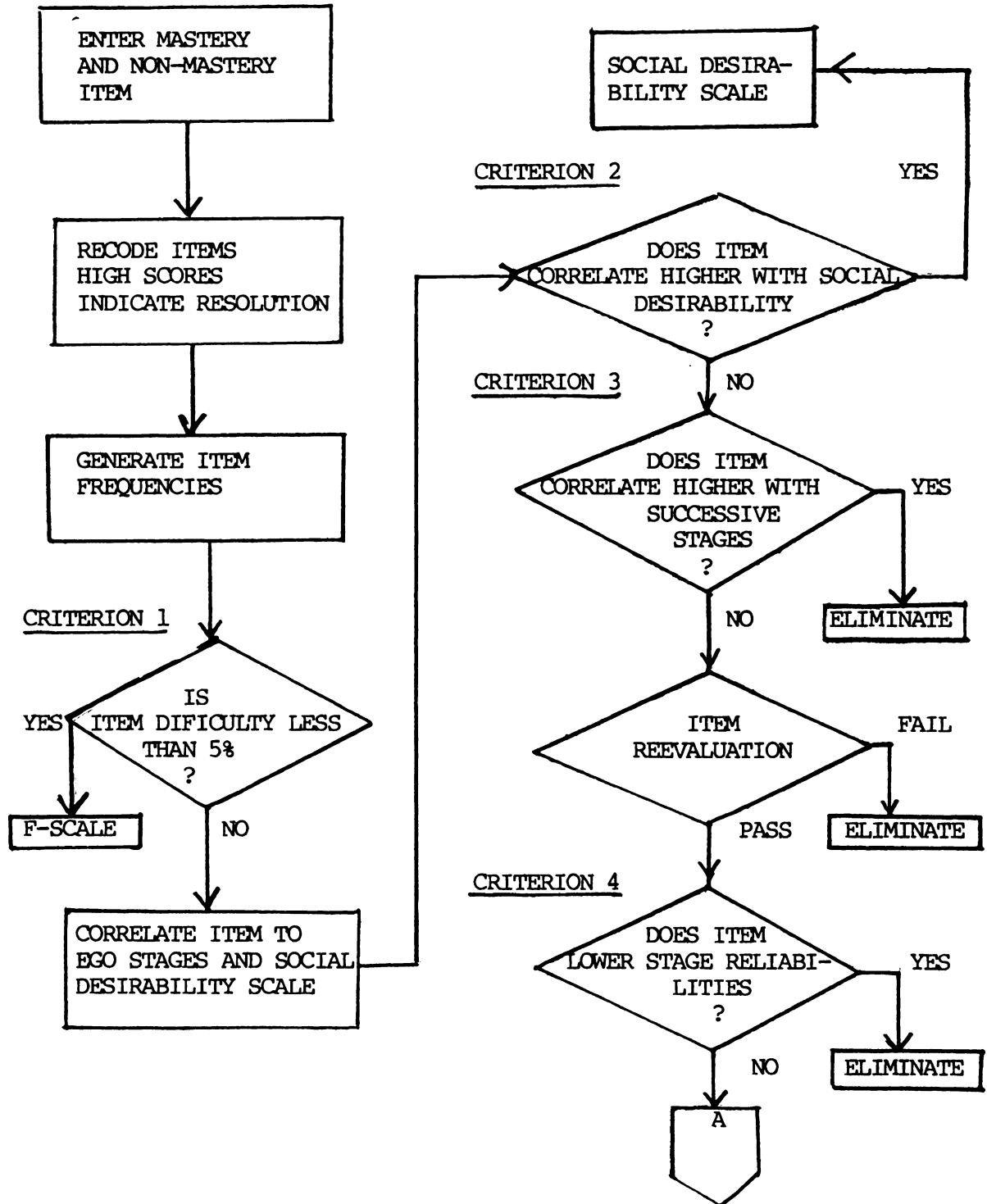
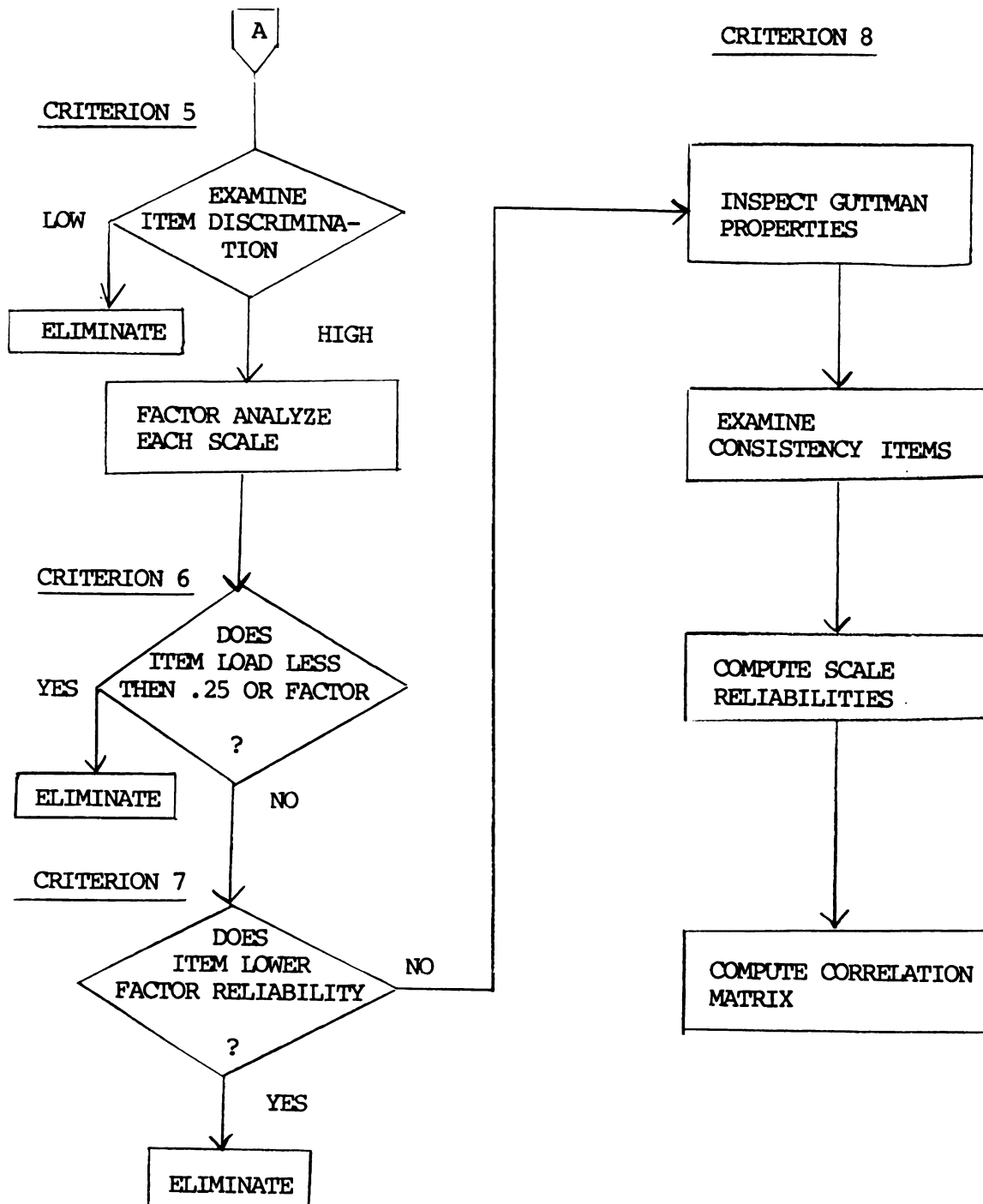


FIGURE 3-4 (CONTINUED)



same content but appearing in different places in the AAAP. Their function was to check an individual's consistency in responding to the questionnaire. These pairs were part of the original 673 items. There were seven items that were eliminated prior to the analysis since it was felt that they did not adequately address the content of the stage. In summary, the AAAP consisted of 719 items reflecting Erikson's eight ego developmental stages, and validity indexes to detect consistency, 'faking' and responding in a socially desirable manner.

A sample consisting of staff and faculty at Michigan State University and psychiatric patients at Pine Rest Christian Hospital responded to the AAAP instrument. There were 354 respondents. The respondents were instructed that due to the length of the AAAP, it was necessary to answer it over a number of sittings. They were also notified that the questionnaire was coded and that the names and codes were kept under tight security. The subjects responded to the items using a 4-point Likert scale ranging from "Definitely True of Me" to "Definitely Not True of Me".

The AAAP items were written to reflect positive and negative aspects of each ego stage in order to detect mastery and non-mastery of the relevant developmental issues. It was assumed that an individual would proceed through the stages in one direction, namely from non-mastery to mastery. However, during the data collection and prior to data analysis, it became apparent that with some develop-

mental issues individuals prior and subsequent to the stage would respond differently than individuals in that stage. In other words, some items were stage-specific. At that point, the items were reexamined with the intent of placing them into two groups: mastery and stage-specific.

A mastery item corresponded to a developmental issue that remains resolved once it is resolved. With a stage-specific item, an individual in that stage responds to the statement differently than an individual in a prior or subsequent developmental stage. It is as if the individual was embedded in the issues of that stage. In the process of differentiating the items into mastery and stage-specific groups, four possible response patterns were conceptualized. The four patterns were the result of the two types of items (mastery and stage-specific) and the two directions (i.e., positive and negative aspects of each stage). It was found that of the 673 Eriksonian items, 539 were mastery and 127 were stage-specific. Seven items were eliminated since they did not adequately reflect the developmental constructs they were intended to measure. It can be seen that 81% of the items were labelled mastery. This finding was expected since the items were originally constructed to reflect the resolution or non-resolution of the issues of each developmental stage. The stage-specific pattern was conceptualized after the item-construction stage.

The items are assumed to have content validity since they were written using Erikson's theory as the guide to issues for each stage. An items analysis was conducted with the mastery items to increase the internal consistency of each of the ego developmental scales. The item analysis consisted of examining an item's difficulty, discriminatory ability, its correlation to the social desirability scale and the reliability of the scale when the item was removed.

The items for each stage that had survived the item analysis procedures were factor analyzed. A principal factor approach was used for each scale to examine the relationship among items and to find how item responses related to each other. A varimax rotation was executed following the principal factor analysis. Only those factors which had an eigenvalue in excess of one were rotated. Rotation was continued until: 1) at least three items or more remained on all factors, and 2) the results made psychological sense. Items that did not load onto a factor were considered for elimination.

Since Erikson's theory is hierarchical in nature, the AAAP's Guttman-like properties were explored through the use of a scalogram analysis.

The items composing the validity index scales (social desirability, consistency and 'faking') were examined. The Social Desirability Index was composed of the modified social desirability items that correlated higher with the Crowne-Marlowe Scale than with any of the ego stage scales.

The F scale index was composed of items that were responded to in the non-mastery direction by less than 5% of the respondents.

CHAPTER IV

RESULTS OF THE DATA ANALYSIS

In Chapter IV the results of the tests of each of the item criteria are presented. The first section of the chapter presents the results of the tests concerning the eight ego stages which included the item, factor and Guttman analyses. The second section presents the results of the tests surrounding the validity indexes. The third section of the chapter consists of a summary of the analyses.

The emphasis of the chapter is the presentation of the items that were retained and eliminated from each of the item criteria. The analyses are concerned solely with the mastery and non-mastery items. The number of stage-specific items will be expanded and explored in a future research endeavor.

Reflection of Mastery Items

Before the analysis was conducted, the item responses were scored so that higher total stage scores reflected resolution of the stage. The scoring system for the AAP items was '1' (Definitely True of Me) thru '4' (Definitely Not True of Me). With a non-mastery item, a '4' response would result in a higher total stage score and reflect a response in the mastery direction. However, responding with a '4' (Definitely Not True of Me) to a mastery item



would not indicate resolution to that particular developmental issue but would nevertheless increase the total stage score. As a result, the mastery items were recoded, such that, a 'Definitely Not True of Me' response was assigned a value of 1, and a 'Definitely True of Me' response, a value of 4. Likewise, 'Not True of Me' resulted in a '2' value and 'True of Me', a value of '3'. In this way, there is a positive relationship between the stage score and the degree of stage resolution.

Criterion 1

Criterion 1 states that each item will be responded to in either the mastery or non-mastery direction by more than 5% of the respondents.

The items that had a frequency of less than 5% in any one direction were eliminated from the stage scale and were considered for a validity index to detect faking or responding in a disfavorable light. Thus, the first analytical procedure was an examination of an item's distribution. An item that was responded to in any one direction (i.e., mastery or non-mastery) by more than 95% of the sample was eliminated from the stage scale. The rationale for this decision was that the item would have too little variance, thus providing little appreciable information. There were 33 items eliminated from the eight ego scales with this procedure. The number of items eliminated from each stage was as follows: Stage 1-1; Stage 2-9; Stage 3-4; Stage 4-7; Stage 5-5; Stage 6-2; Stage 7-2;



and Stage 8-3. The eliminated items are noted in Appendixes J thru Q. These items were considered for a validity index to detect faking or responding in a disfavorable manner. A discussion of these items follow the results of Criterion 10.

Criterion 2

Criterion 2 states that each item will correlate higher with the total stage score for which it was written than it does to the Modified Crowne-Marlowe Social Desirability Scale which was embedded in the AAAP.

Any item that correlated higher with the social desirability scale than the stage scale for which it was written, was eliminated. There were 57 items that correlated higher with the Modified Crowne-Marlowe Scale than with the stage for which it was intended. The number of items eliminated from each stage was as follows: Stage 1-2; Stage 2-9; Stage 3-13; Stage 4-11; Stage 5-10; Stage 6-6; Stage 7-1; and Stage 8-5. In Appendixes J thru Q there is a listing of the stage items and their correlation with the social desirability scale. The eliminated items are noted.

Criterion 3

Criterion 3 states that each item will correlate higher with the total stage score for which it was written or to a previous stage total score than it will to a successive stage.

To test this hypothesis an item was correlated with all eight ego stages. In 159 cases an item had a lower correlation with its intended or with a previous ego stage

than to a subsequent ego stage. The number of items eliminated from each scale was as follows: Stage 1-12; Stage 2-45; Stage 3-21; Stage 4-11; Stage 5-25; Stage 6-7; Stage 7-6; and Stage 8-32. In Appendixes J thru Q there is a listing of the scale items and their correlation to each of the ego stages, as well as to the social desirability scale. The items that were eliminated by each procedure are noted.

The retained items were reevaluated for content validity and the magnitude of the correlation to its own total stage score. Items with correlations less than .25 to its intended scale and with weak content validity were eliminated. This procedure resulted in the removal of five items from Stage 2, and one item from Stage 5, 7, and 8. The eliminated items are noted in Appendixes K, N, P, and Q.

Upon examining the Stage 2 items, it was noted that several of the items correlated higher with Stage 1 than with any other stage. These items were reevaluated in terms of their content validity. In seven out of ten cases, it was decided that the items would be more appropriately placed in Stage 1. The relabelled Stage 1 items are noted in Appendix J.

Criterion 4

Criterion 4 states that each item will contribute to the internal consistency of the scale.

The reliability of the scale was computed using Cronbach's alpha coefficient with the item retained and



eliminated from the scale. If the reliability increased by 0.005 or more when the item was not a part of the scale, it was eliminated. The intent of the procedure was to eliminate any item not contributing to the internal consistency of the scale. In only one case did an item lower the reliability of the scale by more than .005. The item was in Stage 5 and is noted in Appendix N.

Criterion 5

Criterion 5 states that each respondents who have mastered an ego stage, as defined by responding in the resolution direction to over 80% of the items, will respond in the mastery direction to the individual items in the stage. Likewise, the respondents who have not mastered an ego stage will fail the items in that stage, i.e. respond in the non-mastery direction.

A Chi-Square analysis was used to test this criterion. There were five items that resulted in the rejection of the criterion. One item each was eliminated from Stage 2 thru 6. These items are noted in Appendixes K thru O, respectively.

Upon reexamination, it became evident that the Chi Square analysis was a conservative test in this situation. It would be consistent with Erikson's theory that individuals who were in the "should fail" category, on the basis that they had not passed 80% of the items, could have passed individual items in that stage. This scenario would imply that individuals were in the stage but had not mastered it. However, the Chi Square was constructed with the assumption that the cell frequency (the lower left cell

in Figure 3-3) that contained individuals who did pass the item but had not mastered the stage, would be 0. Although the test was conservative, the results were accepted, such that, five items were eliminated from the AAAP due to this item criterion test.

Criterion 6

Criterion 6 states that a factor analysis of the items screened through tests of criterion 1 thru 5 will yield an interpretable structure for each stage which will correspond to the constructs outlined by Erikson's theory.

The items were factor analyzed stage by stage. A principal factor solution was used. Use of a principal factor solution allows the investigator to examine the relationships among items and to find how item responses relate to each other. A varimax rotation was executed following the principal factor analysis. This procedure maximized the within factor loading for any one item. Only those factors with an eigenvalue in excess of one were rotated. Items that did not load onto a factor with a value greater than .25 were eliminated from the stage scale.

A multiple-factor structure resulted for each stage, except Stage 1, which made psychological sense and was consistent with the issues of each stage as outlined by Erikson. The factors for each stage were as follows: Stage 1- basic trust; Stage 2- will to be oneself, solitude, and holding on, letting go; Stage 3- self punishment and guilt, and anticipation of roles by parents; Stage 4- apply self to



task, win recognition by producing things, perseverance, competence, trust in adults, and confidence; Stage 5- trust in peers, ideological thought, molding identity, and fidelity tests; Stage 6- commitment to affiliation, genital maturity and fusion with another; Stage 7- establishing and guiding the next generation, and charity; and Stage 8- order and meaning, and accepting of one's life cycle. The factor structure of the retained items that survived the test of Criterion 7 are presented in Tables 4-1 thru 4-8.

Criterion 7

Criterion 7 states that each item will increase the internal consistency of the stage factor.

The reliability of each of the stage factors was computed using the Cronbach alpha coefficient. An item that lowered the reliability of the factor by more than .005 was eliminated. It was found that in seven cases an item lowered the reliability of the factor. The eliminated items were from the following factors: one item each from Stage 3 factor 2, Stage 4 factor 6, Stage 5 factors 1 and 2, and Stage 7 factor 2 and two items from Stage 5 factor 4. The items are noted in Appendixes L, M, N and P. The reliability of the factors ranged from .68 to .93 with the mean equal to .84. The factor structure of the retained items with loadings above .25 and contributing to the internal consistency of the factor, are presented in Table 4-1 thru 4-8, respectively.

Table 4-1

Item Loadings on The Stage 1
(Trust vs Mistrust) Scale

Factor I: Basic Trust; Reliability = .88

Item *	Factor Loading
414 I am happy. (+)	.77628
106 I am basically an unhappy person. (-)	.68019
494 I feel optimistic about life. (+)	.58137
1 Whatever stage of life I am in is the best one. (+)	.54185
52 I worry about my future. (-)	.50984
299 Basically I feel adequate. (+)	.50673
658 When it is time to go to bed, I fall asleep easily. (-)	.50184
285 I have feelings of doom about the future. (-)	.47405
522 I believe the best times are now. (+)	.44962
156 I have alot of energy. (+)	.38321
583 I eat balanced meals. (+)	.37270
524 I take the unexpected in my stride. (+)	.34527
550 If I were one of the few surviving persons from a world wide war, I would make it. (+)	.32930
701 I trust others. (+)	.32399
478 I an calm. (+)	.31966
416 I worry about things that never happen. (-)	.27118
287 I find people are consistent. (+)	.26052
271 I frighten easily. (-)	.25527

*Mastery = +

Table 4-2

Item Loadings on The Stage 2
(Autnomy vs Shame And Doubt) Scale

Factor I -Will to be Oneself; Reliability = .89

Item *	Factor Loading
707 I like myself. (+)	.69654
606 I make my own decisions. (+)	.68165
493 I am strong enough to make up my own mind on difficult qvestions. (+)	.67246
189 I am self-confident. (+)	.63679
699 It's pretty neat to be me. (+)	.60568
665 I would not care to be much different than I am. (+)	.56312
14 I can make big decisions by myself. (+)	.53589
323 I can take a stand. (+)	.53297
558 I trust the big decisions I make. (+)	.48760
467 I can see little reason why anyone would want to compliment me. (-)	.48194
551 If someone criticizes me to my face, I feel low and worthless. (-)	.38988
270 Circumstances beyond my control are what make me a basically unhappy person. (-)	.38410
599 I am independent of others. (+)	.36450
41 Compliments embarrass me. (-)	.33108
582 I act independently of others. (+)	.32998
404 Even when I am doing something I really enjoy, I can never get totally involved. (-)	.32914
388 The best times of my life were in the past. (-)	.32428
257 My morals are determined by the thoughts, feelings and decisions of other people. (-)	.31629

Table 4-2 (cont.)

77	My basic state of happiness is dependent upon me. (+)	.30255
158	I am outspoken. (+)	.29293
48	When someone says something critical about me, I keep my composure. (+)	.28009
293	I don't worry whether anyone else will like the friends I choose. (+)	.27184
314	If someone criticizes me to my face, I listen closely to what they are saying about me before reacting. (+)	.26096

Factor II - Solitude; Reliability = .82

534	I am comfortable being alone. (+)	.78940
252	I like being by myself. (+)	.65054
549	I cannot stand silence. (-)	.58901
245	I like to be by myself a part of every day. (+)	.58852
161	I enjoy privacy. (+)	.53628
329	I find there are alot of fun things in the world to do alone. (+)	.52160
84	When I am alone, silence is difficult to handle. (-)	.44078
405	I like being able to change my plans without having to check with somebody. (+)	.31871
293	I don't worry whether anyone else will like the friends I choose. (+)	.30913
582	I act independently of others. (+)	.30642
467	I can see little reason why anyone would want to compliment me. (-)	.28282

Factor III - Holding on, Letting Go; Reliability = .82

492	When I get angry at someone, I boil inside without letting them know. (-)	.64755
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Table 4-2 (cont.)

302	When I get angry at someone, I tell them about it and it's over. (-)	.57278
679	I feel free to express both warm and hostile feelings to my friends. (+)	.51853
551	If someone criticizes me to my face, I feel low and worthless. (-)	.47477
214	I go out of my way to avoid being embarrassed (-)	.43330
129	When I get angry at someone, it rarely wrecks our relationship. (+)	.39350
48	When someone says something critical about me, I keep my composure. (+)	.38991
314	If someone criticizes me to my face, I listen closely to what they are saying about me before reacting. (+)	.38098
158	I am outspoken. (+)	.34201
599	I am ashamed of some of my emotions. (-)	.32437
665	I would not care to be much different than I am. (+)	.31544
293	I don't worry whether anyone else will like the friends I choose. (+)	.27703
707	I like myself. (+)	.26086

* Mastery = +

Table 4-3

Items Loading on The Stage 3
(Initiative vs Guilt) Scale

Factor I - Self Punishment, Guilt; Reliability = .86

Item *	Factor Loading
667 I constantly need excuses for why I behave the way I do. (-)	.67449
590 When somebody does me wrong, I get so hung up in my own feelings I can't do anything but brood. (-)	.59466
198 I worry or condemn myself when other people find fault with me. (-)	.57870
681 Feelings of guilt hold me back from doing what I want. (-)	.52165
564 I punish myself when I make mistakes. (-)	.50326
27 I am happy with the pace of speed with which I make decisions. (+)	.50307
387 My day-to-day frustrations do not get in the way of my activities. (+)	.48057
17 I don't need to apologize for the way I act. (+)	.47252
347 My feelings are easily hurt. (-)	.46917
350 No one understands me. (-)	.45785
102 I must depend my past actions. (-)	.45115
326 My word is my bond. (+)	.44838
22 My mistakes annoy me, but do not frighten me. (+)	.43431
382 My free time is spent aimlessly. (+)	.42185
355 It's hard for me to say "no" without feeling guilty. (-)	.41794
112 People hurt my feelings without knowing it. (-)	.36950

Table 4-3 (cont.)

