This dissertation has been microfilmed exactly as received

MARCIA, James Edward, 1937—
DETERMINATION AND CONSTRUCT VALIDITY OF EGO IDENTITY STATUS.

The Ohio State University, Ph.D., 1964
Psychology, clinical

University Microfilms, Inc., Ann Arbor, Michigan
DETERMINATION AND CONSTRUCT VALIDITY
OF EGO IDENTITY STATUS

DISSERTATION

Presented in Partial Fulfillment of the Requirements
for the Degree Doctor of Philosophy in the
Graduate School of the Ohio State University

By

James Edward Marcia, A.B., M.A.

*****

The Ohio State University
1964

Approved by

[Signature]
Adviser
Department of Psychology
ACKNOWLEDGMENTS

Two motifs are distinguishable in this study. The first is a commitment to the scientific method as the sine qua non of psychology; the second is an extensive interest in the variables provided by psychoanalytic theory. Two persons are largely responsible for these trends: Shepherd Liverant and Alvin Scodel. If this study were to be dedicated in any sense, it would be to them.

Douglas P. Crowne, my adviser, has helped to suggest measures of the unmeasurable, provided enthusiasm when mine was flagging, and been a healthy checkrein on my tendencies to overextend findings. In addition, his supervision of this study as a whole has certainly been beyond the requirements of duty; he has been involved with the project from start to finish even though for the major part of the time, not directly connected with the institution granting the degree.

A total of fourteen people have been directly involved in running the pilot studies and the major experiment. These include reliability judges and confederate experimenters. The study could not have been completed in its
present form without them. In particular, the confederate Es from Hiram College deserve special mention. Their participation was voluntary, enthusiastic, and invaluable. Two individuals who were especially helpful were Arthur Salman, who twice judged EI-ISB's and made important contributions to item content and scoring, and Michael Herzbrun who served as both an interview rater and the author's research assistant.

Special thanks are due Dr. George A. Kelly who has "seen me through" the study from afar, provided some valuable suggestions as to the design, in particular, the "over-solicitousness" treatment condition, and expedited the dissertation's final stages.

And, finally, acknowledgment to my wife, Cathe, who is largely responsible for the happy alternatives of intimacy and generativity.