438	I think the best way to handle people is to tell them what they want to hear. (-)	.35884
694	Guilt is a feeling I seem to have outgrown. (-)	.35848
44	My duties and obligation to others trap me. (-)	.35561
504	Mostly I like to just sit at home. (-)	.33371
619	If a clerk gives me too much change, I correct the error. (+)	.28652
30	I admit my mistakes. (+)	.28509
213	My parents caused my troubles. (-)	.26180

Factor II - Anticipation of Roles by Parents;
Reliability = .81

543	My parents treated me fairly. (+)	.77856
231	I was raised in a happy family. (+)	.74381
465	My family understood me while I was growing up. (+)	.73669
213	My parents csused my troubles. (-)	.55374

*Mastery = +

Table 4-4

Item Loadings on The Stage 4
(Industry vs Inferiority) Scale

Factor I - Apply Self to Task, Task Identification;
Reliability = .92

Item *	Factor Loading
86 I like problems that have complicated solutions. (+)	.69578
282 I can work on ideas for hours. (+)	.68963
82 I enjoy finding out whether or not complex ideas work. (+)	.67157
628 I enjoy explaining complex ideas. (+)	.64839
43 I like problems that make me think for a long time before I solve them. (+)	.62754
399 I like to solve problems. (+)	.61330
596 I enjoy things that make me think. (+)	.59576
145 It is hard for me to work on a thought problem for more than an hour or two. (-)	.53293
124 When the situation demands, I can go into deep concentration concerning just about anything. (+)	.51880
423 When I get hold of a complicated problem, I return to it again and again until I come up with a workable solution. (+)	.50968
338 If I can't solve a problem quickly, I lose interest. (-)	.47520
96 When I argue I use facts to support my position. (+)	.45998
345 I will probably always be working on new projects. (+)	.38614
643 I am good at solving puzzles. (+)	.36653
518 I am confident when learning a complicated task. (+)	.36194

Table 4-4 (cont.)

Item *		Factor Loading
186	I am confident when learning something new which requires that I put myself on the line. (+)	.36096
499	In my work I show individuality and originality. (+)	.35535
247	I publicly question statements and ideas expressed by others. (+)	.34449
88	I check things out for myself. (+)	.34185
366	I can stay with a job a long time. (+)	.31953
225	When I sit down to learn something, I get so caught up that nothing can distract me. (+)	.30556
572	I learn well when someone gives me the problem and lets me work out the details for myself. (+)	.29147
168	I read a great deal even when my work does require it. (+)	.28567
373	I get caught up in my work. (+)	.27141
157	It is hard for me to keep my mind on what I am trying to learn. (-)	.26728
142	When things are not going right in my work, I reason my way through the problems. (+)	.26684
Factor II - Win Recognition by Producing Things; Reliability = .93		
375	I am proud of my accomplishments. (+)	.76626
573	I am proud of my work. (+)	.72811
431	I feel proud of my accomplishments. (+)	.72632
301	I am proud of the accomplishments I have made at work. (+)	.66271
365	My work is usually up to the standards set for me. (+)	.42552

Table 4-4 (cont.)

426	I get those things done that I want to do. (+)	.41749
366	I can stay with a job a long time. (+)	.41659
430	My plans work out. (+)	.41359
485	I am dedicated to my work. (+)	.39225
499	In my work I show individuality and originality. (+)	.37110
345	I will probably always be working on new projects. (+)	.37054
18	I do many things well. (+)	.36554
94	My judgement is sound. (+)	.34740
346	Completed and polished products have a great appeal for me. (+)	.33028
353	I feel more confident playing games of skill than games of chance. (+)	.32400
423	When I get hold of a complicated problem, I return to it again and again until I come up with a workable solution. (+)	.31995
535	When I decide to do something, I am determined to get it done. (+)	.30910
295	I feel useless. (-)	.30308
138	I feel there is nothing I can do well. (-)	.29530
518	I am confident when learning a complicated task. (+)	.28972
596	I enjoy things that make me think. (+)	.28477
526	Once I have committed myself to a task, I complete it. (+)	.28167
572	I learn well when someone gives me the problem and lets me work out the details for myself. (+)	.27707
88	I think things out for myself. (+)	.27188
399	I like to solve problems. (+)	.27080

Table 4-4 (cont.)

Item *	Factor Loading
142 When things are not going right in my work, I reason my way through the problems. (+)	.26651
613 I learn fast. (+)	.26562
476 When I was prepared teachers couldn't fool me with trick questions. (+)	.26497
249 When I am in a group, I feel confident that what I have to say is acceptable. (+)	.25870
4 My happiness is pretty much under my control. (+)	.25819
373 I get caught up in my work. (+)	.25439
Factor III - Perseverance, Diligence; Reliability = .86	
187 I have difficulty getting down to work. (-)	.56406
327 I find it hard to keep my mind on a task or job. (-)	.55815
207 I see to it that my work is carefully planned and organized. (+)	.55293
526 Once I have committed myself to a task, I complete it. (+)	.53320
55 I play around so much I have a hard time getting a job done. (-)	.51492
535 When I decide to do something, I am determined to get it done. (+)	.49721
390 I go at my work without much planning ahead of time. (-)	.43585
365 My work is usually up the standards set for me. (+)	.41241
366 I can stay with a job a long time. (+)	.37476
157 It is hard for me to keep my mind on what I am trying to learn. (-)	.36108
426 I get those things done that I want to do. (+)	.34543

Table 4-4 (cont.)

Item *	Factor Loading
145 It is hard for me to work on a thought problem for more than an hour or two. (-)	.31164
142 When things are not going right in my work, I reason my way through the problems. (+)	.30686
124 When the situation demands, I can go into deep concentration concerning just about anything. (+)	.26499
373 I get caught up in my work. (+)	.25051
Factor IV - Competence; Reliability = .85	
430 My plans work out. (+)	.48461
273 People expect too much of me. (-)	.45649
94 My judgement is sound. (+)	.43734
4 My happiness is pretty much under my own control. (+)	.42990
295 I feel useless. (-)	.40247
477 I can work even when there are distraction. (+)	.36744
652 When I have to speed up and meet a deadline, I can still do good work. (+)	.34649
617 I feel inferior to most people. (-)	.34011
503 I feel uneasy if I don't know the next step in a job. (-)	.33782
186 I am confident when learning something new which requires that I put myself on the line. (+)	.29366
142 When things are not going right in my work, I reason my way through the problems. (+)	.28351
168 I read a great deal even when my work does not require it. (+)	.28015

Table 4-4 (cont.)

Item*	Factor Loading
518 I am confident when learning a complicated task. (+)	.27819
6 I feel disappointed and discouraged about the work I do. (+)	.27270
399 I like to solve problems. (+)	.27237
556 I can work under pressure. (+)	.27059
35 For me to learn well, I need someone to explain things to me in detail. (-)	.26406
338 If I can't solve a problem quickly, I lose interest. (-)	.25278
Factor V - Trust in Adults; Reliability = .85	
569 The thought of making a speech in front of a group panics me. (-)	.65407
159 I get stage fright when I have to appear before a group. (-)	.64885
10 I generally feel pleased with my performance when I talk in front of a group. (+)	.63817
617 I feel inferior to most people. (-)	.36082
157 It is hard for me to keep my mind on what I am trying to learn. (-)	.34377
249 When I am in a group, I feel confident that what I have to say is acceptable. (+)	.30892
327 I find it hard to keep my mind on a task or job. (-)	.28855
247 I publically question statements and ideas expressed by others. (+)	.27126
145 It is hard for me to work in a thought problem for more than an hour or two. (-)	.26987
295 I feel useless. (-)	.26806
556 I can work under pressure. (+)	.25858
628 I enjoy explaining complex ideas. (+)	.25474

Table 4-4 (cont.)

Factor VI - Confidence, "what works"; Reliability = .79

Item *	Factor Loading
613 I learn fast. (+)	.61294
518 I am confident when learning a complicated task. (+)	.40514
441 When I took a new course in school, I felt confident that I would do all right. (+)	.37746
157 It is hard for me to keep my mind on what I am trying to learn. (-)	.34361
499 In my work I show individuality and originality. (+)	.33893
652 When I have to speed up and meet a deadline, I can still do good work. (+)	.32663
59 When I was a child I was proud of my schoolwork. (+)	.29981
18 I do many things well. (+)	.29745
35 For me to learn well, I need someone to explain things to me in detail. (-)	.26658
168 I read a great deal even when my work does not require it. (+)	.25094

*Mastery = +

Table 4-5

Item Loading on The Stage 5
(Identity vs Role Diffusion) Scale

Factor I - Trust in Peers; Reliability = .86

Item *	Factor Loading
532 I feel self-confident in social situations. (+)	.74820
172 I handle myself well at social gatherings. (+)	.65898
330 I enjoy going to a social function either with a group or by myself. (+)	.58351
626 If I want to, I can charm a member of the opposite sex. (+)	.52643
304 My social life is full and rewarding. (+)	.50631
646 People of the opposite sex think well of me. (+)	.46571
653 I find it easy to introduce people. (+)	.46194
530 I enjoy parties. (+)	.44534
435 People like to be with me. (+)	.42351
708 I feel awkward around members of the opposite sex. (-)	.41905
199 I fell that people are geuinely interested in me. (+)	.41454
519 In terms of crisis, I am one of the first people my friends call for help. (+)	.34714
188 I get along with people. (+)	.34695
312 It's easy for me to know whether people really like me. (+)	.34061
577 In terms of trouble I have friend I turn to. (+)	.33385
303 I have "put myself on the line" in my relation with others. (+)	.27579

Table 4-5 (cont.)

Factor II - Ideological Thought; Reliability = .79

Item *	Factor Loading
663 I like to participate actively in intense discussions. (+)	.77802
153 I like to participate in intense discussions. (+)	.76802
204 I like to discuss ways to solve the world's problems. (+)	.55582
195 I think about the big issues of life. (+)	.53945
664 I never have serious talks with my friends. (-)	.38136
95 People are more important than material things to me. (+)	.36131
51 I analyze my own motives and reactions. (+)	.34979
235 I'm interested in people. (+)	.29525

Factor III - Molding Identity; Reliability = .84

635 Because I have to be so different from situation to situation, I feel that the real me is lost. (-)	.68313
229 I do not understand myself. (-)	.63031
678 Other people determine the kind of person I am. (-)	.53440
672 I have very few good qualities. (-)	.46817
693 I am pretty much the same person from situation to situation. (+)	.42847
708 I feel awkward around members of the opposite sex. (-)	.38867
576 I am always a loyal friend. (+)	.32537
532 I feel self-confident in social situations. (+)	.32371

Table 4-5 (cont.)

Item *	Factor Loading
199 I feel that people are genuinely interested in me. (+)	.31093
577 In times of trouble I have friends I turn to. (+)	.31891
304 My social life is full and rewarding. (+)	.27549
653 I find it easy to introduce people. (+)	.26125
146 I am determined to be the kind of person I am. (+)	.25950
Factor IV - Fidelity Tests; Reliability = .79	
235 I am interested in people. (+)	.48322
95 People are more important than material things to me. (+)	.47081
512 I enjoy doing favors for my friends. (+)	.42669
576 I am always a loyal friend. (+)	.37677
577 In times of trouble I have friends I turn to. (+)	.37340
188 I get along with people. (+)	.35885
435 People like to be with me. (+)	.33947
216 I have difficulty imagining how other people feel. (-)	.31267
312 It's easy for me to know whether people really like me. (+)	.25922
646 People of the opposite sex think well of me. (+)	.25569

*Mastery = +

Table 4-6

Item Loadings on The Stage 6
(Intimacy vs Isolation) Scale

Factor I - Commitment to Affiliation; Reliability = .90

Item *	Factor Loading
692 With the person I am closest to, I share my inner anxieties. (+)	.76190
689 There is at least one person in my life with whom I can talk about anything. (+)	.69872
601 With the person I am closest to, I share my inner feelings of confidence. (+)	.68190
584 With the person I am closest to, I share my inner feelings of weakness. (+)	.67023
107 With the person I am closest to, I share my inner feelings of tenderness. (+)	.65036
241 With the person I am closest to, I share my inner fears. (+)	.64852
683 I have a person with whom I talk about my deepest feelings about sex. (+)	.64853
364 Being close to another person means sharing my inner feelings. (+)	.57263
369 I am close to someone with whom I talk about my feelings. (+)	.63906
447 I have been so close to somebody, that it is not possible to find adequate words to describe the feeling. (+)	.47157
165 The closest I get to another person is to share my opinions and ideas. (-)	.43424
122 I have not found a person with whom I can be close. (-)	.42510
281 I have been so close to someone, that our relationship seemed almost mystical. (+)	.42337
633 I have been so close to someone, that at times it seemed we could read each other's mind. (+)	.40903

Table 4-6 (cont.)

Item *	Factor Loading
636 I have no one with whom I feel close enough to talk over my day. (-)	.39478
615 I value highly the deep relationships I have formed with members of the opposite sex. (+)	.34508
529 I don't think I will ever find someone to love. (-)	.31441
690 I am sensitive to how other people feel. (+)	.29436
511 I seem to understand how other people are feeling. (+)	.27943
Factor II - Genital Maturity; Reliability = .83	
362 It is very important that my mate likes to touch me and be touched by me (hold hands, hug, etc.). (+)	.75948
292 It is very important that my mate loves me. (+)	.67889
169 It is very important that my mate likes to snuggle. (+)	.60693
469 Being deeply involved with someone of the opposite sex in really important to me. (+)	.59439
211 It is very important that my mate be thoughtful of me. (+)	.49253
615 I value highly the deep relationships I have formed with members of the opposite sex. (+)	.45226
622 For me, sex and love are tightly linked together. (+)	.43169
364 Being close to another person means sharing my inner feelings. (+)	.31146
657 For me to act on a sexual urge, I have to have feelings for the other person. (+)	.31035
947 I have been so close to somebody, that it is not possible to find adequate words to describe the feeling. (+)	.29474

Table 4-6 (cont.)

Item *	Factor Loading
107 With the person I am closest to, I share my inner feelings of tenderness. (+)	.26509
Factor III - Fusion with Another; Reliability = .68	
690 I am sensitive to how other people feel. (+)	.66457
511 I seem to understand how other people are feeling. (+)	.54128
152 I ignore the feelings of others. (-)	.50511
657 For me to act on a sexual urge, I have to have feelings for the other person. (+)	.46134
561 As far as I know about myself, once I choose a mate, I do so for life. (+)	.32532
622 For me, sex and love are tightly linked together. (+)	.27933
633 I have been so close to someone, that at times it seemed like we could read each other's mind. (+)	.27897

*Mastery = +

Table 4-7

Item Loadings on The Stage 7
(Generativity vs Stagnation) Scale

Factor I - Establishing And Guiding Next Generation;
Reliability = .88

Item *	Factor Loading
333 I enjoy interacting with children. (+)	.84114
669 I like children. (+)	.76124
25 I like to answer children's questions. (+)	.66368
31 Children bore me. (-)	.65650
413 Children's imaginations fascinate me. (+)	.65650
62 I'm just not very good with children. (-)	.62488
296 I like curious children. (+)	.60320
54 Children talk to me about personal things. (+)	.59838
370 I enjoy the times I spend with young people. (+)	.57527
209 I like the way young children say exactly what they think. (+)	.50910
452 I know the children who live in my neighborhood. (+)	.50829
290 I feel deep concern for people who are less well. (+)	.41354
116 I devote time to helping people in need. (+)	.36779
103 I lend things to my neighbors when they need them. (+)	.35272
352 Young people today are doing a lot of fine things. (+)	.32915
176 I work to make my community a better for children. (+)	.32294
203 I give clothing and other items to charitable organizations such as The Salvation Army. (+)	.29411

Table 4-7 (cont.)

Factor II - Charity; Reliability = .84

Item *	Factor Loading
650 I have actually sought out information about my school board members in order to form an opinion. (+)	.69609
496 I am active in community or school organizations. (+)	.67229
250 I have met and formed my own opinions about the leaders of my community. (+)	.66952
696 I do things for my community. (+)	.65740
627 I generally attend community or school meetings. (+)	.63356
176 I work to make my community better for children. (+)	.62696
586 I have gone door-to-door collecting signatures on a petition. (+)	.50704
649 I make it a point to vote in all elections. (+)	.47853
127 I keep up with community news. (+)	.45039
21 I have worked on a school committee. (+)	.43297
116 I devote time to helping people in need. (+)	.39699
630 I give blood (or would if not medically prohibited). (+)	.39009
237 I have gone door-to-door collecting money for charity. (+)	.30357
452 I know the children who live in my neighborhood. (+)	.28396
328 I have volunteered my name as a witness at a scene of a crime or an accident. (+)	.26706

*Mastery = +

Table 4-8

Items Loading on The Stage 8
(Wisdom vs Despair) Scale

Factor I - Order And Meaning; Reliability = .83

Item *	Factor Loading
383 I have had moments of intense happiness when I felt like I was experiencing a kind of ecstasy or natural high. (+)	.57248
705 I get a feeling for the meaning of life through beauty. (+)	.55926
150 I get a feeling for the meaning of life through contemplation. (+)	.55835
384 I get a feeling for the meaning of life through music. (+)	.54277
126 I have had experiences in life which were so intense that they were almost mystical. (+)	.53253
674 My feelings about nature are almost sacred. (+)	.51251
184 I get a feeling for the meaning of life through nature. (+)	.49439
428 I have had experiences in life which I have felt so good, I have felt completely alive. (+)	.46507
319 I have a sense of awe about the complexity of things in the universe. (+)	.46020
516 The inner wisdom of people never ceases to amaze me. (+)	.44132
484 My values change as I discover more about life and the universe. (+)	.41996
71 I get a feeling for the meaning of life through art. (+)	.37732
483 I find myself thinking about things much more deeply than I did in years past. (+)	.33453
344 Even though I am pretty much in touch with who I am, I am always discovering new aspects of myself.	.31126

Table 4-8 (cont.)

Item *	Factor Loading
267 I have had an experience where life seemed just perfect. (+)	.30499
81 I have had experiences in life when I have been overwhelmed by good feelings. (+)	.28955
644 I am amazed at how many problems no longer seem to have simple right and wrong answers. (+)	.27054
Factor II - Acceptance of One's Life Cycle; Reliability=.80	
455 Life gets better as I get older. (+)	.60300
283 My values are formed from many sources and I integrate them to give meaning to my life. (+)	.58491
487 Whatever age I am always seems to be the best. (+)	.57756
342 After a lot of hard struggling, I am comfortable being me. (+)	.53590
344 Even though I am pretty much in touch with who I am, I am always discovering new aspects of myself. (+)	.48479
638 As I look back at my past decisions, although I wish I might have done things differently, I realize those were the best decisions I could make at the time. (+)	.45902
428 I have had experiences in life when I have felt so good, I have felt completely alive. (+)	.44178
411 The more I look at things, the more I see how everything fits with everything else. (+)	.42504
64 I am a citizen of the world. (+)	.33732
267 I have had a experience where life seemed just perfect. (+)	.33084
642 Even though I do not like the thought of it, my death does not frighten me. (+)	.32141

Table 4-8 (cont.)

Item *	Factor Loading
81 I have had experiences in life when I have been overwhelmed by good feelings. (+)	.28978
383 I have had moments of intense happiness, when I felt like I was experiencing a kind of ecstasy or a natural high. (+)	.25549

*Mastery = +

Criterion 8

Criterion 8 states that the scales will have a Guttman-like structure, that is, scales are mastered in ascending order from Stage 1 to Stage 8.

To test this criterion the scalogram program of the Statistical Package for the Social Sciences⁸⁸ was used. A restriction of the scalogram program is that no scale may have more than 50 items. Since Scale 4 had 63 items, fifty items were randomly chosen to represent the scale. Mastery of a scale was defined as responding in the resolution direction to 80% of the items. The results of this analysis was that the stages were not ordered from Stage 1 to Stage 8. The order of the stages from least to most difficult was the following: Stage 5, Stage 6, Stage 2, Stage 4, Stage 1, Stage 3, Stage 8 and Stage 7.

The mastery level was manipulated with the intent to rearrange the stages in the proper order. It was found that with the following mastery levels the stages were ordered as Erikson proposed: Stage 1-67%; Stage 2-78%; Stage 3-69%; Stage 4-78%; Stage 5-85%; Stage 6-80%; Stage 7-73%; and Stage 8-84%. With this manipulation, the coefficient of reproducibility and the minimum marginal reproducibility were .80 and .66, respectively.

⁸⁸Norman H. Nie, C. Hodlaj, Jean G. Jean G. Jenkins, Karin Steinbrenner and Dale H. Bent, Statistical Package for the Social Sciences (New York: McGraw-Hill, 1975), p. 533.

The coefficient of reproducibility is a measure of the extent to which a respondent's scale score is a predictor of one's response pattern. Mathematically, it is 1 minus the result of dividing the total number of errors by the total number of responses, and it varies from 0 to 1. A general guideline to the interpretation of this measure is that a coefficient of reproducibility higher than .9 is considered to indicate a valid scale. The minimum marginal reproducibility provides the minimum coefficient of reproducibility that could have occurred for the scale given the cutting points used and the proportion of respondents passing and failing each of the items. It is calculated by summing the maximum marginals for each item and dividing this sum by the total number of responses. The difference between the coefficient of reproducibility and the minimum marginal reproducibility indicates the extent to which the former is due to response patterns rather than the inherent cumulative interrelation of the variables used.⁸⁹

Since the mastery levels were manipulated, it may be useful to examine the hierarchical properties of the instrument when mastery was defined as responding in the resolution direction to over 80% of the items. When mastery was defined at this level, the following percentages of the sample passed the stages: 1-66; Stage 2-73; Stage 3-54;

⁸⁹Nie, Hodlaj, Jenkins, Steinbeenner and Bent, pp. 532-533.

Stage 4-68; Stage 5-76; Stage 6-74; Stage 7-46; and Stage 8-51. It may be illustrative to examine the mastery percentage levels across stages, that is, the percentage of the respondents who mastered both Stage 1 and 2, or 1 and 3, etc. Such a matrix of mastery percentages can be found in Table 4-9. Due to Erikson's epigenetic notion, one would expect the mastery levels to be highest near the diagonal and then decrease as one proceeds away from it. It can be seen that this general pattern did emerge implying that the stages have some hierarchical order. The obvious exceptions are Stages 7 and 5, since the former appears to have been too difficult and the latter too easy to master.

Criterion 9

Criterion 9 states that the social desirability items will correlate higher with the Modified Crowne-Marlowe Social Desirability Scale than to any of the ego stage scales.

It was found that in 28 cases the social desirability items did correlate higher with the Modified Crowne-Marlowe Social Desirability Scale than with any of the ego stages. The eighteen items that correlated higher with the ego stage scales were eliminated. Due to the size constraints of the AAAP, the items with the highest 20 correlations were retained for the validity index. As a result, eight additional items were eliminated. Appendix R presents all of the Modified Crowne-Marlowe items, their correlation to their intended scale and to the ego stage scales, and the decision concerning their retention or elimination from the revised AAAP.

Table 4-9

Percentage of the Sample who Mastered the Stages*

	1	2	3	4	5	6	7	8
1	66	58	48	53	57	45	37	40
2		73	51	59	57	59	53	41
3			54	46	49	44	34	31
4				68	60	55	38	29
5					76	64	41	44
6						75	39	42
7							46	29
8								51

* Mastery was defined as responding in the resolution direction to over 80% of the items.

Criterion 10

Criterion 10 states that the pair of consistency items, i.e., items reflecting the same content but placed in different locations in the AAAP, will be responded to in a similar way and are highly correlated.

The correlations of the twelve pairs were computed. A correlation of .75 was needed to retain the pair in the validity index. The pairs correlated higher than .75 only once. The pairs of items and their correlations are listed in Appendix S.

F Scale

The items eliminated from the test of Criterion 1 (item frequencies of less than .05) were considered for a validity index to detect subjects trying to respond in a unfavorable manner on the AAAP. There were 33 items with a frequency of less than 5% in the non-mastery direction. These F scale items and their frequencies are found in Appendix T.

Scale Statistics

The number of items in a stage ranged from 18 to 63 with the median being 29. The total stage scores were computed by summing the responses in a scale. The mean and standard deviation of the scales ranged from 54 to 191, and 9 to 21, respectively. The Cronbach alpha coefficients of the scales ranged from .85 to .95. The scale statistics are presented in Table 4-10.

The total stage scores for each of the stages were

Table 4-10

Scale Statistics

Stage	Number of Items	Mean*	Variance	Standard Deviation	Reliability
1	18	54.01	53.71	7.33	.88319
2	36	108.86	134.24	11.59	.90717
3	26	75.27	79.29	8.90	.87019
4	63	190.56	440.53	20.99	.95076
5	33	100.08	108.39	10.41	.90255
6	28	88.09	116.72	10.80	.90126
7	29	84.37	116.03	10.77	.88837
8	25	74.23	75.83	8.71	.85431

*Based upon individual items summed across the scale.

summed and the correlations between the stages were computed. The correlations ranged from .25 to .80. For the most part, adjacent stages had the higher correlations. For example, Stage 1 correlated .74 and .80 with Stages 2 and 3, and .45 and .40 with Stages 7 and 8, respectively. In addition, the correlations between the first five stages were higher (.80 to .60) than correlations between the last three stages (.61 to .25). The 8x8 correlation matrix can be found in Table 4-11.

Comparison Between Samples

A comparison was performed between the Michigan State University sample of 322 subjects and the 32 psychiatric patients from Pine Rest Christian Hospital. The sample of Michigan State University staff and faculty were expected to have higher ego stage scores than the psychiatric sample. A high ego stage score was intended to reflect resolution to the stage and thus greater mental health. As a result, a group of faculty members and staff who were well-educated and satisfied with their jobs and personal relationships should have higher scores than a psychiatric sample that was presently in treatment.

To control for an inflated Type 1 error, a multivariate test was performed rather than a series of t-tests. The multivariate test between the two groups on the 8 ego stages was highly significant ($p < .00001$). The psychiatric group had lower means on each of the ego stage scales than the

Table 4-11

Correlation Matrix of Ego Stages

	1	2	3	4	5	6	7	8
1	1.0000	.7352	.8019	.6709	.5971	.2836	.4399	.4019
2		1.0000	.7265	.7770	.7384	.4150	.3527	.5321
3			1.0000	.6449	.6127	.2548	.4034	.3038
4				1.0000	.7113	.3861	.4419	.4467
5					1.0000	.6061	.5515	.5797
6						1.0000	.4019	.5800
7							1.0000	.3992
8								1.0000

normal population. The univariate F-tests between the two samples were significant on seven of the eight scales, with intimacy being the exception. In Table 4-12 one can find the mean and standard deviation of the ego stage scores for both samples as well as the F-test and probability values.

Summary

Eight criteria were applied to refine the item pool in each of the eight ego stage scales and to establish three validity indexes. These were 33 items that were eliminated from the stage scales since their frequencies in the non-mastery direction were less than .05. There were 57 items that correlated higher with the social desirability scale than with the ego stage for which it was written. The majority of the eliminated items (159) correlated higher with a successive stage than with its intended or with a previous ego stage. The content validity of items with a correlation of .25 or less with its own stage were re-evaluated and in 8 cases the items were eliminated. The reliability of the scales were computed and it was found that an item lowered the reliability of the stage scale only once. In addition, the discrimination value of the items were computed and with five items it was evaluated as being too low.

The factor structure of the retained items within each stage scale were inspected. A principal factor solution was used and was followed by a varimax rotation. Only those factors with an eigenvalue in excess of one were rotated.

Table 4-12

Comparison Between the Normal and Psychiatric
Samples on the Ego Stage Scales

Scale	Means		Standard Deviation		<u>F</u> -test	P
	Normal	Psychiatric	Normal	Psychiatric		
Trust	55.08	43.19	6.45	6.92	97.65	.00001
Autonomy	110.30	94.34	10.17	14.75	65.27	.00001
Initiative	76.49	63.00	7.81	10.01	82.13	.00001
Industry	193.14	164.59	18.72	24.96	63.34	.00001
Identity	103.44	91.66	9.73	12.21	40.62	.00001
Intimacy	88.34	85.56	10.74	11.30	1.94	.16504
Genera- tivity	84.84	79.62	10.62	11.26	6.94	.00879
Wisdom	74.75	69.06	8.56	8.64	12.81	.00039

Items that did not load onto a factor with a value greater than .25 were eliminated from the stage scale. This procedure resulted in the elimination of 22 items. The reliability of the factors were examined and in four cases an item lowered the internal consistency of the factor. There were 23 factors that emerged from the 8 stage scales. The reliability of the factors ranged from .68 to .92 with a mean of .84. The name of the factors, as well as their size and reliability, can be found in Table 4-13.

The Guttman-like structure of the AAAP was investigated. Mastery of a stage was defined as responding in the resolution direction to over 80% of the items. It was found that the stages were arranged in the following order from least to most difficult: Stage 5, Stage 6, Stage 2, Stage 4, Stage 1, Stage 3, Stage 8, and Stage 7. This arrangement was not consistent with Erikson's epigenetic conceptualization. However, when the mastery levels were manipulated, the coefficient of reproducibility and the minimum marginal reproducibility were .80 and .66, respectively.

There were three sets of validity indexes that were also examined in this study. There were 46 Modified Modified Crowne-Marlowe items embedded in the AAAP. It was found that 28 items correlated higher with the total social desirability scale than with any of the ego stage scales. These items were retained for a validity index to detect responding in a socially desirable manner. Likewise, the 33

Table 4-13

The Factors Emerging From the AAAP

Stage	Name of Factor	Number of Items	Reliability
1	Basic Trust	18	.88
2	Will to be oneself	23	.89
2	Solitude	11	.82
2	Holding on, letting go	13	.82
3	Self-punishment and guilt	23	.86
3	Anticipation of roles by parents	4	.81
4	Apply self to task	26	.92
4	Win recognition by producing things	31	.93
4	Perserverance	15	.86
4	Competence	18	.85
4	Trust in Adults	12	.85
4	Confidence	10	.79
5	Trust in peers	16	.86
5	Ideological thought	8	.79
5	Molding identity	13	.84
5	Fidelity tests	10	.79
6	Commitment to affiliation	19	.90
6	Genital maturity	11	.83
6	Fusion with another	7	.68
7	Establishing and guiding next generation	17	.88
7	Charity	15	.84
8	Order and Meaning	17	.83
8	Accepting one's life cycle	13	.80

items that were responded to in either the mastery or non-mastery direction by less than 5% of the respondents were retained in a validity index to detect faking or responding in a disfavorable manner. There was also twelve pairs of consistency items, i.e., items with the same content but placed in different sections of the AAAP, that were designed to make up the third validity index. However, the correlation between the pairs was less than .75 in eleven of the twelve pairs. There was no evidence at this time that these items can constitute a validity index to detect consistency.

In Table 4-14 the number of items that were eliminated from the tests of Criterion 1 thru 7 and the total number of retained items are presented. In Table 4-15 the number of social desirability and consistency items eliminated and retained from the tests of Criterion 9 and 10 are presented.

Table 4-14

Results of the Tests of Criterion 1-7.
Number of Eliminated Items

	STAGES								Total
	1	2	3	4	5	6	7	8	
Criterion 1 (Item Frequencies Less than .05)	1	9	4	7	5	2	2	3	33
Criterion 2 (Correlates higher with social desirability)	2	9	13	11	10	6	1	5	57
Criterion 3 (Correlates higher with successive stage)	12	45	21	11	25	7	6	32	159
Content Reevaluation	0	5	0	0	1	0	1	1	8
Criterion 4 (Decreases reliability of scale)	0	0	0	0	1	0	0	0	1
Criterion 5 (Items discrimination is low.)	0	1	1	1	1	1	0	0	5
Criterion 6 (Value less than .25 on a factor).	7	2	2	2	2	0	2	4	21
Criterion 7 (Decreases factor reliability)	0	0	0	1	2	0	1	0	4
Original Number	33*	107	67	96	80	44	42	70	539
Total Eliminated	22	71	41	33	47	16	13	45	288*
Total Retained	18	36	26	63	33	28	29	25	258

*7 items were added from stage 2.

Table 4-15

Items Retained And Eliminated From Tests of
Criterion 9 And 10

	Eliminated	Retained
Social Desirability Items	18	28
Consistency Item Pairs	11	1

CHAPTER V

SUMMARY AND CONCLUSIONS

This chapter consists of a capsule summary of the study and the conclusions that were reached. In addition, implications for future studies with the AAAP are discussed.

Preliminary Work with the AAAP

The AAAP had been designed by Farquhar, Wilson and Parmeter⁹⁰ to measure the constructs of Erikson's ego stage development theory as well as to assess a respondent's test-taking attitude through a set of validity indexes. The AAAP's 673 items reflected positive and negative aspects to the eight Eriksonian stages. Embedded within the AAAP were 46 Modified Crowne-Marlowe Social Desirability items. In addition, there were twelve pairs of consistency items that were designed to assess the respondent's care in filling out the questionnaire. There had been no assessment of the instrument's validity or reliability.

Summary of the Study

During a content reevaluation period, the present investigator found that there were two types of items within

⁹⁰Farquhar, Wilson and Parmeter, 1977.

the AAAP: mastery and stage-specific. A mastery item corresponded to a developmental issue that once it is resolved, it remains resolved. With a stage-specific item, an individual in that stage responds to the statement differently than an individual in a prior or subsequent developmental stage. It is as if the individual was embedded in the issues of that stage. In the process of differentiating the items into mastery and stage-specific groups, four possible response patterns were conceptualized. The four patterns were the result of the two types of items (mastery and stage-specific) and the two directions (i.e., positive and negative aspects of each stage). It was found that of the 673 Eriksonian items, 539 were mastery and 127 were stage-specific. Seven items were eliminated since they did not adequately reflect the developmental constructs they were intended to measure.

There were 354 subjects consisting of faculty and staff from Michigan State University and psychiatric patients at Pine Rest Christian Hospital. The sample was composed of middle age adults (mean age = 42), who were well educated (77% had at least a bachelor's degree), and had above average income (median = \$20- \$25,000). There were slightly more males (55%) than females (43%), and an overabundance of Caucasians (91%).

The respondents volunteered to complete the AAAP, a consent form, and a demographic fact sheet. Due to the size of the instrument (719 items), they were instructed to

complete it over a number of sittings. They were also notified that the questionnaire was coded and that the names and codes were kept under tight security. The subjects responded to the items using a 4-point Likert-type scale ranging from "Definitely True of Me" to "Definitely Not True of Me".

The analyses pertained to the mastery items solely since the pool of stage-specific items was inadequate. An item analysis was conducted to increase the internal consistency of each of the ego developmental scales. The item analysis consisted of examining an item's difficulty, discriminatory ability, and its correlation to the social desirability scale as well as to the ego stage scales. The reliability of the scale was also computed when the item was removed from the scale.

The items for each stage that had survived the item analysis procedures were factor analyzed. A principal factor approach was used for each scale to examine the relationship among items and to find how item responses related to each other. A varimax rotation was executed following the principal factor analysis. Only those factors which had an eigenvalue in excess of one were rotated. Rotation was continued until: 1) at least three items or more remained on all factors, and 2) the results made psychological sense. Items that did not load onto a factor were eliminated. The reliability of the factors were also computed. In addition, the AAAP's Guttman-like properties

were explored through the use of a scalogram analysis, since Erikson's proposed theory is hierarchical.

The ten item criteria for the study and the results of the statistical tests are listed below.

1. Each item will be responded to in either the mastery or nonmastery direction by more than 5% of the respondents. It was found that 33 items had a frequency distribution in one direction of less than 5%. These items were considered for the F Scale.
2. Each item will correlate higher with the total stage score for which it was written than it will to the Modified Crowne-Marlowe Social Desirability Scale embedded in the AAAP. There were 57 items that correlated higher with the social desirability scale and were thus eliminated.
3. Each item will correlate higher with the total stage score for which it was written or to a previous stage total score than it will to a successive ego stage. It was found that 159 items correlated higher with a successive stage than with its intended or with a previous ego stage. These items were eliminated.
4. Each item will increase the internal consistency of the stage scale for which it was written. In one case an item decreased the reliability of the scale and was thus eliminated.
5. Each item will have a moderate or a high discrimination value. There were 5 items with a low discrimi-

nation value and were thus eliminated from the scales.

6. A factor analysis of the items screened through tests of Criteria 1 thru 5 will yield an interpretable structure for each stage. Stage 1 had only one factor with an eigenvalue above 1. However, the remaining seven stages had multiple-factor structures. The items that did not load onto a factor with a value of .25 or greater were eliminated. There were 22 items that did not load at the required level.

7. Each item will increase the reliability of the factor. In 4 cases items lowered the internal consistency of the factor and were thus eliminated.

8. The AAP will have a Guttman-like structure, such that, the stages will be mastered in ascending order from Stage 1 to Stage 8. Mastery was defined as responding in the resolution direction to over 80% of the items. It was found using the 80% criterion that stages were mastered from least to most difficult in the following order: Stage 5, Stage 6, Stage 2, Stage 4, Stage 1, Stage 3, Stage 8, and Stage 7. The mastery level was manipulated to arrange the stages in the proper order. The necessary mastery levels were as follows: Stage 1-67%; Stage 2-78%; Stage 3-69%; Stage 4-78%; Stage 5-85%; Stage 6-80%; Stage 7-73%; and Stage 8-84%. The coefficient of reproducibility was .80 and the minimum marginal reproducibility was .66 when the mastery levels were manipulated.

9. A social desirability item will correlate higher with the Modified Crowne-Marlowe Social Desirability Scale than to any of the ego stage scales. There were 28 items that correlated higher with the Social Desirability Scale than with any of the ego stage scales and were considered for retention in the social desirability validity index.

10. The twelve pairs of consistency items will be responded to in a similar manner and each pair will have a correlation of at least .75. It was found that only one pair had a correlation greater than .75.

Conclusions

The conclusion reached from the study were the following.

1. Stage 1 had 18 items that survived the tests of criterion 1 thru 7. The Cronbach alpha coefficient was .88. There was only one factor that emerged with an eigenvalue greater than one. It was labelled Basic Trust.

2. There were 36 items in Stage 2 with an internal consistency of .91. Three factors emerged with an eigenvalue greater than one. The factors and their reliabilities were as follows: Will to be oneself (.89); Solitude (.82); and Holding on, letting go (.82).

3. There were 26 items in Stage 3 that survived the

tests of Criterion 1 thru 7. The Cronbach alpha coefficient was .87. The two factors that emerged were: Self punishment and guilt (.86); and Anticipation of roles by parents (.81).

4. Stage 4 had 63 items that were retained and an internal consistency of .95. Six factors emerged with an eigenvalue greater than one. They were: Apply self to task (.92); Win Recognition by producing things (.93); Perseverance (.86); Competence (.85); Trust in adults (.85); and Confidence (.79).

5. There were 33 items in Stage 5 with a reliability coefficient of .90. The four factors that emerged were: Trust in peers (.86); Ideological thought (.79); Molding identity (.84); and Fidelity tests (.79).

6. Stage 6 had 28 items that survived the tests of Criteria 1 thru 7. The alpha coefficient for the scale was .90. Three factors emerged with an eigenvalue greater than one. They were: Commitment to affiliation (.90); Genital maturity (.83); and Fusion with another (.68).

7. There were 29 items in Stage 7 with an alpha coefficient of .89. The two factors that emerged were: Establishing and guiding the next generation (.88); and Charity (.84).

8. Stage 8 had 25 items that survived the tests of Criteria 1 thru 7. The Cronbach alpha coefficient was .85. The two factors that emerged were Order and

meaning (.83); and Accepting one's life cycle (.80).

9. There were 28 Modified Social Desirability items that correlated higher with the Crowne-Marlowe total scale than with any of the ego stage scales. The correlations ranged from .17 to .51.

10. The F Scale consisted of 33 items that had a frequency distribution of less than .05 in any one direction. This scale was designed to detect respondents trying to respond in a disfavorable manner.

11. The consistency validity index consisted of only one pair of items with a correlation above .75. The validity index did not perform the function for which it was designed.

12. The hierarchical structure of the AAAP was moderately evident. The mastery levels of the stages were manipulated to order the stages from 1 to 8. The resulting index of reproducibility and the minimum marginal reproducibility were .80 and .66, respectively.

13. The correlations between stages were as expected. The correlations between the first five stages were higher (.80 to .60) than the correlations between the last three stages (.61 to .25). Likewise, the correlations were higher with adjacent stages than with distant stages.

Implications for Future Research

The Assessment of Adult Adjustment Patterns (AAAP) is an objective and easily scored questionnaire designed to operationalize the constructs of Erikson's epigenetic theory. The internal consistency of the ego scales are quite high (mean = .89) and the factors that emerge from each stage scale are consistent with Erikson's theory and are moderately reliable (mean = .84). The social desirability index is composed of items from the Crowne-Marlowe Social Desirability Scale, therefore, there is reason to trust the construct validity of this scale. The F scale validity index was constructed in the same manner as the MMPI F Scale. However, the cross-validation of the F scale, as well as the ego stage scales, are needed at this point since the development of the scales were based solely on the item responses of the sample.

The number of items across stages is not uniform. Presently, there are 63 Stage 4 items and 18 Stage 1 items. The distribution of items in the other six stages range from 25 to 36. There were seven items eliminated from Stage 1 because they loaded onto a factor that had an eigenvalue of less than one (the items are noted in Appendix J). However, the eigenvalue was .94 and all the items loaded on it with values greater than .20. These items reflected the "coping and stability" aspect of Stage 1. It may be wise to retain these seven items in a future study and reexamine their contribution at that time. The rationale for this proposal

is that they appear to be measuring a secondary component of the stage. In addition, they contribute to the reliability of the scale and balance the distribution of items across stages. Likewise, a reevaluation of Stage 4 items in a future study is warranted. If there is an overlap of information with the six factors in Stage 4, then a further item analysis with the intent of eliminating items is justified.

The consistency index did not behave as expected. The correlation between the pairs of items were quite low (mean = .47). Some may argue that the size of the original instrument may have been the cause, particularly with the directions to complete it over a number of sittings. However, the items are measuring constructs that should not change over a short period of time. A redevelopment of the consistency index or a reevaluation of it on a new sample is needed.

There is evidence from this study to support the construct validity of the AAAP Scales. Cronbach and Meehl discussed the use of internal consistency and factor analysis in the establishment of construct validity. They stated that if a trait, such as Autonomy (Stage 2) is hypothesized and the items inquire about behaviors subsumed under this label, then the hypothesis requires that these items be generally intercorrelated.⁹¹ In this study the

⁹¹Lee J. Cronbach and Paul Meehl, "Construct Validity in Psychological Tests," in Problems in Human Assessment, Eds. Douglas N. Jackson and Samuel Messick, (New York: McGraw-Hill, 1967).

hypothesized traits representing Stages 1 thru 8 had internal consistency coefficients from .85 to .95. The items within each scale were highly homogeneous.

Guilford⁹² and Eysenck⁹³ discussed the use of factor analysis in the establishment of construct validity. They used factor analysis as a confirmatory procedure, such that, the factors that emerge from each stage should be consistent with the intended or hypothesized constructs. This consistency can be seen in the AAAP scales. An initial procedure in the development of the AAAP was the breakdown of the stages into components (see Figure 3-1). This outline served as a guide during item construction and editing. Evidence of construct validity was reflected in the congruence between the factors that resulted from the factor analysis and the outline of the constructs that was used in the item-construction process. The items clustered into expected sets that were consistent with Erikson's theory. However, a much stronger case would have been made if the items were identified a priori for each factor and the factor analysis confirmed the classification. It will be much easier to perform the confirmatory analysis in a future study since items are presently grouped under distinct factors within each stage.

⁹²J.P. Guilford, "Factor Analysis in a Test-Development Program, Psychological Review, 55 (1948), 79-94.

⁹³H.J. Eysenck, "Criterion Analysis- An Application of the Hypothetico-Deductive Method in Factor Analysis," Psychological Review, 57 (1950), 38-53.

Future work with the AAAP should be in the form of cross validation studies. Although the ego stage scales have content and construct validity and are highly consistent, there is no evidence of criterion validity at this time, nor is there a test-retest reliability coefficient. There are a number of approaches to establish the validity of the AAAP stage scales. One approach is to identify two sets of individuals judged to be mastering and not mastering a particular stage. Differences would be expected between these two groups on the AAAP stage scale in question. For example, a group of adolescents with poor identity formation may be contrasted with a group of individuals beyond Stage 5 or with a set of individuals who are presently resolving the adolescent struggle. Differences in the Stage 5 AAAP scores should result between these two groups. This procedure would establish the predictive validity of a stage.

The construct validity of the stages can be further established by identifying the characteristics surrounding mastery and nonmastery of a stage. For example, the research concerning Stage 5 indicates that role diffusion is related to anxiety, uncertainty about personal characteristics and poor adjustment, while identity is associated with self-esteem, a healthy self-concept, and consistency. The AAAP as well as measures of anxiety, adjustment and self-esteem may be administered to a group of adolescents. High scores on Stage 5 of the AAAP should be associated with

high scores on the self-esteem and adjustment measures. Likewise, low Stage 5 AAAP scores should be correlated with anxiety and maladjustment.

The validity indexes also need to be validated. Individuals responding to the AAAP with 'fake good' and 'fake bad' instructions may shed some light on the social desirability and F scale indexes. 'Fake good' instructions should result in higher scores in the social desirability scale while 'Fake bad' instructions should increase the scores on the F Scale.

A questionnaire composed of stage-specific items would complement and enhance the AAAP ego stage scales. The stage-specific scales would identify particular developmental issues that presently occupy the individual. This information as well as the factor scores on the mastery items, would be particularly helpful to practicing psychologists planning their therapeutic interventions. At this time more stage-specific items are needed since there is an under-representation in Stages 1, 6, 7, and 8. To analyze and establish the validity of the stage-specific items, it would be necessary to show that they correlate with the ego stage for which they were written and and show little relationship with the other stage scores. The rationale for this analysis is to truly demonstrate their stage specificity.

Erikson's epigenetic notion may be addressed with the use of the AAAP. Erikson assumed that the stages were

mastered in the same order for both sexes. However, there has been some speculation⁹⁴ that the identity and intimacy stages may be reversed for women, such that, intimacy is a necessary prerequisite before a full resolution of the identity crisis can take place. In addition, the eight stages may, in fact, be reduced to a smaller set of factors. For example, in this study some form of trust was evident in the factors for Stages 1 (Basic Trust), 4 (Trust in Adults), and 5 (Trust in Peers). It is also logical to assume that trust is a necessary prerequisite for intimacy (Stage 6) and in the belief that there is order and meaning in the world (Stage 8).

The only other objective instrument designed to measure the eight ego stages was Boyd and Koskela's Self Description Questionnaire. The Self Description Questionnaire⁹⁵ was developed with a college sample. There was no attempt to measure the constructs of the stages nor was there any attempt to establish scales to assess an individual's test-taking attitude. In addition, a scalogram analysis with the instrument was not made. However, the Self Description Questionnaire (SDQ) had two types of response instructions: Like-Unlike Me, and Concern-No Concern For Me. These two response categories may be similar to the mastery and stage-

⁹⁴Carol Gilligan, "Woman's Place in Man's Life Cycle," Harvard Educational Review, 49(1979), 431-446.

⁹⁵Boyd and Koskela, pp. 1-14.

specific classifications, respectively. The SDQ also reported moderately high internal consistency coefficients for the Like-Unlike Me, and Concern-No Concern For Me Stage Scales (.61 to .89, and .67 to .80, respectively). A comparison between the SDQ and the AAAP may be helpful in further refining the properties and establishing the construct validity of the AAAP.

In summary, this study has paved the way for future validation studies by refining the instrument into a more efficient and manageable form. The psychometric properties of the AAAP with the present sample should provide the necessary incentive for future investigators' efforts in cross validating the instrument.

APPENDICES

Appendix A - Assessment of Adult Adjustment Patterns (AAAP)

All items are to be rated:

1 = Definitely true of me

2 = True of me

3 = Not true of me

4 = Definitely not true of me

- | | |
|---|---------|
| 1. Whatever stage of life I am in is the best one. | 1 2 3 4 |
| 2. Even when I find a grudge I hold is unfounded, I have a hard time letting go of my resentment. | 1 2 3 4 |
| 3. Compliments make me feel good. | 1 2 3 4 |
| 4. My happiness is pretty much under my own control. | 1 2 3 4 |
| 5. My life is a delightful mixture of work and play. | 1 2 3 4 |
| 6. I feel disappointed and discouraged about the work I do. | 1 2 3 4 |
| 7. I am able to give reasons for my opinions and reactions. | 1 2 3 4 |
| 8. I believe in a personal God. | 1 2 3 4 |
| 9. Most of my high school friends pretty well had their heads together. | 1 2 3 4 |
| 10. I generally feel pleased with my performance when I talk in front of a group. | 1 2 3 4 |
| 11. I do not show my weaknesses to anyone. | 1 2 3 4 |
| 12. I have sufficient energy which I use to reach my goals. | 1 2 3 4 |
| 13. I can't tell ahead of time how people will feel about the way I act. | 1 2 3 4 |
| 14. I can make big decisions by myself. | 1 2 3 4 |

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|-----|---|---------|
| 15. | As I look back at decisions I would now
change I realize that I did the best I could
at the time. | 1 2 3 4 |
| 16. | At times I feel just plain sexy. | 1 2 3 4 |
| 17. | I don't need to apologize for the way I act. | 1 2 3 4 |
| 18. | I do many things well. | 1 2 3 4 |
| 19. | I like to be with a group that plays jokes
on each other. | 1 2 3 4 |
| 20. | Before voting, I thoroughly investigate the
qualifications of all candidates. | 1 2 3 4 |
| 21. | I have worked on a school committee. | 1 2 3 4 |
| 22. | My mistakes annoy me, but do not frighten me. | 1 2 3 4 |
| 23. | Even when I am doing something I really enjoy,
I seem to be watching myself. | 1 2 3 4 |
| 24. | Wishing is bad. | 1 2 3 4 |
| 25. | I like to answer children's questions. | 1 2 3 4 |
| 26. | I want to live a long life. | 1 2 3 4 |
| 27. | I am happy with the pace or speed with which
I make decisions. | 1 2 3 4 |
| 28. | I believe laws should be strictly enforced. | 1 2 3 4 |
| 29. | Ideas are more important than people to me. | 1 2 3 4 |
| 30. | I admit my mistakes. | 1 2 3 4 |
| 31. | Children bore me. | 1 2 3 4 |
| 32. | When making a snap judgment, my first impulse
is to trust my logic. | 1 2 3 4 |
| 33. | I can make up my mind without difficulty. | 1 2 3 4 |
| 34. | I can tell right away whether I can trust
a stranger. | 1 2 3 4 |
| 35. | For me to learn well, I need someone to
explain things to me in detail. | 1 2 3 4 |
| 36. | I handle my disappointments. | 1 2 3 4 |

37. I stall rather than follow a rule I don't like. 1 2 3 4
38. No matter what the task, I prefer to get someone else to help me. 1 2 3 4
39. When a mechanical thing goes wrong, I take care of it myself. 1 2 3 4
40. I do not hesitate to go out of my way to help someone in trouble. 1 2 3 4
41. Compliments embarrass me. 1 2 3 4
42. My high school friends, though unconventional, had their heads pretty well together. 1 2 3 4
43. I like problems that make me think for a long time before I solve them. 1 2 3 4
44. My duties and obligations to others trap me. 1 2 3 4
45. I am irritable. 1 2 3 4
46. I would not like to have someone else tell me how to solve my personal problems. 1 2 3 4
47. I lose my temper when things go wrong. 1 2 3 4
48. When someone says something critical about me, I keep my composure. 1 2 3 4
49. I was made to feel extremely guilty about masturbation. 1 2 3 4
50. It annoys me to be interrupted when I am concentrating on something. 1 2 3 4
51. I analyze about my own motives and reactions. 1 2 3 4
52. I worry about my future. 1 2 3 4
53. New situations excite me. 1 2 3 4
54. Children talk to me about personal things. 1 2 3 4
55. I play around so much I have a hard time getting a job done. 1 2 3 4
56. I'm a friend to everyone. 1 2 3 4
57. I do well in activities that require me to use my body rather than my mind. 1 2 3 4

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| 58. I live in the past. | 1 2 3 4 |
| 59. When I was a child I was proud of my schoolwork. | 1 2 3 4 |
| 60. It is sometimes hard for me to go on with my work if I am not encouraged. | 1 2 3 4 |
| 61. The only person I am critical of is myself. | 1 2 3 4 |
| 62. I'm just not very good with children. | 1 2 3 4 |
| 63. When meeting other people for the first time, I can tell right away whether they like or dislike me. | 1 2 3 4 |
| 64. I am a citizen of the world. | 1 2 3 4 |
| 65. There seems to be some kind of barrier between the members of my own sex and me. | 1 2 3 4 |
| 66. I had to work hard to break away from my family. | 1 2 3 4 |
| 67. For me, the present is an island unrelated to the past and future. | 1 2 3 4 |
| 68. I can cry. | 1 2 3 4 |
| 69. I must justify being selfish. | 1 2 3 4 |
| 70. I have taken time to help my neighbors when they need it. | 1 2 3 4 |
| 71. I get a feeling for the meaning of life through art. | 1 2 3 4 |
| 72. Life is pretty confusing to me. | 1 2 3 4 |
| 73. My basic responsibility in life is to take care of my own needs. | 1 2 3 4 |
| 74. I belong to a group that gets together regularly for a sport or activity. | 1 2 3 4 |
| 75. I don't show much mercy to a loser. | 1 2 3 4 |
| 76. When I do something wrong, I know I'll get caught. | 1 2 3 4 |
| 77. My basic state of happiness is dependent upon me. | 1 2 3 4 |

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|---|---------|
| 78. I have never been close to anyone. | 1 2 3 4 |
| 79. I need to have periods when I just let go and act on my impulses. | 1 2 3 4 |
| 80. I do not intensely dislike anyone. | 1 2 3 4 |
| 81. I have had experiences in life when I have been overwhelmed by good feelings. | 1 2 3 4 |
| 82. I enjoy finding out whether or not complex ideas work. | 1 2 3 4 |
| 83. I am a stable, dependable worker. | 1 2 3 4 |
| 84. When I am alone, silence is difficult to handle. | 1 2 3 4 |
| 85. I am obedient. | 1 2 3 4 |
| 86. I like problems which have complicated solutions. | 1 2 3 4 |
| 87. I decide for myself whether I'll be what other people want me to be. | 1 2 3 4 |
| 88. I check things out for myself. | 1 2 3 4 |
| 89. When I get bored, I like to stir up some excitement. | 1 2 3 4 |
| 90. When I finish a job, I feel satisfied with what I have done. | 1 2 3 4 |
| 91. I am fun to be with. | 1 2 3 4 |
| 92. I think life is absurd. | 1 2 3 4 |
| 93. When I get angry at someone, I am afraid to let them know. | 1 2 3 4 |
| 94. My judgment is sound. | 1 2 3 4 |
| 95. People are more important than material things to me. | 1 2 3 4 |
| 96. When I argue, I use facts to support my position. | 1 2 3 4 |
| 97. I don't need much help from others to get myself going. | 1 2 3 4 |
| 98. I keep my word. | 1 2 3 4 |

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|------|---|---------|
| 99. | By church standards, I'm not very religious. | 1 2 3 4 |
| 100. | On occasion, I have had doubts about my ability to succeed in life. | 1 2 3 4 |
| 101. | I go out of my way to avoid an argument. | 1 2 3 4 |
| 102. | I must defend my past actions. | 1 2 3 4 |
| 103. | I lend things to my neighbors when they need them. | 1 2 3 4 |
| 104. | I am at peace with myself. | 1 2 3 4 |
| 105. | I feel most creative when I am alone. | 1 2 3 4 |
| 106. | I am basically an unhappy person. | 1 2 3 4 |
| 107. | With the person I am closest to, I share my inner feelings of tenderness. | 1 2 3 4 |
| 108. | I like to talk about the people I know. | 1 2 3 4 |
| 109. | My enthusiasm spreads to those around me. | 1 2 3 4 |
| 110. | I have a good life. | 1 2 3 4 |
| 111. | I give help when a friend asks a favor. | 1 2 3 4 |
| 112. | People hurt my feelings without knowing it. | 1 2 3 4 |
| 113. | I have clear ideas of what's right and wrong. | 1 2 3 4 |
| 114. | I like to show off. | 1 2 3 4 |
| 115. | I tell the truth, even if the consequences may be unpleasant. | 1 2 3 4 |
| 116. | I devote time to helping people in need. | 1 2 3 4 |
| 117. | I go out of my way to keep other people from littering. | 1 2 3 4 |
| 118. | I wonder what I really should be like. | 1 2 3 4 |
| 119. | I feel uncomfortable when things around me aren't orderly. | 1 2 3 4 |
| 120. | I sometimes feel resentful when I don't get my way. | 1 2 3 4 |
| 121. | I am not ashamed that at times I cry. | 1 2 3 4 |

122. I have not found a person with whom I can be close. 1 2 3 4
123. I feel I am drifting along in life without much to do. 1 2 3 4
124. When the situation demands, I can go into deep concentration concerning just about anything. 1 2 3 4
125. Most of my misfortunes have been the result of my lack of ability, ignorance, or laziness. 1 2 3 4
126. I have had experiences in life which were so intense that they were almost mystical. 1 2 3 4
127. I keep up with community news. 1 2 3 4
128. I purposely pick friends who lead their lives effectively. 1 2 3 4
129. When I get angry at someone, it rarely wrecks our relationship. 1 2 3 4
130. I'm a pretty together person. 1 2 3 4
131. I enjoy my work so much that it seems like play. 1 2 3 4
132. I choose to be pessimistic because it's safer. 1 2 3 4
133. When things are not going right in my work, I let my feelings be my guide. 1 2 3 4
134. I'm proud that I have a lot of friends. 1 2 3 4
135. How many friends I have depends on how humble I am. 1 2 3 4
136. I play fair. 1 2 3 4
137. I refuse to do things if I know I'm not good at it. 1 2 3 4
138. I feel there is nothing I can do well. 1 2 3 4
139. Criticism in any form is hard for me to take. 1 2 3 4
140. I am careful about my manner of dress. 1 2 3 4
141. I began to masterbate when I was a child. 1 2 3 4
142. When things are not going right in my work, I reason my way through the problems. 1 2 3 4

143. I am aware and sensitive toward others. 1 2 3 4
144. I am basically cooperative when I work. 1 2 3 4
145. It is hard for me to work on a thought problem for more than an hour or two. 1 2 3 4
146. I am determined to be the kind of person I am. 1 2 3 4
147. In school there was a direct connection between how hard I studied and grades I got. 1 2 3 4
148. I am willing to admit it when I don't know something. 1 2 3 4
149. I'm the life of the party. 1 2 3 4
150. I get a feeling for the meaning of life through contemplation. 1 2 3 4
151. I am exceptionally good at learning new sports or activities requiring physical coordination. 1 2 3 4
152. I ignore the feelings of others. 1 2 3 4
153. I like to participate in intense discussions. 1 2 3 4
154. I dominate my acquaintances of my own age. 1 2 3 4
155. I have made arrangements for part of my estate to go for humanitarian purposes. 1 2 3 4
156. I have a lot of energy. 1 2 3 4
157. It is hard for me to keep my mind on what I am trying to learn. 1 2 3 4
158. I am outspoken. 1 2 3 4
159. I get stage fright when I have to appear before a group. 1 2 3 4
160. My table manners at home are as good as when I eat out in a restaurant. 1 2 3 4
161. I enjoy privacy. 1 2 3 4
162. When I tell a story, I bend the facts to make it interesting. 1 2 3 4
163. I learn things at least as fast as the average person does. 1 2 3 4

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| 164. I learn things as fast as most people do who have my ability. | 1 2 3 4 |
| 165. The closest I get to another person is to share my opinions and ideas. | 1 2 3 4 |
| 166. People get only one chance with me. | 1 2 3 4 |
| 167. My body is sufficiently healthy to allow me to do what I want to do. | 1 2 3 4 |
| 168. I read a great deal even when my work does not require it. | 1 2 3 4 |
| 169. It is very important that my mate likes to snuggle. | 1 2 3 4 |
| 170. I hide my feelings from others. | 1 2 3 4 |
| 171. I remember the things people say to me. | 1 2 3 4 |
| 172. I handle myself well at social gatherings. | 1 2 3 4 |
| 173. I get along better with people of the opposite sex than I do with people of my sex. | 1 2 3 4 |
| 174. I feel uneasy when I am different from the people around me. | 1 2 3 4 |
| 175. I like people who say what they really believe. | 1 2 3 4 |
| 176. I work to make my community better for children. | 1 2 3 4 |
| 177. In order to get along and be liked, I tend to be what people expect me to be. | 1 2 3 4 |
| 178. Injustice makes me feel angry. | 1 2 3 4 |
| 179. I master a new sport or physical activity at least as well as the average person. | 1 2 3 4 |
| 180. If I could get into a movie without paying and be sure I was not seen, I would probably do it. | 1 2 3 4 |
| 181. I belong to a club or lodge. | 1 2 3 4 |
| 182. People can tell when I lie. | 1 2 3 4 |
| 183. How many friends I have depends on how pleasant a person I am. | 1 2 3 4 |

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| 184. | I get a feeling for the meaning of life through nature. | 1 2 3 4 |
| 185. | My misfortunes have been the result of mistakes I have made. | 1 2 3 4 |
| 186. | I am confident when learning something new which requires that I put myself on the line. | 1 2 3 4 |
| 187. | I have difficulty in getting down to work. | 1 2 3 4 |
| 188. | I get along with people. | 1 2 3 4 |
| 189. | I am self-confident. | 1 2 3 4 |
| 190. | I'd like to be younger than I am. | 1 2 3 4 |
| 191. | I feel jealous when others get ahead of me in life. | 1 2 3 4 |
| 192. | The closest I get to another person is to share facts and information. | 1 2 3 4 |
| 193. | A person's social standing in life has little effect on how I treat them. | 1 2 3 4 |
| 194. | I try to figure out what people really mean by what they say. | 1 2 3 4 |
| 195. | I think about the big issues of life. | 1 2 3 4 |
| 196. | I compare prices before I buy anything. | 1 2 3 4 |
| 197. | When I'm with a sexually attractive person, I feel aroused. | 1 2 3 4 |
| 198. | I worry or condemn myself when other people find fault with me. | 1 2 3 4 |
| 199. | I feel that people are genuinely interested in me. | 1 2 3 4 |
| 200. | On a few occasions, I have given up doing something because I thought too little of my ability. | 1 2 3 4 |
| 201. | Even if I don't agree with someone, I figure out some way to get along with them. | 1 2 3 4 |
| 202. | I have worked out my philosophy of life. | 1 2 3 4 |
| 203. | I give clothing and other items to charitable organizations such as the Salvation Army. | 1 2 3 4 |

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| 204. | I like to discuss ways to solve the world's problems. | 1 | 2 | 3 | 4 |
| 205. | Not having a relationship with a member of the opposite sex makes me feel lonely and empty. | 1 | 2 | 3 | 4 |
| 206. | I have so many goals, I get bogged down. | 1 | 2 | 3 | 4 |
| 207. | I see to it that my work is carefully planned and organized. | 1 | 2 | 3 | 4 |
| 208. | I am more concerned with the way things should be than with the way things are. | 1 | 2 | 3 | 4 |
| 209. | I like the way young children say exactly what they think. | 1 | 2 | 3 | 4 |
| 210. | I deeply resent it when people try to control life. | 1 | 2 | 3 | 4 |
| 211. | It is very important that my mate be thoughtful of me. | 1 | 2 | 3 | 4 |
| 212. | I feel ashamed of myself. | 1 | 2 | 3 | 4 |
| 213. | My parents caused my troubles. | 1 | 2 | 3 | 4 |
| 214. | I go out of my way to avoid being embarrassed. | 1 | 2 | 3 | 4 |
| 215. | I need persons of authority to tell me what I am to do. | 1 | 2 | 3 | 4 |
| 216. | I have difficulty imagining how other people feel. | 1 | 2 | 3 | 4 |
| 217. | When I stop to look at something, I find that I am fascinated by what I see. | 1 | 2 | 3 | 4 |
| 218. | In order to be popular, I often put on an act. | 1 | 2 | 3 | 4 |
| 219. | As I look back over my life, I find very little about which I feel proud. | 1 | 2 | 3 | 4 |
| 220. | I like to gossip at times. | 1 | 2 | 3 | 4 |
| 221. | I do not litter. | 1 | 2 | 3 | 4 |
| 222. | Although it annoys me, I do favors for people when they ask. | 1 | 2 | 3 | 4 |
| 223. | I am more inclined to compete than I am to cooperate. | 1 | 2 | 3 | 4 |

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| 224. | In general I'm satisfied with my decisions about right and wrong. | 1 2 3 4 |
| 225. | When I sit down to learn something, I get so caught up that nothing can distract me. | 1 2 3 4 |
| 226. | When I'm angry, I am afraid I may do something terrible. | 1 2 3 4 |
| 227. | People like me. | 1 2 3 4 |
| 228. | I do good work with my hands. | 1 2 3 4 |
| 229. | I do not understand myself. | 1 2 3 4 |
| 230. | I have been taken advantage of by my friends. | 1 2 3 4 |
| 231. | I was raised in a happy family. | 1 2 3 4 |
| 232. | When making an important decision, I trust my gut level feelings. | 1 2 3 4 |
| 233. | I worry about being different from other people. | 1 2 3 4 |
| 234. | When I find inconsistencies within myself, I resolve them. | 1 2 3 4 |
| 235. | I'm interested in people. | 1 2 3 4 |
| 236. | Children should play mostly with children, not with adults. | 1 2 3 4 |
| 237. | I have gone door-to-door collecting money for charity. | 1 2 3 4 |
| 238. | There are some things I feel so strongly about that I will not give in on them. | 1 2 3 4 |
| 239. | I only feel good when I make someone else happy. | 1 2 3 4 |
| 240. | There have been times when I felt like rebelling against people in authority even though I knew they were right. | 1 2 3 4 |
| 241. | With the person I am closest to, I share my inner fears. | 1 2 3 4 |
| 242. | About the only time I do much thinking is at my work. | 1 2 3 4 |
| 243. | My life is what I made it to be. | 1 2 3 4 |

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| 244. | I enjoy the unpredictable. | 1 2 3 4 |
| 245. | I like to be by myself a part of every day. | 1 2 3 4 |
| 246. | I make sure I know something about the issues and the candidates when I vote. | 1 2 3 4 |
| 247. | I publically question statements and ideas expressed by others. | 1 2 3 4 |
| 248. | I lose control when things go wrong. | 1 2 3 4 |
| 249. | When I'm in a group, I feel confident that what I have to say is acceptable. | 1 2 3 4 |
| 250. | I have met and formed my own opinions about the leaders of my community. | 1 2 3 4 |
| 251. | When someone finds fault with me, I feel uneasy. | 1 2 3 4 |
| 252. | I like being by myself. | 1 2 3 4 |
| 253. | I prefer to stay at home rather than to go to parties. | 1 2 3 4 |
| 254. | I enjoy unexpected free time. | 1 2 3 4 |
| 255. | I think people like to help each other. | 1 2 3 4 |
| 256. | I ask others for help. | 1 2 3 4 |
| 257. | My morals are determined by the thoughts, feelings, and decisions of other people. | 1 2 3 4 |
| 258. | I accept disappointments and learn from them. | 1 2 3 4 |
| 259. | I handle my problems on my own. | 1 2 3 4 |
| 260. | No matter who I'm talking to, I'm a good listener. | 1 2 3 4 |
| 261. | I can tolerate a temporary discomfort to gain a greater good. | 1 2 3 4 |
| 262. | The notion of a personal god seems ridiculous. | 1 2 3 4 |
| 263. | I believe people are basically good. | 1 2 3 4 |
| 264. | I don't work well with someone watching over my shoulder. | 1 2 3 4 |
| 265. | I believe most conversations are insincere. | 1 2 3 4 |

266. I enjoy being sexually stimulated by someone I care about. 1 2 3 4
267. I have had an experience where life seemed just perfect. 1 2 3 4
268. People find it easy to tell me things that really bother them. 1 2 3 4
269. Reading or talking about sex stimulates me. 1 2 3 4
270. Circumstances beyond my control are what make me a basically unhappy person. 1 2 3 4
271. I frighten easily. 1 2 3 4
272. If I have something to say, I say it. 1 2 3 4
273. People expect too much of me. 1 2 3 4
274. I have a great sex life. 1 2 3 4
275. I like to flirt. 1 2 3 4
276. My life would not be meaningful without a mate. 1 2 3 4
277. The best experiences of my life are those that occur spontaneously. 1 2 3 4
278. I know who I am. 1 2 3 4
279. I enjoy being in a crowd just to be with people. 1 2 3 4
280. I can remember "playing sick" to get out of something. 1 2 3 4
281. I have been so close to someone that our relationship seemed almost mystical. 1 2 3 4
282. I can work on ideas for hours. 1 2 3 4
283. My values are formed from many sources, and I integrate them to give meaning to my life. 1 2 3 4
284. I have developed an interest in something new in the past year. 1 2 3 4
285. I have feelings of doom about the future. 1 2 3 4
286. I get into relationships faster then I really want to. 1 2 3 4

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| 287. I find people are consistent. | 1 2 3 4 |
| 288. I never have a serious talk with my friends about my sexual experiences. | 1 2 3 4 |
| 289. I believe in life after death. | 1 2 3 4 |
| 290. I feel deep concern for people who are less well off than I am. | 1 2 3 4 |
| 291. I am more rebellious than most people. | 1 2 3 4 |
| 292. It is very important that my mate loves me. | 1 2 3 4 |
| 293. I don't worry whether anyone else will like the friends I choose. | 1 2 3 4 |
| 294. I spend time reflecting on good experiences I have had in the past. | 1 2 3 4 |
| 295. I feel useless. | 1 2 3 4 |
| 296. I like curious children. | 1 2 3 4 |
| 297. No matter what the task, I prefer to do it myself. | 1 2 3 4 |
| 298. I express my feelings. | 1 2 3 4 |
| 299. Basically I feel adequate. | 1 2 3 4 |
| 300. There have been occasions when I took advantage of someone. | 1 2 3 4 |
| 301. I am proud of the accomplishments I have made at work. | 1 2 3 4 |
| 302. When I get angry at someone, I tell them about it, and it's over. | 1 2 3 4 |
| 303. I have "put myself on the line" in my relations with others. | 1 2 3 4 |
| 304. My social life is full and rewarding. | 1 2 3 4 |
| 305. When I feel worried, there is usually a pretty good reason. | 1 2 3 4 |
| 306. I get along well with members of the opposite sex. | 1 2 3 4 |
| 307. I have intervened when I thought one person was taking advantage of another. | 1 2 3 4 |

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| 308. | I'm not the person I pretend to be. | 1 2 3 4 |
| 309. | I am not afraid of my anger. | 1 2 3 4 |
| 310. | I have known someone who was such an
extraordinarily fine human being that I held
that person in awe. | 1 2 3 4 |
| 311. | When things are not going right, I look to my
inner feeling to figure out what's wrong. | 1 2 3 4 |
| 312. | It's easy for me to know whether people
really like me. | 1 2 3 4 |
| 313. | To gain a greater good, I will express my
feelings even though I expect that others
will be upset with me. | 1 2 3 4 |
| 314. | If someone criticizes me to my face, I listen
closely to what they are saying about me
before reacting. | 1 2 3 4 |
| 315. | I work well under a great deal of tension. | 1 2 3 4 |
| 316. | At a large party, I spend a little time with
almost everybody there. | 1 2 3 4 |
| 317. | When I get tricked, I am bitter toward those
who tricked me. | 1 2 3 4 |
| 318. | The closest I get to other people is to go
through the social amenities, such as "hi"
or "how are you". | 1 2 3 4 |
| 319. | I have a sense of awe about the complexity
of things in the universe. | 1 2 3 4 |
| 320. | I'm willing to admit it when I make a mistake. | 1 2 3 4 |
| 321. | I am comfortable in the presence of people
of any age. | 1 2 3 4 |
| 322. | The rudeness of other people does not
determine how I respond. | 1 2 3 4 |
| 323. | I can take a stand. | 1 2 3 4 |
| 324. | When I get angry, I blow off steam and
it's over. | 1 2 3 4 |
| 325. | I am a worthwhile person. | 1 2 3 4 |
| 326. | My word is my bond. | 1 2 3 4 |

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| 327. | I find it hard to keep my mind on a task or job. | 1 2 3 4 |
| 328. | I have volunteered my name as a witness at the scene of a crime or an accident. | 1 2 3 4 |
| 329. | I find there are a lot of fun things in this world to do alone. | 1 2 3 4 |
| 330. | I enjoy going to a social function either with a group or by myself. | 1 2 3 4 |
| 331. | I prefer to save good things for future use. | 1 2 3 4 |
| 332. | I am totally trusting about my friendships. | 1 2 3 4 |
| 333. | I enjoy interacting with children. | 1 2 3 4 |
| 334. | I need reasons to justify my feelings. | 1 2 3 4 |
| 335. | When I get bored, I do something that generally gets me in trouble. | 1 2 3 4 |
| 336. | I have broken rules. | 1 2 3 4 |
| 337. | I enjoy acting on the spur of the moment without stopping to think. | 1 2 3 4 |
| 338. | If I can't solve a problem quickly, I lose interest. | 1 2 3 4 |
| 339. | I am surprised at how many people know me. | 1 2 3 4 |
| 340. | I try to practice what I preach. | 1 2 3 4 |
| 341. | People respect my work because I do a good job. | 1 2 3 4 |
| 342. | After a lot of hard struggling, I am comfortable being me. | 1 2 3 4 |
| 343. | I have worked out my own guidelines for living my life. | 1 2 3 4 |
| 344. | Even though I am pretty much in touch with who I am, I am always discovering new aspects of myself. | 1 2 3 4 |
| 345. | I will probably always be working on new projects. | 1 2 3 4 |
| 346. | Completed and polished products have a great appeal for me. | 1 2 3 4 |

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| 347. | My feelings are easily hurt. | 1 2 3 4 |
| 348. | I like spending money the way I want. | 1 2 3 4 |
| 349. | There is little point in doing things if the timing is not right. | 1 2 3 4 |
| 350. | No one understands me. | 1 2 3 4 |
| 351. | When I was younger, I wanted to run away from home. | 1 2 3 4 |
| 352. | Young people today are doing a lot of fine things. | 1 2 3 4 |
| 353. | I feel more confident playing games of skill than games of chance. | 1 2 3 4 |
| 354. | Gossip makes me angry. | 1 2 3 4 |
| 355. | It's hard for me to say "no" without feeling guilty. | 1 2 3 4 |
| 356. | I put on a show to impress people. | 1 2 3 4 |
| 357. | When I am trying to work through my feelings of sadness, I will not let someone take away those feelings. | 1 2 3 4 |
| 358. | Rather than bluff, I admit I made a mistake. | 1 2 3 4 |
| 359. | When I discipline even a little child, I try to give a reason. | 1 2 3 4 |
| 360. | I don't find it particularly difficult to get along with loudmouthed, obnoxious people. | 1 2 3 4 |
| 361. | I like it when others vigorously challenge my point of view. | 1 2 3 4 |
| 362. | It is very important that my mate likes to touch me and be touched by me (hold hands, hug, etc.). | 1 2 3 4 |
| 363. | I can't make people like me. | 1 2 3 4 |
| 364. | Being close to another person means sharing my inner feelings. | 1 2 3 4 |
| 365. | My work is usually up to the standards set for me. | 1 2 3 4 |
| 366. | I can stay with a job a long time. | 1 2 3 4 |

367. My life is the result of choices I have made. 1 2 3 4
368. I like other people to notice me. 1 2 3 4
369. I am close to someone with whom I talk about my feelings. 1 2 3 4
370. I enjoy the times I spend with young people. 1 2 3 4
371. The truth belongs to every person; there should be no secrets. 1 2 3 4
372. I feel angry when people tell me things just to make me feel good. 1 2 3 4
373. I get caught up in my work. 1 2 3 4
374. The best experiences in life are those that I plan, do, and then remember with fondness. 1 2 3 4
375. I am proud of my accomplishments. 1 2 3 4
376. I get so lonely I find myself desperately trying to impress the opposite sex. 1 2 3 4
377. My pet makes my life less lonely. 1 2 3 4
378. I wonder about questions such as whether people really have free choice in life. 1 2 3 4
379. When I do something against my basic values, I get disgusted with myself. 1 2 3 4
380. I sometimes try to get even rather than forgive and forget. 1 2 3 4
381. I feel strongly about some things. 1 2 3 4
382. My free time is spent aimlessly. 1 2 3 4
383. I have had moments of intense happiness, when I felt like I was experiencing a kind of ecstasy or natural high. 1 2 3 4
384. I get a feeling for the meaning of life through music. 1 2 3 4
385. I get a thrill out of understanding what's below the surface of an idea. 1 2 3 4
386. I am critical of my own behavior. 1 2 3 4
387. My day-to-day frustrations do not get in the way of my activities. 1 2 3 4

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| 388. | The best times of my life were in the past. | 1 2 3 4 |
| 389. | My sexual life is satisfying. | 1 2 3 4 |
| 390. | I go at my work without much planning
ahead of time. | 1 2 3 4 |
| 391. | I can be silly only under very exceptional
circumstances. | 1 2 3 4 |
| 392. | There are people I don't like. | 1 2 3 4 |
| 393. | When I start to care about someone, I
usually end up hurting the person. | 1 2 3 4 |
| 394. | People intrigue me. | 1 2 3 4 |
| 395. | I will be punished for my sins in the
hereafter. | 1 2 3 4 |
| 396. | I am afraid of making mistakes. | 1 2 3 4 |
| 397. | Life has treated me pretty well. | 1 2 3 4 |
| 398. | My past dictates what kind of person I am. | 1 2 3 4 |
| 399. | I like to solve problems. | 1 2 3 4 |
| 400. | When I don't know something, I don't at all
mind admitting it. | 1 2 3 4 |
| 401. | Being teased by someone who cares for me
can be fun. | 1 2 3 4 |
| 402. | I feel good when others do something nice
for me. | 1 2 3 4 |
| 403. | I work poorly under leaders who make all
the decisions by themselves. | 1 2 3 4 |
| 404. | Even when I am doing something I really
enjoy, I can never get totally involved. | 1 2 3 4 |
| 405. | I like being able to change my plans without
having to check with somebody. | 1 2 3 4 |
| 406. | I am afraid of growing old alone. | 1 2 3 4 |
| 407. | I do not expect people to be consistent. | 1 2 3 4 |
| 408. | There are questions that interest me which
will not be answered in my lifetime. | 1 2 3 4 |

409. I am an even-tempered person. 1 2 3 4
410. I try hard to impress people with my ability. 1 2 3 4
411. The more I look at things, the more I see
how everything fits with everything else. 1 2 3 4
412. I have felt so angry, I have wanted to
destroy or hurt others. 1 2 3 4
413. Children's imaginations fascinate me. 1 2 3 4
414. I am happy. 1 2 3 4
415. In order to be popular, at times I am phony. 1 2 3 4
416. I worry about things that never happen. 1 2 3 4
417. I work at predicting what will happen in
the future. 1 2 3 4
418. I enjoy children, but not infants. 1 2 3 4
419. I take good care of myself physically. 1 2 3 4
420. I never like to gossip. 1 2 3 4
421. I get along best with another person when
I can get my own needs met in the relationship. 1 2 3 4
422. When doing a routine job, my imagination
helps keep me entertained. 1 2 3 4
423. When I get hold of a complicated problem,
I return to it again and again until I come
up with a workable solution. 1 2 3 4
424. I live by the rules and standards of society. 1 2 3 4
425. I like who I am. 1 2 3 4
426. I get those things done that I want to do. 1 2 3 4
427. I enjoy acting on my impulses. 1 2 3 4
428. I have had experiences in life when I have
felt so good, I have felt completely alive. 1 2 3 4
429. When I get angry at someone, I fight dirty. 1 2 3 4
430. My plans work out. 1 2 3 4
431. I feel proud of my accomplishments. 1 2 3 4

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| 432. | I enjoy being playful like a child. | 1 2 3 4 |
| 433. | I have intentionally hurt someone's feelings just to make myself feel better. | 1 2 3 4 |
| 434. | I fight dirty. | 1 2 3 4 |
| 435. | People like to be with me. | 1 2 3 4 |
| 436. | I pick up other people's litter. | 1 2 3 4 |
| 437. | It seems right to me that some people like me, and some people don't. | 1 2 3 4 |
| 438. | I think the best way to handle people is to tell them what they want to hear. | 1 2 3 4 |
| 439. | When I was young, there were times I wanted to leave home. | 1 2 3 4 |
| 440. | At times I have really insisted on having things my own way. | 1 2 3 4 |
| 441. | When I took a new course in school, I felt confident I would do all right. | 1 2 3 4 |
| 442. | I am for truth, no matter how the chips may fall. | 1 2 3 4 |
| 443. | I have known some people who seemed like saints. | 1 2 3 4 |
| 444. | I'm too easily influenced by other people's opinions. | 1 2 3 4 |
| 445. | I can express affection without always needing to have it returned. | 1 2 3 4 |
| 446. | I enjoy being sexually stimulated by someone I don't know. | 1 2 3 4 |
| 447. | I have been so close to somebody, that it is not possible to find adequate words to describe the feeling. | 1 2 3 4 |
| 448. | I enjoy using my imagination. | 1 2 3 4 |
| 449. | I think people pretend to care about each other than they really do. | 1 2 3 4 |
| 450. | I feel annoyed when I am pushed to be just like everybody else. | 1 2 3 4 |

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| 451. | I don't back off from something when I think I am right. | 1 2 3 4 |
| 452. | I know the children who live in my neighborhood. | 1 2 3 4 |
| 453. | I am annoyed with people whose indecisiveness interferes with my work. | 1 2 3 4 |
| 454. | When in school, I enjoyed trying to figure out the questions the teacher might ask on a test. | 1 2 3 4 |
| 455. | Life gets better as I get older. | 1 2 3 4 |
| 456. | How many friends I have depends on how pleasing a person I am. | 1 2 3 4 |
| 457. | I will go to great lengths to avoid feeling sad. | 1 2 3 4 |
| 458. | There are some people I hate so much I wish they were dead. | 1 2 3 4 |
| 459. | I give in if a person insists on a point, even if I don't agree with them. | 1 2 3 4 |
| 460. | There have been occasions when I felt like smashing things. | 1 2 3 4 |
| 461. | I am lovable. | 1 2 3 4 |
| 462. | I pretend I care about people more than I really do. | 1 2 3 4 |
| 463. | I like being able to come and go as I please. | 1 2 3 4 |
| 464. | I believe the best times are yet to come. | 1 2 3 4 |
| 465. | My family understood me while I was growing up. | 1 2 3 4 |
| 466. | Even in my friendships, I look out for my own interests. | 1 2 3 4 |
| 467. | I can see little reason why anyone would want to compliment me. | 1 2 3 4 |
| 468. | I look forward to having a deep, intimate relationship with a member of the opposite sex. | 1 2 3 4 |
| 469. | Being deeply involved with someone of the opposite sex is really important to me. | 1 2 3 4 |

470. Having a long-term relationship with a mate is not for me. 1 2 3 4
471. It's good to be alive. 1 2 3 4
472. I cannot focus my attention on one thing at a time. 1 2 3 4
473. When someone does me wrong, I examine my own feelings in depth, to see what I might have done to contribute to the situation. 1 2 3 4
474. I'm choosy about whom I select as a friend, because I know I can be taken advantage of easily. 1 2 3 4
475. I wouldn't enjoy having sex with someone I was not close to. 1 2 3 4
476. When I was prepared, teachers couldn't fool me with trick questions. 1 2 3 4
477. I can work even when there are distractions. 1 2 3 4
478. I am calm. 1 2 3 4
479. I am picky about my food. 1 2 3 4
480. I would not think of letting someone else be punished for my wrongdoings. 1 2 3 4
481. I live mostly for the moment. 1 2 3 4
482. I think I will go on being curious until the day I die. 1 2 3 4
483. I find myself thinking about things much more deeply than I did in years past. 1 2 3 4
484. My values change as I discover more about life and the universe. 1 2 3 4
485. I am dedicated to my work. 1 2 3 4
486. I believe the best times were in the past. 1 2 3 4
487. Whatever age I am always seems to be the best. 1 2 3 4
488. I have taken action to donate vital organs to science for research or for transplants. 1 2 3 4
489. An unimportant thought may bother me for days. 1 2 3 4

490. It makes me furious when I have to work under pressure. 1 2 3 4
491. It annoys me to have to work hard. 1 2 3 4
492. When I get angry at someone, I boil inside without letting them know. 1 2 3 4
493. I am strong enough to make up my own mind on difficult questions. 1 2 3 4
494. I feel optimistic about life. 1 2 3 4
495. I welcome the opportunity to meet new people. 1 2 3 4
496. I am active in community or school organizations. 1 2 3 4
497. There seems to be some kind of barrier between me and members of the opposite sex. 1 2 3 4
498. Religion is not very important to me. 1 2 3 4
499. In my work I show individuality and originality. 1 2 3 4
500. I do not resent being asked to return a favor. 1 2 3 4
501. It is very important that my mate be faithful. 1 2 3 4
502. I am annoyed with people whose indecisiveness affects my life. 1 2 3 4
503. I feel uneasy if I don't know the next step in a job. 1 2 3 4
504. Mostly I like to just sit at home. 1 2 3 4
505. I no longer feel the need to prove myself to other people. 1 2 3 4
506. With conditions as they are, I find little hope for the future. 1 2 3 4
507. I can't stand the children who live in my neighborhood. 1 2 3 4
508. I don't care whether or not I get anywhere in life. 1 2 3 4
509. When I get tricked, my basic faith in people is shaken. 1 2 3 4

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| 510. | I like being me. | 1 2 3 4 |
| 511. | I seem to understand how other people are feeling. | 1 2 3 4 |
| 512. | I enjoy doing favors for my friends. | 1 2 3 4 |
| 513. | Everything I do has a purpose. | 1 2 3 4 |
| 514. | I enjoy thinking about the things I do better than other people. | 1 2 3 4 |
| 515. | My only ambition is to develop myself as a person. | 1 2 3 4 |
| 516. | The inner wisdom of people never ceases to amaze me. | 1 2 3 4 |
| 517. | No one person meets all my needs. | 1 2 3 4 |
| 518. | I am confident when learning a complicated task. | 1 2 3 4 |
| 519. | In times of crisis, I'm one of the first people my friends call for help. | 1 2 3 4 |
| 520. | I am not irked when people express ideas very different from my own. | 1 2 3 4 |
| 521. | I like finding out how things work. | 1 2 3 4 |
| 522. | I believe the best times are now. | 1 2 3 4 |
| 523. | I enjoy working on practical problems more than on theoretical problems. | 1 2 3 4 |
| 524. | I take the unexpected in my stride. | 1 2 3 4 |
| 525. | I feel ill at ease when I am introduced to someone. | 1 2 3 4 |
| 526. | Once I have committed myself to a task, I complete it. | 1 2 3 4 |
| 527. | How many friends I have depends on how sexy a person I am. | 1 2 3 4 |
| 528. | I am dissatisfied with my sex life. | 1 2 3 4 |
| 529. | I don't think I'll ever find someone to love. | 1 2 3 4 |
| 530. | I enjoy parties. | 1 2 3 4 |

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| 531. | I regret the times my behavior has hurt others. | 1 2 3 4 |
| 532. | I feel self-confident in social situations. | 1 2 3 4 |
| 533. | When meeting people for the first time, I can tell right away whether I like or dislike them. | 1 2 3 4 |
| 534. | I am comfortable being alone. | 1 2 3 4 |
| 535. | When I decide to do something, I am determined to get it done. | 1 2 3 4 |
| 536. | Gossip annoys me. | 1 2 3 4 |
| 537. | I am a good liar. | 1 2 3 4 |
| 538. | It takes something of real significance to upset me. | 1 2 3 4 |
| 539. | I am desperate to have a deep intimate relationship with the opposite sex. | 1 2 3 4 |
| 540. | I do not make long trips without checking the safety of my car. | 1 2 3 4 |
| 541. | I joke with my friends about sex. | 1 2 3 4 |
| 542. | My time is spent preparing to live. | 1 2 3 4 |
| 543. | My parents treated me fairly. | 1 2 3 4 |
| 544. | People look up to and respect me. | 1 2 3 4 |
| 545. | I do things just to get a reaction from other people. | 1 2 3 4 |
| 546. | Every day I need periods of quiet. | 1 2 3 4 |
| 547. | I save my energy for important issues. | 1 2 3 4 |
| 548. | How many friends I have depends on how nice a person I am. | 1 2 3 4 |
| 549. | I cannot stand silence. | 1 2 3 4 |
| 550. | If I were one of the few surviving persons from a worldwide war, I would make it. | 1 2 3 4 |
| 551. | If someone criticizes me to my face, I feel low and worthless. | 1 2 3 4 |

552. I take extreme likes or dislikes to people. 1 2 3 4
553. I get so lonely, I find myself trying to find 1 2 3 4
ways to attract someone to be close to.
554. I dreaded growing older, and I was right. 1 2 3 4
555. I don't follow fads. 1 2 3 4
556. I can work under pressure. 1 2 3 4
557. I prefer to carry out an activity or job, 1 2 3 4
rather than to do the planning for it.
558. I trust the spontaneous decisions I make. 1 2 3 4
559. My secret ambition is to become a famous 1 2 3 4
person.
560. There have been times when I was quite 1 2 3 4
jealous of the good fortune of others.
561. As far as I know about myself, once I choose 1 2 3 4
a mate, I do so for life.
562. I like loud fun. 1 2 3 4
563. I like both my aggressive and tender feelings. 1 2 3 4
564. I punish myself when I make mistakes. 1 2 3 4
565. It takes a lot to frighten me. 1 2 3 4
566. At a large party, I seek out a few people 1 2 3 4
and spend my time only with them.
567. I cheat when I think I won't be caught. 1 2 3 4
568. I like everyone I know. 1 2 3 4
569. The thought of making a speech in front of 1 2 3 4
a group panics me.
570. I obey rules without questioning them. 1 2 3 4
571. I think most people dislike putting 1 2 3 4
themselves out to help other people.
572. I learn well when someone gives me the 1 2 3 4
problem and lets me work out the details
for myself.
573. I am proud of my work. 1 2 3 4

574. I avoid talking about my past, because I feel 1 2 3 4
bitter about the things I have missed.
575. Most of my high school friends were pretty 1 2 3 4
messed up.
576. I am always a loyal friend. 1 2 3 4
577. In times of trouble I have friends I turn to. 1 2 3 4
578. Being helpful to others comes naturally 1 2 3 4
for me.
579. People cannot expect to get to know me in a 1 2 3 4
short period of time.
580. I have almost never felt the urge to tell 1 2 3 4
someone off.
581. When I'm angry with someone, I cannot 1 2 3 4
continue to work with them.
582. I act independently of others. 1 2 3 4
583. I eat balanced meals. 1 2 3 4
584. With the person I am closest to, I share my 1 2 3 4
inner feelings of weakness.
585. It is important to me to know how I will live 1 2 3 4
each moment of my life.
586. I have gone door-to-door collecting 1 2 3 4
signatures on a petition.
587. I am a highly emotional person. 1 2 3 4
588. I feel a deep sense of bitterness about what 1 2 3 4
I have missed in life.
589. I usually talk with strangers when I travel. 1 2 3 4
590. When somebody does me wrong, I get so hung 1 2 3 4
up on my own feelings I can't do anything but
brood.
591. My friends tend to have a lot of personal 1 2 3 4
problems.
592. I am cool and calm when I work. 1 2 3 4
593. I get so caught up with what I am doing, that 1 2 3 4
I lose track of time.

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| 594. | I enjoy being sexually stimulated. | 1 2 3 4 |
| 595. | I only like learning facts that relate to my own experiences. | 1 2 3 4 |
| 596. | I enjoy things that make me think. | 1 2 3 4 |
| 597. | I have more social life than I really want. | 1 2 3 4 |
| 598. | I'm a loner. | 1 2 3 4 |
| 599. | I am ashamed of some of my emotions. | 1 2 3 4 |
| 600. | I am sometimes irritated by people who ask favors of me. | 1 2 3 4 |
| 601. | With the person I am closest to, I share my inner feelings of confidence. | 1 2 3 4 |
| 602. | I enjoy the challenge of having to do things for myself. | 1 2 3 4 |
| 603. | I am proud of having a clear moral position. | 1 2 3 4 |
| 604. | No matter what the task, I prefer to get someone to do it for me. | 1 2 3 4 |
| 605. | I have a basic respect for myself. | 1 2 3 4 |
| 606. | I make my own decisions. | 1 2 3 4 |
| 607. | I am confused by the way people treat me. | 1 2 3 4 |
| 608. | When I die, it's going to take three days to wipe the smile off my face. | 1 2 3 4 |
| 609. | I say things that hurt people's feelings. | 1 2 3 4 |
| 610. | Living for the future gives my life basic meaning. | 1 2 3 4 |
| 611. | I do my duty. | 1 2 3 4 |
| 612. | When making a snap judgment, my first impulse is to trust my gut feelings. | 1 2 3 4 |
| 613. | I learn fast. | 1 2 3 4 |
| 614. | I feel embarrassed when people give me presents. | 1 2 3 4 |
| 615. | I value highly the deep relationships I have formed with members of the opposite sex. | 1 2 3 4 |

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| 616. | I find it difficult to carry on a light conversation. | 1 2 3 4 |
| 617. | I feel inferior to most people. | 1 2 3 4 |
| 618. | How many friends I have depends on how decent a person I am. | 1 2 3 4 |
| 619. | If a clerk gives me too much change, I correct the error. | 1 2 3 4 |
| 620. | I have not felt that I was punished without cause. | 1 2 3 4 |
| 621. | I want concrete or tangible products, not ideas, to show for my work. | 1 2 3 4 |
| 622. | For me, sex and love are tightly linked together. | 1 2 3 4 |
| 623. | I get a feeling for the meaning of life through ideas. | 1 2 3 4 |
| 624. | If I see children doing something destructive, I ask them to stop. | 1 2 3 4 |
| 625. | How many friends I have depends on how right and perfect a person I am. | 1 2 3 4 |
| 626. | If I want to, I can charm a member of the opposite sex. | 1 2 3 4 |
| 627. | I generally attend community or school meetings. | 1 2 3 4 |
| 628. | I enjoy explaining complex ideas. | 1 2 3 4 |
| 629. | I either tell the truth or shut up. | 1 2 3 4 |
| 630. | I give blood (or I would if not medically prohibited). | 1 2 3 4 |
| 631. | I have definite views about religion. | 1 2 3 4 |
| 632. | The happiest years of my life were when I was younger. | 1 2 3 4 |
| 633. | I have been so close to someone, that at times it seemed like we could read each other's mind. | 1 2 3 4 |
| 634. | My life has clear direction. | 1 2 3 4 |

635. Because I have to be so different from situation to situation, I feel that the real me is lost. 1 2 3 4
636. I have no one with whom I feel close enough to talk over my day. 1 2 3 4
637. My life is all mixed up. 1 2 3 4
638. As I look back at my past decisions, although I wish I might have done things differently, I realize those were the best decisions I could make at the time. 1 2 3 4
639. I have serious doubts about my religious beliefs. 1 2 3 4
640. Sometimes I think that when people have misfortunes, they are getting what they deserve. 1 2 3 4
641. I am a serious person. 1 2 3 4
642. Even though I do not like the thought of it, my death does not frighten me. 1 2 3 4
643. I am good at solving puzzles. 1 2 3 4
644. I am amazed at how many problems no longer seem to have simple right and wrong answers. 1 2 3 4
645. I feel angry when people say one thing and mean something else. 1 2 3 4
646. People of the opposite sex think well of me. 1 2 3 4
647. I am good at making small talk. 1 2 3 4
648. I am fair in my dealings with others. 1 2 3 4
649. I make it a point to vote in all elections. 1 2 3 4
650. I have actually sought out information about my school board members in order to form an opinion. 1 2 3 4
651. I feel guilty when I am selfish. 1 2 3 4
652. When I have to speed up and meet a deadline, I can still do good work. 1 2 3 4
653. I find it easy to introduce people. 1 2 3 4
654. I value keeping contact with my family. 1 2 3 4

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| 655. | I take care of myself. | 1 2 3 4 |
| 656. | Nothing is worth losing contact with my family. | 1 2 3 4 |
| 657. | For me to act on a sexual urge, I have to have feelings for the other person. | 1 2 3 4 |
| 658. | When it's time to go to bed, I fall asleep easily. | 1 2 3 4 |
| 659. | I learn from constructive criticism. | 1 2 3 4 |
| 660. | I have not deliberately said something that hurt someone's feelings. | 1 2 3 4 |
| 661. | My religious beliefs and values are complex and not easily explained. | 1 2 3 4 |
| 662. | People rarely forget my first name. | 1 2 3 4 |
| 663. | I like to participate actively in intense discussions. | 1 2 3 4 |
| 664. | I never have serious talks with my friends. | 1 2 3 4 |
| 665. | I would not care to be much different than I am. | 1 2 3 4 |
| 666. | I make my own decisions without relying on the directions of other people. | 1 2 3 4 |
| 667. | I constantly need excuses for why I behave the way I do. | 1 2 3 4 |
| 668. | I feel that others care about what happens to me. | 1 2 3 4 |
| 669. | I like children. | 1 2 3 4 |
| 670. | There are moments when I feel as though I might go to pieces. | 1 2 3 4 |
| 671. | There are some things in life that people just should not question. | 1 2 3 4 |
| 672. | I have very few good qualities. | 1 2 3 4 |
| 673. | For me to work well, I need to have things explained in detail. | 1 2 3 4 |
| 674. | My feelings about nature are almost sacred. | 1 2 3 4 |

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| 675. | I tend to lose a sense of my own personal significance in the face of the complexity of the universe. | 1 2 3 4 |
| 676. | I get a feeling of the meaning of life through people. | 1 2 3 4 |
| 677. | My life has meaning only when my day-to-day existence fits with my plans for the future. | 1 2 3 4 |
| 678. | Other people determine the kind of person I am. | 1 2 3 4 |
| 679. | I feel free to express both warm and hostile feelings to my friends. | 1 2 3 4 |
| 680. | I have no doubts about my ability to succeed in life. | 1 2 3 4 |
| 681. | Feelings of guilt hold me back from doing what I want. | 1 2 3 4 |
| 682. | When I do something wrong, I do something to make up for it. | 1 2 3 4 |
| 683. | I have a person with whom I talk about my deepest feelings about sex. | 1 2 3 4 |
| 684. | I sometimes get so involved in others that I lose my sense of self. | 1 2 3 4 |
| 685. | As I think about my past, there are some points about which I feel ashamed. | 1 2 3 4 |
| 686. | I can be silly when I feel like it. | 1 2 3 4 |
| 687. | When it comes to sex, I like the thrill of the chase most. | 1 2 3 4 |
| 688. | I resent being bossed. | 1 2 3 4 |
| 689. | There is at least one person in my life with whom I can talk about anything. | 1 2 3 4 |
| 690. | I am sensitive to how other people feel. | 1 2 3 4 |
| 691. | I am proud of the things I have acquired. | 1 2 3 4 |
| 692. | With the person I am closest to, I share my inner anxieties. | 1 2 3 4 |
| 693. | I am pretty much the same person from situation to situation. | 1 2 3 4 |

694. Quilt is a feeling I seem to have outgrown. 1 2 3 4
695. My free time is usually spent with my friends. 1 2 3 4
696. I do things for my community. 1 2 3 4
697. I want the people I value to know what I'm really like. 1 2 3 4
698. I think it is all right to get around the law, if I don't actually break it. 1 2 3 4
699. It's pretty neat to be me. 1 2 3 4
700. I am sloppy about my manner of dress. 1 2 3 4
701. I trust others. 1 2 3 4
702. I don't particularly enjoy nature; therefore I don't spend much time being in it. 1 2 3 4
703. When someone questions my worth as a person, I worry that they may be right. 1 2 3 4
704. I wonder whether people react to things the same way I do. 1 2 3 4
705. I get a feeling for the meaning of life through beauty. 1 2 3 4
706. When I feel tense, there is a good reason. 1 2 3 4
707. I like myself. 1 2 3 4
708. I feel awkward around members of the opposite sex. 1 2 3 4
709. I try to cover up when I make a mistake. 1 2 3 4
710. Getting along with loudmouthed, obnoxious people is impossible for me. 1 2 3 4
711. When I don't know something I try to cover it up. 1 2 3 4
712. I just can't be courteous to people who are disagreeable. 1 2 3 4
713. I would let someone take the blame for my wrongdoings, if I thought I could get away with it. 1 2 3 4
714. I hate it when people expect me to return a favor. 1 2 3 4

715. When people express ideas very different from 1 2 3 4
my own, I am annoyed.
716. I rarely check the safety of my car no matter 1 2 3 4
how far I am traveling.
717. The urge to tell someone off is not part of 1 2 3 4
my make up.
718. I have been punished unfairly. 1 2 3 4
719. Sometimes I deliberately hurt someone's 1 2 3 4
feelings.

Appendix B

Respondent's Assessment of Their Physical Well Being.

Rating	Frequency	Percent
1	0	0.0
2 Unhealthy	1	.3
3	2	.6
4	11	3.1
5 Average	25	7.1
6	31	8.8
7	75	21.2
8 Healthy	135	38.1
9	65	18.4
No Response	9	2.5

Appendix C

Respondent's Assessment of Their Emotional Well Being

Rating	Frequency	Percent
1	0	0
2 Unhappy	6	1.7
3	10	2.8
4	17	4.8
5 Average	27	7.6
6	39	11.0
7	74	20.9
8 Happy	136	38.4
9	36	10.2
No Response	9	2.5

Appendix D

Respondent's Job Satisfaction

Rating	Frequency	Percent
1	5	1.4
2 Dissatisfied	5	1.4
3	13	3.7
4	19	5.4
5 Average	23	6.5
6	39	11.0
7	96	27.1
8 Satisfied	105	29.7
9	38	10.7
No Response	11	3.1

Appendix E

Respondent's Rating of Their Personal Relationships

Rating	Frequency	Percent
1	0	
2 Dissatisfied	8	2.3
3	18	5.1
4	11	3.1
5 Average	21	5.9
6	41	11.6
7	92	26.0
8 Satisfied	119	33.6
9	35	9.9
No Response	9	2.5

Appendix F

Request for Participation in Study

Dear MSUEA Member:

A psychology is not complete if it studies illness but not health, weakness but not strength, surviving but not thriving. After nearly four years of preparation, we have developed a research instrument to study the mastery of problems encountered in the development of adults.

What we need from you is your time to answer a measure of adult adjustment patterns. This instrument is long so it will take about three hours of your time to complete. But most people find filling out the instrument interesting because they get a chance to think over many issues about their own total development. If you are willing to do this task for us, fill out the enclosed card and send it to us in the campus mail. You will then receive a copy of the instrument which has a special code sheet enclosed. Your name and code number will be separated from your questionnaire and kept under tight security so no one but Dr. William W. Farquhar or Dr. Frederick R. Wilson will have access to such information.

Because of the length of the instrument we want you to take it over a number of sittings. Work until you feel tired--come back to it later when you are refreshed. We know we are asking a lot from you but we need your help desperately. For too long we have neglected research on the normal, functioning person. One reason, of course, is that you are not an easy group to contact. Therefore, if you will send in the enclosed form and take it upon yourself to complete the instrument you will be making a magnanimous contribution to the science of human behavior.

We need roughly 2000 volunteers to answer the questions in our instrument in order to facilitate analysis of the adjustment scales. If you are willing to participate or if you would like additional information before deciding, fill out the card below and mail it through campus mail to Dr. William W. Farquhar, 439 Erickson Hall, MSU.

Sincerely,

William W. Farquhar, Professor

Frederick R. Wilson
Assistant Professor

Appendix G

Consent Form For Michigan State Sample

1. I freely consent to take part in a scientific study being conducted by William W. Farquhar, Professor of Education, and F. Robert Wilson, Assistant Professor of Education.
2. I have read the letter of explanation of the study, and I understand the explanation and what my participation will involve.
3. I understand that I am free to discontinue my participation in study at any time. However, in the interest of contributing to the knowledge of how normal adults develop, I will try my best to finish the part of the study to which I have committed myself, if I can do so in good conscious.
4. I understand that if I do not complete the questionnaire within three weeks I will be contacted by William Farquhar.
5. I understand that the results of the study will be treated in strict confidence and that after I return the AAAP my responses will be coded and remain anonymous. Within these restrictions, results of the study will be made available to me at my request.
6. I understand that my participation in the study does not guarantee any beneficial results to me.
7. I understand that, at my request, I can receive additional explanation of the study after my participation is completed.

Signed _____

Date _____

Appendix H

AAAP Fact Sheet

Code Number _____

1. Your age in years:
2. Your race: 1-Oriental, 2-Caucasian, 3-Black, 4-Other
3. Sex: 1-Male, 2-Female
4. How many children do you have:
5. Age (in years) of youngest child: (put X if no children)
6. Age (in years) of oldest child: (put X if no children)
7. Marital Status:

1-Married	2-Pair Bonded	3-Divorced
4-Widowed	5-Never Married	6-Never Pair Bonded
8. If married more than once, how many marriages?
(If once or none put X)
9. Income:

1-Under \$4000	2-\$4000-6000	3-\$6000-10,000
4-\$10,000-15,000	5-\$15,000-20,000	6-\$20,000-25,000
7-\$25,000-30,000	8-\$30,000-35,000	9-Over \$40,000
10. Education: (Check highest level completed)

1-Grade school	2-Junior High	3-High School
4-Trade school	5-BS/BA	6-MS/MA
7-EDS	8-PhD/MD	
11. Rate Your social standing:

1	2	3	4	5	6	7	8	9
Lower			Middle			Upper		
12. Rate your sense of physical well being:

1	2	3	4	5	6	7	8	9
Unhealthy			Average			Healthy		
13. Rate your sense of emotional well being:

1	2	3	4	5	6	7	8	9
Unhappy			Average			Happy		
14. Rate your sense of job satisfaction:

1	2	3	4	5	6	7	8	9
Dissatisfied			Average			Satisfied		
15. Rate your sense of satisfaction with personal relationships:

1	2	3	4	5	6	7	8	9
Dissatisfied			Average			Satisfied		

Appendix I

Consent Form For Pine Rest Christian Hospital Sample

1. I freely consent to take part in a scientific study being conducted by William W. Farquhar, Professor of Education, and F. Robert Wilson, Assistant Professor of Education.
2. I understand that I am free to discontinue my participation in the study at any time. However, in the interest of contributing to the knowledge of how normal adults develop, I will try my best to finish the part of the study to which I have committed myself, if I can do so in good conscious.
3. I understand that the results of the study will be treated in strict confidence and that after I return the AAAP my responses will be coded and remain anonymous. Within these restrictions, results of the study will be made available to me at my request.
4. I understand that my participation in the study does not guarantee any beneficial results to me.
5. I understand that, at my request, I can receive additional explanation of the study after my participation is completed.

Signed _____

Date _____

Key For Appendix J Thru Q

R - Rejected

C1 - Criterion 1: Item frequency less than .05.

C2 - Criterion 2: Item correlates higher with social desirability.

C3 - Criterion 3: Item correlates higher with subsequent stage.

C4 - Criterion 4: Item lowers reliability of scale.

C5 - Criterion 5: Item has low discriminatory value.

C6 - Criterion 6: Item loads less than .25 on factor.

C7 - Criterion 7: Item lowers reliability of factor.

CR - Item eliminated due to content reevaluation.

Appendix J

Stage 1 Items

Correlations With Ego Stages And The Social

Desirability Scale

Item** #	1	2	3	4	5	6	7	8	SD	Decision*
12	.49	.47	.49	.51	.43	.21	.30	.40	.30	R-C3
36	.57	.57	.59	.49	.46	.24	.34	.47	.42	R-C3
53	.37	.41	.35	.36	.44	.31	.30	.35	.28	R-C3
78	.22	.29	.29	.17	.34	.39	.22	.26	.10	R-C3
156	.48	.43	.44	.44	.44	.28	.31	.40	.31	
167	.34	.35	.37	.30	.31	.21	.17	.24	.24	R-C3
258	.42	.45	.41	.43	.40	.27	.23	.43	.35	R-C3
263	.41	.31	.37	.33	.38	.26	.36	.36	.30	R-C6
271	.49	.46	.48	.45	.37	.18	.33	.36	.37	
285	.53	.45	.48	.40	.37	.19	.30	.41	.43	
287	.34	.22	.32	.24	.14	.00	.12	.16	.27	
317	.12	.07	.10	.01	-.01	-.01	.03	-.02	.23	R-C2
402	.29	.34	.31	.34	.41	.38	.24	.38	.21	R-C1
407	.00	-.09	.04	-.05	-.08	-.11	-.07	-.04	.05	R-C2
409	.38	.26	.30	.23	.22	.04	.25	.23	.36	R-C6
414	.63	.59	.61	.49	.51	.28	.35	.56	.43	
419	.32	.32	.34	.30	.31	.23	.16	.25	.27	R-C3
461	.32	.35	.31	.28	.49	.45	.31	.41	.21	R-C3
478	.52	.44	.43	.39	.30	.13	.22	.39	.40	
479	.29	.18	.23	.16	.18	.13	.21	.21	.19	R-C6
494	.68	.61	.56	.55	.52	.33	.44	.61	.45	
495	.47	.46	.47	.42	.55	.43	.42	.45	.37	R-C3

Appendix J (cont.)

Stage 1 Items

Item #	1	2	3	4	5	6	7	8	SD	Decision*
509	.29	.30	.29	.28	.18	.02	.16	.15	.26	R-C3
524	.53	.52	.53	.41	.38	.19	.28	.39	.43	
525	.42	.36	.40	.30	.43	.26	.30	.27	.26	R-C3
538	.49	.37	.39	.37	.34	.17	.27	.38	.45	R-C6
550	.49	.47	.40	.43	.47	.29	.37	.41	.30	
565	.47	.44	.42	.40	.37	.20	.32	.34	.36	R-C6
583	.37	.32	.33	.33	.28	.21	.24	.29	.31	
658	.41	.36	.37	.31	.28	.25	.24	.32	.26	
668	.43	.45	.45	.35	.58	.47	.37	.44	.36	R-C3
701	.50	.38	.41	.36	.38	.26	.35	.38	.46	
706	.52	.51	.50	.42	.47	.33	.35	.43	.37	R-C6
1	.49	.45	.46	.33	.35	.20	.21	.44	.32	
52	.47	.40	.41	.31	.27	.14	.18	.31	.35	
106	.55	.50	.52	.37	.40	.18	.29	.45	.34	
299	.59	.59	.57	.58	.51	.22	.31	.53	.33	
305	.52	.46	.48	.46	.44	.28	.36	.41	.39	R-C6
416	.49	.45	.46	.34	.31	.14	.27	.30	.39	
522	.50	.44	.39	.37	.41	.31	.28	.44	.23	

*Refer to p.195

**Items 1, 52, 106, 299, 305, 416, and 522 were originally Stage 2 items.

Appendix K

Stage 2 Items

Correlations With Ego Stages And The Social
Desirability Scale

Item #	2	1	3	4	5	6	7	8	SD	Decision*
1	.45	.48	.46	.33	.35	.20	.21	.44	.32	R-C3
2	.34	.39	.39	.32	.32	.19	.24	.30	.33	R-C3
11	.19	.09	.15	.14	.23	.20	.15	.19	.06	R-C3
14	.53	.45	.51	.51	.44	.22	.31	.40	.31	
23	.39	.31	.36	.24	.23	.14	.12	.20	.25	R-C3
33	.48	.48	.49	.49	.44	.22	.29	.37	.32	R-C3
38	.30	.22	.25	.32	.21	.14	.07	.21	.12	R-C3
41	.36	.29	.32	.26	.29	.21	.12	.21	.17	
46	.11	.02	.07	.02	.01	.05	-.07	.06	-.07	R-CR
47	.22	.34	.29	.19	.17	.49	.17	.22	.40	R-C1
48	.47	.44	.44	.48	.34	.18	.22	.35	.41	
52	.40	.47	.41	.31	.27	.14	.18	.31	.35	R-C3
68	.05	-.02	-.02	.02	.11	.23	.09	.07	-.08	R-C3
77	.43	.38	.34	.37	.35	.28	.19	.40	.25	
79	.06	-.10	-.09	-.03	.13	.19	-.02	.12	-.19	R-C3
84	.30	.22	.28	.29	.23	.18	.13	.23	.18	
93	.23	.24	.26	.19	.20	.12	.06	.12	.09	R-C3
106	.50	.55	.52	.37	.40	.18	.29	.45	.34	R-C3
121	.29	.20	.18	.15	.34	.32	.23	.26	.08	R-C3
129	.37	.37	.36	.26	.34	.18	.20	.28	.32	
158	.38	.18	.24	.32	.36	.20	.07	.26	.01	

Appendix K (cont.)

Stage 2 Items

Item #	2	1	3	4	5	6	7	8	SD	Decision*
161	.29	.12	.22	.25	.19	.16	-.00	.22	.07	
171	.18	.08	.20	.26	.24	.21	.15	.14	.04	R-C3
182	-.01	.01	-.03	-.03	-.02	-.08	-.08	-.08	-.09	R-C3
189	.59	.57	.53	.58	.55	.28	.30	.54	.31	
196	.14	.19	.22	.21	.16	.20	.25	.15	.22	R-C2
210	.21	.02	.11	.18	.20	.16	.05	.17	-.05	R-C5
212	.54	.50	.57	.44	.43	.28	.25	.42	.41	R-C3
214	.32	.29	.29	.19	.21	.10	.13	.19	.21	
215	.52	.47	.51	.53	.42	.25	.29	.37	.37	R-C3
226	.41	.44	.47	.25	.31	.25	.24	.27	.45	R-C2
232	.24	.13	.18	.14	.28	.24	.16	.24	.04	R-C3
238	.27	.16	.27	.27	.29	.30	.13	.33	.10	R-C3
245	.27	.09	.16	.22	.13	.09	.05	.22	.01	
248	.55	.57	.57	.47	.41	.26	.25	.41	.43	R-C3
252	.39	.25	.26	.31	.25	.14	.07	.31	.11	
254	.37	.20	.29	.28	.33	.25	.19	.29	.17	R-C1
257	.37	.29	.35	.32	.32	.26	.16	.26	.28	
259	.42	.38	.38	.47	.29	.10	.20	.35	.31	R-C3
270	.44	.42	.44	.42	.36	.23	.16	.36	.30	
277	.03	-.07	-.08	-.07	.11	.10	-.04	.10	-.18	R-C3
293	.46	.38	.39	.43	.34	.22	.25	.36	.36	
299	.59	.59	.57	.58	.51	.27	.31	.53	.33	R-C3
302	.43	.35	.38	.32	.42	.20	.24	.35	.20	
305	.46	.52	.48	.46	.44	.28	.36	.41	.39	R-C3

Appendix K (cont.)

Stage 2 Items

Items #	2	1	3	4	5	6	7	8	SD	Decision*
309	.48	.48	.48	.41	.43	.24	.27	.37	.38	R-C3
314	.47	.44	.44	.42	.38	.21	.27	.35	.40	
322	.22	.28	.23	.24	.19	.08	.21	.26	.36	R-C2
323	.58	.47	.55	.53	.57	.41	.30	.58	.33	
324	.38	.31	.31	.29	.39	.23	.20	.33	.12	R-C3
325	.61	.58	.55	.59	.57	.40	.32	.58	.35	R-C1
329	.43	.35	.34	.42	.36	.21	.27	.42	.23	
337	.08	.00	-.06	-.04	.10	.11	-.01	.07	-.10	R-C3
348	.30	.13	.20	.23	.31	.26	.13	.27	.01	R-C3
381	.40	.31	.37	.38	.41	.38	.26	.42	.18	R-C1
388	.42	.35	.34	.36	.32	.21	.16	.39	.18	
391	.08	.01	.01	-.03	.08	.16	.07	.05	-.07	R-C3
392	.14	.03	.08	.15	.12	.12	.00	.09	-.16	R-C3
396	.44	.45	.45	.35	.30	.14	.15	.30	.35	R-C3
398	.19	.13	.15	.15	.13	.10	.01	.13	.07	R-CR
403	.22	.12	.14	.22	.27	.18	.10	.21	-.05	R-C3
404	.44	.39	.39	.40	.39	.38	.28	.39	.27	
405	.34	.19	.26	.29	.30	.20	.10	.25	.13	
412	.20	.36	.32	.17	.15	.07	.20	.16	.52	R-C2
416	.45	.49	.46	.34	.31	.14	.27	.30	.39	R-C3
427	.33	.20	.18	.17	.30	.27	.10	.28	.09	R-C6
432	.28	.18	.16	.19	.34	.35	.19	.29	.08	R-C3
448	.49	.41	.40	.50	.51	.43	.33	.52	.25	R-C1
451	.41	.32	.41	.40	.42	.33	.25	.39	.23	R-C3

Appendix K (cont.)

Stage 2 Items

Item #	2	1	3	4	5	6	7	8	SD	Decision*
457	.68	.05	.03	.01	-.06	-.04	-.13	-.02	-.07	R-CR
458	.28	.36	.33	.19	.18	.13	.19	.23	.38	R-C2
463	.31	.16	.23	.24	.23	.15	.01	.22	.08	R-C1
464	.21	.20	.15	.18	.24	.24	.12	.30	.16	R-C3
467	.53	.45	.48	.48	.45	.29	.25	.40	.24	
486	.41	.36	.37	.31	.32	.25	.16	.42	.24	R-C3
489	.48	.49	.49	.43	.37	.22	.27	.35	.32	R-C3
492	.42	.34	.35	.30	.40	.25	.24	.31	.21	
493	.68	.58	.62	.63	.54	.35	.34	.56	.41	
522	.44	.45	.39	.37	.41	.31	.28	.44	.23	R-C3
534	.41	.27	.31	.31	.25	.14	.13	.29	.17	
542	.24	.18	.23	.18	.13	.04	.07	.09	.19	R-CR
546	.13	-.04	.04	.09	.11	.16	.02	.19	-.10	R-C3
549	.39	.26	.36	.31	.25	.27	.13	.31	.14	
551	.55	.52	.51	.47	.42	.20	.29	.36	.40	
558	.47	.40	.35	.42	.40	.29	.29	.38	.26	
563	.48	.48	.40	.40	.52	.44	.35	.44	.28	R-C3
581	.24	.24	.27	.18	.21	.14	.14	.20	.32	R-C2
582	.41	.28	.27	.37	.30	.15	.00	.27	.09	
585	.38	.30	.29	.26	.25	.13	.10	.23	.18	R-C6
593	.28	.21	.19	.34	.23	.22	.14	.33	.25	R-C3
599	.53	.47	.51	.47	.44	.29	.24	.32	.42	
602	.56	.44	.47	.60	.49	.38	.27	.52	.28	R-C3

Appendix K (cont.)

Stage 2 Items

Item #	2	1	3	4	5	6	7	8	SD	Decision*
604	.32	.29	.34	.37	.29	.23	.23	.31	.26	R-C1
605	.63	.61	.60	.58	.54	.39	.35	.58	.39	R-C1
606	.63	.55	.61	.60	.48	.27	.32	.49	.41	
614	.26	.20	.23	.18	.24	.17	.17	.14	.06	R-CR
655	.42	.44	.43	.42	.44	.33	.24	.43	.29	R-C1
659	.45	.44	.45	.44	.44	.34	.29	.43	.36	R-C1
665	.55	.52	.53	.50	.49	.27	.24	.48	.34	
670	.45	.52	.53	.44	.32	.09	.28	.31	.46	R-C2
679	.41	.32	.33	.30	.41	.30	.23	.29	.21	
685	.32	.28	.35	.27	.20	.05	.09	.20	.40	R-C2
686	.29	.15	.19	.23	.34	.34	.16	.26	.00	R-C3
688	.21	.07	.14	.20	.23	.18	.06	.18	.09	R-C3
699	.58	.56	.51	.49	.54	.42	.31	.58	.31	
703	.45	.44	.46	.41	.30	.15	.19	.25	.38	R-C3
707	.69	.66	.63	.59	.63	.42	.41	.63	.39	

* Refer to p. 195

Appendix L

Stage 3 Items

Correlations With Ego Stages And Social
Desirability Scale

Item #	3	1	2	4	5	6	7	8	SD	Decision*
7	.35	.31	.38	.44	.38	.25	.26	.34	.23	R-C3
17	.41	.40	.39	.37	.30	.17	.24	.31	.32	
22	.47	.51	.45	.44	.41	.30	.27	.12	.35	R-C7
24	.16	.10	.23	.14	.15	.15	.04	.15	.02	R-C6
27	.46	.45	.48	.45	.42	.26	.23	.43	.23	
30	.32	.27	.30	.29	.28	.21	.19	.21	.31	
37	.20	.16	.13	.13	.09	.07	.16	.10	.29	R-C2
44	.36	.36	.30	.28	.27	.15	.20	.23	.32	
69	.16	.14	.18	.13	.07	.04	.00	.08	.14	R-C6
75	.24	.17	.20	.22	.23	.23	.27	.20	.20	R-C3
89	.03	.02	.06	.01	.19	.12	.04	.07	-.15	R-C3
91	.28	.34	.39	.26	.49	.36	.27	.32	.14	R-C3
97	.52	.55	.56	.60	.46	.20	.32	.46	.41	R-C3
98	.51	.45	.43	.43	.43	.29	.34	.38	.41	R-C1
101	.13	.05	.20	.13	.14	.10	.03	.08	-.03	R-C3
102	.39	.34	.39	.26	.24	.15	.13	.17	.26	
109	.30	.34	.38	.35	.42	.33	.32	.34	.15	R-C3
112	.28	.28	.26	.21	.15	.02	.06	.15	.21	
113	.32	.27	.21	.26	.26	.11	.19	.25	.25	R-C5
115	.38	.33	.31	.33	.31	.24	.21	.36	.39	R-C2
123	.44	.46	.46	.47	.41	.28	.28	.45	.31	R-C3

Appendix L (cont.)

Stage 3 Items

Item #	3	1	2	4	5	6	7	8	SD	Decision*
136	.49	.40	.40	.39	.41	.31	.31	.36	.38	R-C1
178	.18	.15	.21	.15	.23	.18	.13	.20	.07	R-C3
198	.43	.43	.48	.35	.35	.16	.14	.32	.33	
213	.42	.36	.30	.22	.20	.10	.13	.21	.32	
224	.55	.50	.54	.48	.45	.33	.32	.51	.44	R-C1
231	.31	.35	.19	.12	.17	.11	.18	.22	.28	
272	.05	.26	.44	.39	.42	.23	.21	.35	.13	R-C2
284	.33	.38	.48	.41	.44	.39	.29	.49	.19	R-C3
291	-.05	.00	-.21	-.17	-.15	-.02	.09	-.11	.15	R-C2
326	.53	.47	.48	.47	.45	.27	.34	.43	.46	
335	.44	.38	.39	.35	.37	.34	.25	.33	.32	R-C1
347	.34	.40	.35	.30	.24	.02	.16	.23	.32	
350	.51	.49	.46	.40	.47	.37	.33	.42	.36	
355	.32	.22	.34	.25	.29	.14	.15	.24	.14	
372	-.13	-.18	-.07	-.19	-.01	.01	-.13	-.03	-.12	R-C2
379	.15	.08	.16	.16	.20	.22	.17	.24	.07	R-C3
382	.47	.45	.45	.45	.38	.27	.27	.36	.34	
387	.46	.48	.46	.44	.40	.18	.28	.39	.41	
395	.17	.12	.24	.22	.19	.13	.06	.15	.02	R-C3
401	.26	.28	.32	.22	.31	.23	.20	.28	.26	R-C3
429	.34	.29	.26	.15	.21	.23	.19	.23	.40	R-C2
434	.42	.36	.32	.24	.28	.29	.28	.32	.45	R-C2
438	.33	.25	.37	.26	.33	.26	.19	.28	.21	
459	.26	.21	.28	.29	.26	.18	.13	.18	.11	R-C3

Appendix L (cont.)

Stage 3 Items

Item #	3	1	2	4	5	6	7	8	SD	Decision*
465	.27	.29	.14	.09	.10	.04	.12	.10	.22	
472	.53	.47	.50	.54	.40	.32	.28	.39	.35	R-C3
504	.37	.34	.30	.30	.35	.21	.27	.23	.26	
508	.30	.28	.27	.30	.24	.20	.16	.21	.17	R-C3
521	.38	.40	.41	.44	.38	.26	.30	.34	.33	R-C3
531	.11	.07	.10	.10	.16	.23	.17	.17	.05	R-C3
537	.17	.09	.03	.10	.08	.06	.09	.13	.24	R-C2
543	.42	.36	.24	.20	.22	.09	.17	.22	.31	
545	.21	.18	.18	.20	.10	.16	.12	.17	.34	R-C2
564	.39	.37	.35	.18	.17	.00	.18	.18	.34	
567	.36	.27	.26	.25	.22	.22	.15	.18	.38	R-C2
578	.37	.44	.39	.32	.48	.38	.48	.39	.46	R-C2
590	.55	.57	.52	.43	.39	.20	.32	.36	.42	
611	.35	.31	.26	.35	.18	.08	.23	.19	.30	R-C3
619	.41	.32	.38	.35	.37	.36	.29	.37	.37	
629	.33	.30	.28	.29	.24	.13	.19	.30	.36	R-C2
645	-.01	-.04	.02	.03	.10	.11	.06	.14	-.10	R-C3
648	.47	.44	.45	.45	.47	.37	.38	.44	.42	R-C3
667	.63	.55	.62	.52	.48	.32	.34	.45	.51	
681	.52	.45	.46	.44	.35	.22	.30	.32	.43	
694	.29	.32	.31	.24	.26	.01	.18	.25	.23	
698	.20	.17	.13	.17	.02	.04	.13	.05	.33	R-C2

*Refer to p. 195

Appendix M

Stage 4 Items

Correlations With Ego Stages And Social

Desirability Scale

Item #	4	1	2	3	5	6	7	8	SD	Decision*
4	.38	.43	.46	.42	.37	.21	.28	.38	.29	
6	.33	.37	.30	.37	.30	.09	.20	.28	.30	
10	.51	.42	.47	.39	.40	.15	.29	.37	.22	
18	.56	.48	.51	.43	.47	.29	.32	.45	.29	
35	.36	.22	.28	.23	.19	.10	.10	.17	.20	
43	.32	.15	.16	.14	.12	.05	.05	.15	.13	
55	.36	.32	.28	.37	.26	.11	.25	.25	.25	
57	.06	.00	.07	.05	.00	.06	-.05	.08	.00	R-C2
59	.18	.06	.16	.15	.16	.05	.08	.13	.02	R-C7
82	.58	.34	.40	.39	.40	.22	.29	.38	.26	
83	.44	.42	.41	.45	.38	.20	.26	.36	.30	R-C1
86	.50	.20	.27	.26	.26	.17	.20	.27	.14	
88	.53	.42	.51	.51	.49	.34	.34	.42	.34	
90	.47	.36	.41	.38	.40	.27	.27	.39	.31	R-C1
94	.57	.46	.51	.52	.44	.25	.31	.43	.31	
96	.52	.37	.35	.40	.40	.25	.33	.37	.34	
124	.49	.29	.32	.31	.36	.25	.26	.40	.24	
125	-.26	-.18	-.23	-.24	-.23	-.19	-.13	-.14	-.18	R-C2
133	.00	-.03	-.10	-.02	-.15	-.20	-.08	-.17	.06	R-C3
137	.26	.32	.29	.25	.25	.23	.19	.23	.27	R-C2
138	.43	.39	.40	.38	.42	.32	.35	.40	.19	
139	.29	.37	.34	.36	.32	.18	.20	.26	.36	R-C2



Appendix M (cont.)

Stage 4 Items

Item #	4	1	2	3	5	6	7	8	SD	Decision*
142	.52	.50	.46	.52	.44	.23	.31	.41	.41	
144	.32	.35	.35	.36	.40	.34	.41	.35	.40	R-C1
145	.44	.20	.25	.23	.21	.15	.12	.16	.21	
147	.03	.16	.03	.11	.03	.03	.11	.10	.13	R-C2
148	.24	.25	.28	.27	.24	.15	.18	.25	.25	R-C1
157	.61	.43	.45	.48	.37	.26	.29	.33	.30	
159	.37	.31	.33	.31	.22	.10	.11	.24	.20	
163	.51	.37	.44	.39	.40	.28	.26	.37	.23	R-C1
164	.55	.40	.48	.46	.44	.36	.28	.41	.29	R-C1
168	.45	.31	.36	.33	.30	.17	.23	.32	.21	
179	.14	.20	.17	.16	.19	.16	.09	.12	.16	R-C2
185	-.09	-.06	-.10	-.14	.00	-.01	-.04	.02	-.13	R-C3
186	.55	.46	.48	.38	.42	.27	.30	.46	.35	
187	.37	.27	.23	.33	.24	.15	.23	.22	.26	
206	.11	.14	.10	.20	.09	.04	.10	.01	.17	R-C2
207	.29	.19	.15	.29	.23	.15	.19	.16	.22	
225	.32	.10	.18	.15	.14	.15	.08	.17	.18	
228	.13	.18	.18	.16	.15	.18	.18	.20	.15	R-C2
247	.43	.22	.42	.38	.36	.22	.18	.31	.17	
249	.55	.48	.55	.50	.52	.29	.32	.44	.34	
251	.31	.32	.34	.33	.24	.04	.21	.21	.32	R-C2
264	-.13	-.19	-.06	-.15	-.01	.06	-.13	-.04	-.19	R-C3
273	.32	.34	.34	.39	.21	.13	.06	.21	.30	
282	.60	.30	.37	.34	.37	.36	.20	.38	.27	

Appendix M (cont.)

Stage 4 Items

Item #	4	1	2	3	5	6	7	8	SD	Decision*
295	.53	.56	.60	.55	.50	.31	.29	.49	.31	
301	.61	.50	.53	.48	.53	.33	.37	.53	.27	
327	.63	.50	.50	.51	.42	.31	.26	.42	.37	
338	.45	.34	.34	.38	.30	.18	.24	.31	.38	
341	.55	.37	.44	.44	.48	.29	.32	.45	.24	R-C1
345	.54	.44	.52	.43	.50	.38	.31	.54	.27	
346	.23	.14	.17	.15	.15	.09	.11	.16	.06	
351	-.15	-.33	-.17	-.32	-.11	-.06	-.13	-.12	-.29	R-C3
353	.35	.31	.26	.29	.31	.21	.23	.25	.21	
358	.38	.38	.42	.43	.34	.19	.26	.38	.40	R-C2
365	.56	.47	.49	.51	.44	.34	.22	.42	.33	
366	.63	.45	.49	.49	.46	.33	.32	.46	.33	
373	.41	.25	.28	.24	.31	.15	.16	.32	.17	
375	.61	.46	.53	.50	.52	.35	.33	.55	.33	
390	.34	.21	.28	.28	.23	.18	.18	.24	.16	
394	.39	.40	.44	.37	.56	.48	.41	.51	.21	R-C3
399	.66	.43	.51	.46	.48	.31	.32	.47	.33	
422	.36	.32	.37	.31	.36	.26	.18	.37	.19	R-C3
423	.59	.39	.46	.43	.46	.31	.31	.46	.31	
426	.54	.49	.50	.54	.41	.28	.27	.44	.33	
430	.46	.50	.46	.47	.43	.26	.21	.45	.34	
431	.52	.42	.45	.44	.49	.34	.28	.50	.30	
439	.11	-.29	-.12	-.27	-.08	-.05	-.11	-.10	-.31	R-C6
441	.48	.33	.41	.32	.36	.13	.19	.32	.23	



Appendix M (cont.)

Stage 4 Items

Item #	4	1	2	3	5	6	7	8	SD	Decision*
453	.32	.20	.32	.24	.30	.17	.17	.33	.11	R-C3
454	.23	.10	.06	.07	.17	.06	.27	.10	.04	R-C3
476	.36	.26	.29	.32	.35	.21	.15	.28	.17	
477	.40	.35	.33	.33	.30	.24	.20	.28	.28	
485	.48	.44	.37	.43	.38	.19	.32	.41	.36	
490	.29	.32	.32	.33	.23	.17	.27	.21	.28	R-C3
491	.30	.31	.29	.30	.20	.19	.16	.26	.19	R-C6
499	.61	.45	.53	.46	.51	.32	.37	.46	.36	
503	.28	.26	.31	.23	.20	.12	.22	.22	.21	
518	.63	.48	.54	.45	.45	.28	.32	.43	.31	
526	.44	.37	.37	.42	.38	.26	.26	.28	.37	
535	.45	.33	.38	.39	.37	.28	.24	.33	.32	
544	.54	.56	.56	.56	.59	.34	.38	.51	.33	R-C3
556	.52	.43	.50	.44	.40	.25	.25	.37	.29	
569	.57	.41	.48	.41	.33	.18	.20	.31	.24	
572	.46	.31	.39	.30	.36	.22	.14	.35	.20	
573	.62	.50	.56	.54	.57	.38	.36	.56	.37	
592	.36	.42	.33	.37	.30	.18	.26	.26	.41	R-C2
595	.34	.29	.35	.33	.30	.24	.22	.25	.28	R-C5
596	.64	.37	.51	.46	.51	.39	.38	.51	.31	
613	.51	.30	.41	.32	.38	.27	.25	.32	.23	
617	.46	.47	.51	.46	.42	.25	.27	.39	.27	
628	.59	.34	.41	.35	.44	.31	.31	.38	.28	
643	.32	.20	.21	.19	.19	.16	.21	.15	.16	

Appendix M (cont.)

Stage 4 Items

Item #	4	1	2	3	5	6	7	8	SD	Decision*
652	.54	.35	.44	.36	.36	.25	.26	.33	.28	
656	-.00	-.18	-.04	-.17	-.09	-.15	-.17	-.10	-.25	R-C3

*Refer to p. 195

Appendix N

Stage 5 Items

Correlations With Ego Stages And Social

Desriability Scale

Item #	5	1	2	3	4	6	7	8	SD	Decision*
9	.11	.18	.07	.21	.08	.08	.16	.08	.21	R-C2
16	.33	.21	.25	.16	.16	.28	.08	.31	.03	R-C7
29	.21	.12	.11	.11	-.05	.29	.25	.15	.12	R-C3
42	.07	.09	.23	.08	.05	.03	.17	.01	.12	R-C2
51	.36	.21	.30	.25	.35	.30	.23	.31	.18	
87	.48	.48	.62	.54	.48	.36	.28	.51	.32	R-C3
95	.44	.28	.31	.30	.25	.42	.38	.40	.24	
99	.04	-.01	.10	.01	.15	-.05	-.15	-.04	-.08	R-C7
111	.38	.35	.37	.41	.35	.30	.41	.37	.31	R-C1
143	.44	.35	.29	.29	.28	.46	.45	.35	.37	R-C3
146	.44	.40	.42	.38	.44	.30	.23	.43	.24	
153	.44	.24	.38	.28	.42	.30	.30	.38	.16	
172	.44	.36	.35	.32	.34	.33	.26	.26	.19	
175	.35	.27	.42	.37	.33	.21	.17	.35	.25	R-C1
188	.48	.44	.40	.38	.34	.37	.44	.43	.34	
192	.37	.25	.35	.26	.23	.47	.20	.30	.05	R-C3
193	.22	.22	.25	.23	.24	.17	.21	.29	.21	R-C3
194	.21	.07	.09	.06	.14	.29	.13	.18	.02	R-C3
195	.44	.25	.30	.29	.40	.34	.36	.39	.18	
197	.17	.03	.09	.01	.05	.08	.01	.11	.11	R-C5
199	.59	.52	.50	.48	.46	.43	.37	.44	.35	
201	.20	.22	.13	.16	.14	.15	.27	.20	.27	R-C2

Appendix N (cont.)

Stage 5 Items

Item #	5	1	2	3	4	6	7	8	SD	Decision*
204	.37	.28	.27	.29	.39	.22	.32	.34	.23	
216	.33	.29	.28	.29	.20	.32	.27	.27	.20	
227	.58	.48	.49	.44	.42	.44	.33	.45	.37	R-C1
229	.53	.59	.62	.66	.54	.34	.37	.50	.42	
235	.52	.38	.38	.38	.31	.50	.43	.45	.29	
255	.30	.42	.31	.34	.29	.17	.29	.31	.36	R-C2
261	.43	.46	.48	.45	.46	.36	.28	.44	.35	R-C1
269	.25	.13	.17	.10	.18	.27	.10	.21	-.06	R-C6
274	.27	.30	.27	.26	.21	.38	.14	.29	.17	R-C3
278	.53	.65	.64	.66	.55	.31	.31	.56	.41	R-C3
288	.20	.04	.04	.01	.04	.28	.05	.13	-.10	R-C3
289	.04	.01	.10	.07	.17	-.08	-.09	-.04	-.05	R-C4
303	.39	.23	.36	.26	.30	.30	.21	.37	.01	
304	.47	.43	.36	.41	.35	.34	.33	.41	.26	
306	.49	.43	.41	.33	.33	.37	.22	.37	.24	R-C1
308	.47	.52	.56	.57	.50	.26	.26	.48	.37	R-C3
310	.17	.10	.05	.05	.11	.23	.17	.28	.02	R-C3
311	.28	.12	.19	.13	.14	.28	.19	.28	.08	R-C3
312	.44	.39	.35	.39	.35	.30	.32	.34	.31	
313	.49	.34	.53	.44	.40	.28	.16	.43	.13	R-C3
330	.43	.34	.32	.28	.31	.26	.25	.38	.15	
354	.02	.02	-.02	.01	-.03	.00	.17	.04	.19	R-C2
363	-.23	-.26	-.21	-.25	-.25	-.20	-.21	-.20	-.22	R-C2
378	.00	-.15	-.11	-.11	-.11	.07	.06	.02	-.12	R-C3

Appendix N (cont.)

Stage 5 Items

Item #	5	1	2	3	4	6	7	8	SD	Decision*
389	.24	.30	.27	.28	.25	.34	.08	.27	.22	R-C3
425	.55	.65	.64	.60	.60	.40	.40	.61	.42	R-C3
435	.55	.41	.41	.38	.43	.38	.33	.40	.21	
450	.32	.18	.30	.22	.20	.24	.12	.31	.05	R-C6
466	.00	.03	.00	.07	.03	.08	.16	.00	.24	R-C2
502	.19	.11	.23	.15	.19	.11	-.08	.21	-.03	R-C3
512	.39	.33	.31	.33	.27	.35	.34	.38	.32	
519	.37	.30	.29	.24	.28	.28	.40	.29	.25	
530	.28	.22	.18	.21	.11	.22	.16	.15	.14	
532	.57	.52	.48	.45	.46	.31	.33	.42	.29	
536	.08	.12	.02	.07	.03	.05	.19	.15	.26	R-C2
541	.15	.00	.01	-.02	-.03	.07	.09	.11	-.15	R-CR
571	.06	.14	.13	.12	.08	.04	.14	.04	.26	R-C2
576	.43	.34	.34	.40	.30	.34	.33	.30	.36	
577	.50	.38	.41	.41	.34	.40	.39	.41	.26	
589	.34	.23	.20	.20	.16	.28	.34	.27	.18	R-C3
594	.30	.14	.24	.12	.22	.42	.14	.26	.04	R-C3
607	.43	.53	.52	.59	.51	.26	.32	.42	.46	R-C2
626	.36	.24	.25	.13	.18	.25	.15	.22	.05	
631	.12	.12	.15	.15	.16	.16	.19	.22	.11	R-C3
634	.47	.59	.54	.60	.58	.28	.37	.52	.43	R-C3
635	.51	.56	.63	.62	.54	.33	.30	.46	.38	
637	.48	.63	.62	.64	.56	.32	.33	.49	.46	R-C3
639	-.20	-.26	-.28	-.31	-.27	-.18	-.21	-.18	-.24	R-C3



Appendix N (cont.)

Stage 5 Items

Item #	5	1	2	3	4	6	7	8	SD	Decision*
641	.11	.08	.08	.08	.22	.12	.06	.13	.12	R-C3
646	.49	.36	.35	.28	.31	.37	.27	.37	.23	
653	.42	.33	.35	.35	.36	.23	.27	.21	.29	
663	.56	.34	.45	.37	.52	.42	.36	.29	.22	
664	.46	.21	.33	.28	.29	.40	.27	.32	.15	
672	.48	.44	.52	.45	.50	.32	.28	.46	.24	
678	.44	.40	.51	.49	.43	.29	.22	.39	.30	
693	.34	.39	.36	.41	.38	.17	.22	.31	.34	
697	.36	.23	.26	.23	.26	.35	.18	.36	.05	R-C3
708	.44	.41	.46	.41	.43	.31	.26	.33	.30	

*Refer to p. 195

Appendix O

Stage 6 Items

Correlations With Ego Stage And Social
Desirability Scale

Item #	6	1	2	3	4	5	7	8	SD	Decision*
107	.60	.27	.38	.33	.32	.49	.30	.39	.16	
122	.42	.33	.32	.31	.22	.35	.22	.27	.17	
152	.39	.30	.27	.32	.24	.38	.37	.30	.30	
165	.36	.21	.24	.22	.23	.35	.22	.23	.10	
169	.36	.03	.11	.04	.06	.19	.07	.13	-.06	
211	.39	.04	.15	.10	.12	.26	.08	.18	-.05	
241	.53	.18	.31	.22	.22	.43	.17	.36	.06	
266	.42	.26	.29	.24	.28	.36	.14	.27	.10	R-C1
281	.38	.16	.21	.11	.18	.35	.26	.38	.04	
292	.51	.06	.10	.10	.06	.23	.15	.15	.05	
298	.42	.35	.53	.43	.46	.57	.32	.44	.20	R-C3
318	.40	.36	.46	.39	.35	.49	.24	.37	.19	R-C3
362	.49	.07	.13	.10	.09	.26	.13	.21	.01	
364	.57	.16	.31	.21	.29	.46	.23	.40	.06	
369	.59	.25	.32	.27	.32	.46	.28	.38	.15	
393	.35	.44	.45	.48	.36	.36	.30	.36	.43	R-C2
421	-.01	-.06	-.04	-.12	-.04	-.01	-.16	-.01	-.31	R-C3
433	.05	.29	.22	.33	.14	.16	.17	.18	.47	R-C2
445	.39	.41	.44	.42	.36	.44	.30	.41	.43	R-C2
446	.10	.03	-.02	.07	-.04	-.03	.09	.00	.16	R-C2
447	.54	.25	.26	.20	.21	.38	.24	.40	.09	
469	.42	.10	.12	.07	.14	.25	.11	.17	-.03	

Appendix O (cont.)

Stage 6 Items

Item #	6	1	2	3	4	5	7	8	SD	Decision*
470	.45	.16	.18	.20	.17	.22	.17	.19	.16	R-C1
475	.20	.06	.11	.16	.06	.03	.08	.09	.24	R-C2
497	.34	.46	.40	.40	.39	.40	.34	.32	.31	R-C3
501	.26	.04	.01	.06	.00	.03	.11	.02	.12	R-C5
511	.42	.37	.36	.32	.33	.49	.41	.40	.34	
517	.13	.10	.19	.11	.16	.21	.13	.18	.00	R-C3
528	.20	.26	.26	.25	.19	.22	.03	.23	.19	R-C3
529	.42	.35	.32	.34	.28	.33	.24	.31	.21	
561	.26	.13	.06	.15	.08	.09	.19	.13	.15	
579	-.04	-.19	-.05	-.13	-.03	-.06	-.16	-.04	-.19	R-C3
584	.59	.22	.37	.29	.31	.45	.21	.37	.11	
601	.63	.27	.40	.32	.38	.49	.28	.39	.17	
609	.11	.22	.13	.26	.16	.16	.26	.15	.44	R-C2
615	.55	.31	.33	.30	.15	.48	.28	.38	.17	
622	.37	.11	.10	.12	.12	.20	.17	.14	.13	
633	.48	.20	.23	.17	.21	.41	.29	.39	.08	
636	.36	.23	.25	.27	.20	.29	.29	.30	.17	
659	.41	.29	.21	.31	.17	.28	.31	.24	.34	
683	.48	.15	.19	.15	.15	.35	.20	.25	.03	
689	.57	.25	.28	.26	.21	.43	.27	.34	.15	
690	.46	.37	.37	.35	.31	.51	.41	.40	.34	
692	.58	.26	.36	.33	.32	.49	.26	.40	.15	

*Refer to p. 195



Appendix P

Stage 7 Items

Correlations With Ego Stages And Social
Desirability Scale

Item #	7	1	2	3	4	5	6	8	SD	Decision*
21	.33	.30	.21	.28	.27	.20	.09	.18	.27	
25	.48	.25	.22	.28	.21	.30	.28	.30	.26	
31	.46	.28	.21	.28	.19	.27	.25	.25	.27	
54	.52	.24	.19	.18	.16	.32	.30	.29	.24	
62	.46	.27	.21	.27	.23	.30	.23	.24	.24	
70	.43	.33	.28	.31	.24	.30	.27	.28	.32	R-C1
103	.38	.29	.24	.30	.27	.34	.26	.25	.31	
116	.53	.28	.19	.27	.25	.35	.32	.30	.32	
117	.25	.12	.04	.04	.06	.13	.09	.10	.10	R-C6
127	.39	.33	.19	.31	.28	.28	.17	.20	.32	
155	.17	.03	.03	.06	.02	.07	.04	.06	.11	R-CR
176	.59	.34	.15	.26	.24	.23	.15	.25	.28	
181	.14	.02	-.09	.02	-.07	-.02	-.05	-.03	.06	R-C7
203	.37	.24	.27	.29	.26	.28	.25	.27	.23	
209	.30	.21	.27	.28	.24	.37	.34	.30	.19	
221	.18	.18	.23	.21	.25	.19	.25	.19	.22	R-C2
237	.23	.04	-.01	.00	-.02	.05	.10	.04	.06	
246	.41	.35	.39	.41	.46	.40	.27	.35	.31	R-C3
250	.45	.17	.07	.16	.22	.19	.10	.10	.20	
268	.30	.33	.36	.30	.33	.51	.47	.43	.21	R-C3
290	.11	.23	.20	.26	.21	.36	.33	.29	.28	



Appendix P (cont.)

Stage 7 Items

Item #	7	1	2	3	4	5	6	8	SD	Decision*
296	.47	.37	.38	.40	.42	.43	.37	.46	.34	
321	.41	.49	.46	.44	.42	.52	.40	.46	.40	R-C3
328	.23	.18	.15	.15	.13	.22	.08	.19	.15	
333	.57	.28	.24	.27	.23	.35	.35	.35	.26	
352	.40	.40	.32	.33	.32	.34	.21	.38	.35	
359	.37	.32	.36	.37	.36	.42	.34	.42	.33	R-C3
370	.44	.38	.35	.35	.35	.39	.32	.43	.34	
413	.46	.21	.18	.26	.18	.34	.34	.35	.13	
436	.18	.17	.17	.11	.13	.15	.15	.19	.16	R-C3
452	.54	.29	.25	.27	.31	.34	.32	.30	.28	
488	.16	.11	.10	.08	.05	.07	.00	.08	.09	R-C6
496	.56	.30	.21	.29	.25	.31	.21	.29	.24	
507	.44	.40	.34	.38	.31	.36	.32	.41	.24	R-C1
586	.37	.10	.02	.07	.07	.12	.01	.05	.13	
624	.26	.26	.29	.29	.20	.31	.33	.28	.20	R-C3
627	.44	.20	.07	.17	.14	.14	.08	.14	.21	
630	.40	.31	.24	.29	.27	.25	.14	.28	.25	
649	.47	.34	.29	.36	.35	.29	.20	.28	.28	
650	.52	.28	.17	.29	.30	.22	.09	.13	.29	
669	.54	.32	.21	.24	.18	.33	.31	.32	.25	
696	.62	.34	.26	.30	.33	.36	.27	.36	.25	

*Refer to p. 195

Appendix Q

Stage 8 Items

Correlations With Ego Stage And Social Desirability Scale

Item #	8	1	2	3	4	5	6	7	SD	Decision*
5	.39	.45	.37	.39	.36	.31	.15	.25	.28	R-C3
15	.42	.42	.46	.50	.38	.37	.27	.26	.32	R-C3
64	.31	.23	.26	.24	.26	.32	.20	.23	.22	
67	.29	.35	.36	.35	.36	.32	.23	.26	.19	R-C3
71	.34	.13	.24	.14	.23	.28	.22	.20	.06	
81	.38	.27	.27	.23	.22	.36	.36	.25	.12	
92	.29	.37	.27	.34	.27	.29	.16	.32	.31	R-C2
104	.54	.65	.60	.63	.50	.45	.20	.35	.43	R-C3
126	.33	.12	.20	.07	.11	.30	.26	.17	.00	
130	.56	.67	.65	.66	.57	.58	.33	.39	.39	R-C3
131	.42	.43	.37	.42	.49	.35	.14	.34	.39	R-C3
132	.36	.44	.38	.40	.29	.34	.19	.30	.34	R-C3
150	.36	.14	.18	.13	.17	.27	.17	.19	.12	
184	.44	.18	.26	.22	.28	.26	.21	.22	.16	
202	.48	.49	.50	.51	.47	.44	.27	.33	.35	R-C3
219	.52	.56	.59	.59	.58	.52	.38	.33	.42	R-C3
234	.36	.38	.29	.40	.31	.34	.22	.27	.35	R-C3
243	.31	.30	.33	.27	.35	.32	.20	.17	.24	R-C3
267	.43	.34	.35	.29	.34	.40	.43	.25	.19	
283	.57	.48	.56	.55	.55	.57	.40	.38	.33	
307	.33	.34	.37	.36	.34	.45	.26	.36	.23	R-C3
319	.30	.10	.12	.09	.07	.13	.19	.18	.05	



Appendix Q (cont.)

Stage 8 Items

Item #	8	1	2	3	4	5	6	7	SD	Decision*
342	.46	.38	.43	.38	.39	.39	.22	.21	.24	
343	.55	.56	.60	.58	.57	.51	.27	.26	.40	R-C3
344	.50	.39	.43	.31	.36	.44	.41	.27	.16	
349	-.06	-.11	-.13	-.08	-.11	-.14	-.10	-.08	-.08	R-C3
357	.02	-.14	-.01	-.09	-.04	.00	.00	-.10	-.14	R-C2
361	.26	.20	.30	.23	.32	.30	.13	.17	.14	R-C3
367	.41	.38	.46	.44	.50	.40	.22	.20	.30	R-C3
371	.10	.03	.08	.08	.08	.07	.04	.05	.05	R-C6
374	.18	.09	.08	.11	.16	.16	.14	.04	.06	R-C6
383	.44	.18	.26	.17	.22	.32	.36	.18	.04	
384	.34	.08	.18	.10	.17	.24	.26	.11	.07	
385	.49	.32	.42	.38	.49	.55	.42	.29	.27	R-C3
397	.47	.57	.48	.52	.47	.39	.27	.34	.36	R-C3
408	.28	.17	.29	.25	.30	.29	.23	.15	.08	R-C1
411	.44	.32	.31	.30	.34	.34	.25	.23	.27	
428	.54	.33	.39	.33	.38	.48	.48	.33	.23	
437	.31	.27	.37	.28	.27	.24	.17	.06	.15	R-C3
442	.18	.12	.13	.21	.19	.15	.10	.09	.21	R-C2
443	.13	-.02	-.11	-.01	-.03	.04	.09	.13	.03	R-C3
455	.54	.47	.53	.44	.43	.54	.49	.34	.26	
471	.54	.55	.51	.46	.44	.49	.37	.32	.29	R-C1
473	.30	.17	.21	.19	.18	.30	.31	.26	.25	R-C3
482	.44	.37	.44	.39	.48	.44	.36	.28	.29	R-C3
483	.28	.15	.12	.12	.08	.23	.23	.21	.15	

Appendix Q (cont.)

Item #	Stage 8 Items								SD	Dicision*
	8	1	2	3	4	5	6	7		
484	.33	.19	.23	.11	.14	.28	.25	.18	.12	
487	.48	.47	.46	.45	.36	.40	.35	.28	.32	
505	.20	.28	.30	.27	.21	.21	.03	.08	.25	R-C2
506	.49	.55	.47	.46	.42	.46	.31	.34	.37	R-C3
510	.61	.60	.63	.57	.56	.59	.40	.38	.40	R-C3
516	.28	.06	.06	.05	-.01	.19	.22	.17	.02	
547	.14	.10	.06	.08	.14	.10	.01	.07	.04	R-C6
554	.54	.50	.60	.51	.48	.46	.36	.27	.31	R-C3
574	.35	.46	.48	.52	.40	.42	.26	.23	.29	R-C3
588	.44	.54	.54	.58	.42	.42	.28	.27	.39	R-C3
608	.17	.08	.08	.03	.09	.10	.02	.08	.05	R-CR
623	.48	.27	.34	.32	.44	.48	.37	.35	.22	R-C3
632	.35	.29	.41	.36	.31	.34	.34	.23	.21	R-C3
638	.48	.45	.45	.46	.37	.44	.37	.28	.25	
642	.29	.26	.27	.29	.26	.26	.19	.23	.31	
644	.12	-.02	-.03	-.07	-.05	.05	.08	.05	-.11	
661	.11	-.08	-.03	-.07	.00	.01	.06	.03	-.08	R-C6
674	.34	.08	.12	.06	.07	.17	.15	.10	.08	
675	-.01	-.14	-.12	-.06	-.07	-.17	-.15	-.10	-.08	R-C3
676	.38	.27	.29	.21	.28	.44	.45	.35	.11	R-C3
677	.11	.21	.28	.19	.18	.15	.11	.10	.18	R-C2
684	.13	.03	-.05	-.11	-.06	.10	.19	.18	.02	R-C3
702	.37	.33	.34	.36	.32	.33	.30	.26	.32	R-C1
705	.42	.16	.24	.18	.27	.29	.25	.24	.09	

*Refer to p. 195.



Appendix R

Social Desirability Items And Their Correlation To
The Ego Stages

Item #	SD	1	2	3	4	5	6	7	8	Decision*
20	.33	.34	.32	.38	.43	.35	.23	.48	.27	R-C9
40	.33	.34	.22	.26	.16	.37	.26	.45	.29	R-C9
60	.41	.37	.31	.42	.37	.21	.06	.21	.21	R-C9
80	.43	.24	.09	.21	.08	.07	-.02	.20	.13	
100	.32	.34	.26	.32	.32	.21	.10	.21	.23	R-C9
120	.42	.27	.23	.32	.18	.13	.04	.15	.18	
140	.15	.14	.05	.12	.04	.13	.12	.16	.08	R-C9
160	.30	.25	.21	.23	.19	.24	.19	.22	.20	
180	.29	.16	.22	.28	.23	.16	.19	.16	.17	R-SC
200	.32	.38	.34	.33	.36	.27	.16	.17	.28	R-C9
220	.32	.16	.06	.15	.06	.08	.02	.17	.13	
240	.29	.18	.03	.21	.06	.05	.04	.12	.01	
260	.35	.31	.27	.27	.25	.30	.23	.24	.28	
280	.41	.34	.21	.36	.25	.17	.03	.22	.15	
300	.28	.07	.00	.18	.00	.01	.01	.11	.09	R-SC
320	.31	.38	.43	.40	.40	.38	.23	.23	.40	R-C9
340	.43	.42	.43	.50	.44	.47	.39	.41	.47	R-C9
360	.17	.16	.06	.06	.08	.04	.00	.06	.04	R-SC
380	.51	.37	.32	.39	.24	.27	.22	.25	.27	
400	.47	.48	.44	.47	.48	.42	.23	.38	.42	R-C9
420	.33	.14	.03	.13	.04	.03	.00	.18	.12	
440	.26	-.02	-.16	-.04	-.16	-.22	.14	-.01	-.15	R-SC
460	.35	.26	.12	.22	.11	.10	.06	.16	.07	

Appendix R (cont.)

Item #	Social Desirability Items									Decision*
	SD	1	2	3	4	5	6	7	8	
480	.30	.23	.27	.32	.27	.24	.22	.19	.31	R-C9
500	.34	.33	.38	.37	.38	.30	.26	.27	.29	R-C9
520	.33	.29	.32	.29	.28	.29	.26	.18	.26	
540	.23	.17	.11	.15	.16	.19	.24	.24	.22	R-C9
560	.50	.30	.21	.32	.19	.16	.05	.17	.13	
580	.23	.02	-.17	-.02	-.12	-.13	-.19	.00	-.07	R-SC
600	.29	.20	.11	.21	.06	.08	.03	.11	.07	
620	.32	.18	.06	.20	.09	.05	.01	.07	.06	R-SC
640	.26	.12	.10	.15	.05	.12	.10	.17	.06	R-SC
660	.42	.19	.07	.22	.08	.04	.06	.20	.07	
680	.33	.59	.58	.52	.53	.49	.33	.37	.50	R-C9
700	.25	.22	.15	.22	.11	.23	.22	.18	.11	R-SC
709	.37	.34	.35	.42	.29	.28	.19	.19	.28	R-C9
710	.31	.23	.21	.24	.18	.18	.18	.23	.16	
711	.33	.27	.34	.35	.35	.32	.20	.17	.26	R-C9
712	.42	.34	.34	.33	.29	.30	.24	.29	.29	
713	.38	.41	.47	.50	.45	.48	.38	.33	.44	R-C9
714	.26	.28	.30	.31	.31	.25	.19	.18	.24	R-C9
715	.41	.37	.40	.40	.37	.35	.25	.24	.33	
716	.31	.25	.25	.29	.27	.26	.27	.28	.25	
717	-.30	-.17	.03	.08	.00	.01	.03	-.08	-.03	R-C9
718	.30	.28	.21	.28	.18	.14	.09	.11	.14	
719	.46	.23	.14	.26	.10	.12	.14	.22	.15	
R-Rejected										
C9-Criterion 9: Correlated higher with ego stage.										
SC-Size Constraint										

Appendix S

Consistency Items And Their Correlations

Consistency Items*	Stage	Correlation
287 (+), 407 (-)	1	.1701
297 (-), 604 (+)	2	.1223
98 (+), 326 (+)	3	.5253
390 (-), 207 (+)	4	.4078
351 (+), 439 (+)	4	.7529
183 (+), 456 (+)	5	.4787
269 (+), 594 (+)	5	.4664
241 (+), 692 (+)	6	.5294
152 (-), 690 (+)	6	.4018
333 (+), 669 (+)	7	.6819
627 (+), 496 (+)	7	.5619
243 (+), 367 (+)	8	.5608

*Mastery = +; Non-Mastery = -

Appendix T
F Scale Items

Item Number	Percent of Responses in Non-Mastery Direction
111	.3
381	.6
144	1.4
136	2.3
471	2.3
659	2.5
98	2.8
402	2.8
507	2.8
83	3.1
325	3.1
341	3.1
463	3.1
604	3.1
70	3.7
148	3.7
164	3.7
175	3.7
227	3.7
408	3.7
163	4.0
254	4.0
335	4.0



Appendix T (cont.)

Item Number	Percent of Responses in Non-Mastery Direction
655	4.0
90	4.2
261	4.2
266	4.2
470	4.2
605	4.5
702	4.5
224	4.8
306	4.8
448	4.8

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