J.E.M.
### CONTENTS

<table>
<thead>
<tr>
<th>ACKNOWLEDGMENTS</th>
<th>ii</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLES</td>
<td>viii</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I BACKGROUND</td>
<td>1</td>
</tr>
<tr>
<td>Ego Identity: An Introduction to the Construct</td>
<td>1</td>
</tr>
<tr>
<td>Ego Identity: The Context of the Construct</td>
<td>5</td>
</tr>
<tr>
<td>Ego psychology</td>
<td>5</td>
</tr>
<tr>
<td>Historical development of ego psychology</td>
<td>6</td>
</tr>
<tr>
<td>Present status of ego psychology</td>
<td>7</td>
</tr>
<tr>
<td>Ego Identity: A Description of the Construct</td>
<td>10</td>
</tr>
<tr>
<td>Psychosocial stages</td>
<td>10</td>
</tr>
<tr>
<td>The epigenetic principle</td>
<td>13</td>
</tr>
<tr>
<td>Ego identity vs. identity diffusion</td>
<td>14</td>
</tr>
<tr>
<td>Differentiation of Ego Identity from Other Concepts</td>
<td>16</td>
</tr>
<tr>
<td>Identity and identification</td>
<td>16</td>
</tr>
<tr>
<td>Superego, ego ideal, and ego identity</td>
<td>17</td>
</tr>
<tr>
<td>Translation into Research</td>
<td>18</td>
</tr>
<tr>
<td>Previous studies: measures</td>
<td>18</td>
</tr>
<tr>
<td>Previous studies: results</td>
<td>20</td>
</tr>
<tr>
<td>Summary</td>
<td>23</td>
</tr>
<tr>
<td>Chapter</td>
<td>Current Conception of Ego Identity</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>I</td>
<td>Basis for Identity Statuses</td>
</tr>
<tr>
<td></td>
<td>The Identity Statuses</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Development of Measures</td>
</tr>
<tr>
<td></td>
<td>The Ego Identity Incomplete Sentences Blank</td>
</tr>
<tr>
<td></td>
<td>Reliability and findings</td>
</tr>
<tr>
<td></td>
<td>The Identity Status Interview</td>
</tr>
<tr>
<td></td>
<td>Adaptability to environmental press</td>
</tr>
<tr>
<td></td>
<td>Reliability and findings</td>
</tr>
<tr>
<td></td>
<td>Development of Tasks</td>
</tr>
<tr>
<td></td>
<td>The Self-Esteem Questionnaire</td>
</tr>
<tr>
<td></td>
<td>Invalidated self-definition</td>
</tr>
<tr>
<td></td>
<td>Concept Attainment Task under stress</td>
</tr>
<tr>
<td></td>
<td>Overview</td>
</tr>
<tr>
<td>II</td>
<td>HYPOTHESIS</td>
</tr>
<tr>
<td></td>
<td>Ego Identity</td>
</tr>
<tr>
<td></td>
<td>Identity Status</td>
</tr>
<tr>
<td>III</td>
<td>METHOD</td>
</tr>
<tr>
<td></td>
<td>Subjects</td>
</tr>
<tr>
<td></td>
<td>Use of confederate experimenters</td>
</tr>
<tr>
<td></td>
<td>Measurement of subject variables</td>
</tr>
<tr>
<td></td>
<td>Relationship between EI-ISB and Identity Status</td>
</tr>
<tr>
<td></td>
<td>Interview</td>
</tr>
<tr>
<td></td>
<td>Measurement of dependent variables</td>
</tr>
<tr>
<td></td>
<td>Treatment conditions</td>
</tr>
<tr>
<td></td>
<td>Pilot study data on stress conditions</td>
</tr>
<tr>
<td></td>
<td>Procedure</td>
</tr>
<tr>
<td>Chapter</td>
<td>Page</td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
</tr>
<tr>
<td>IV RESULTS</td>
<td>78</td>
</tr>
<tr>
<td>Preliminary Analyses</td>
<td>78</td>
</tr>
<tr>
<td>Sources of error</td>
<td>78</td>
</tr>
<tr>
<td>Effectiveness of experimental manipulation</td>
<td>81</td>
</tr>
<tr>
<td>Reliability of measurement</td>
<td>84</td>
</tr>
<tr>
<td>Main Analyses</td>
<td></td>
</tr>
<tr>
<td>Ego identity and Identity Status</td>
<td>86</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>89</td>
</tr>
<tr>
<td>Year in college</td>
<td>92</td>
</tr>
<tr>
<td>Authoritarian submission and conventionality</td>
<td>96</td>
</tr>
<tr>
<td>Change in self-esteem scores</td>
<td>98</td>
</tr>
<tr>
<td>Reactions to invalidated self-definition</td>
<td>101</td>
</tr>
<tr>
<td>Performance in the Concept Attainment Task</td>
<td>108</td>
</tr>
<tr>
<td>Level of aspiration measures</td>
<td>116</td>
</tr>
<tr>
<td>V DISCUSSION</td>
<td>125</td>
</tr>
<tr>
<td>Experimental Findings</td>
<td>125</td>
</tr>
<tr>
<td>Relationship between EI-ISB and Identity Status</td>
<td>125</td>
</tr>
<tr>
<td>Initial self-esteem</td>
<td>126</td>
</tr>
<tr>
<td>Year in college</td>
<td>126</td>
</tr>
<tr>
<td>F scale</td>
<td>127</td>
</tr>
<tr>
<td>Change in self-esteem</td>
<td>127</td>
</tr>
<tr>
<td>Reactions to invalidated self-definition</td>
<td>128</td>
</tr>
<tr>
<td>Concept Attainment Task performance</td>
<td>129</td>
</tr>
<tr>
<td>Level of aspiration measures</td>
<td>131</td>
</tr>
<tr>
<td>Treatment conditions</td>
<td>132</td>
</tr>
<tr>
<td>Implications of Findings</td>
<td>137</td>
</tr>
<tr>
<td>Measures</td>
<td>137</td>
</tr>
<tr>
<td>Future research</td>
<td>145</td>
</tr>
<tr>
<td>Chapter</td>
<td>Page</td>
</tr>
<tr>
<td>--------------</td>
<td>------</td>
</tr>
<tr>
<td>VI SUMMARY</td>
<td>151</td>
</tr>
</tbody>
</table>

Appendixes

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>157</td>
</tr>
<tr>
<td>II</td>
<td>160</td>
</tr>
<tr>
<td>III</td>
<td>184</td>
</tr>
<tr>
<td>IV</td>
<td>186</td>
</tr>
<tr>
<td>V</td>
<td>202</td>
</tr>
<tr>
<td>VI</td>
<td>205</td>
</tr>
<tr>
<td>VII</td>
<td>208</td>
</tr>
<tr>
<td>VIII</td>
<td>212</td>
</tr>
<tr>
<td>IX</td>
<td>214</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>216</td>
</tr>
<tr>
<td>AUTOBIOGRAPHY</td>
<td>220</td>
</tr>
<tr>
<td>Table</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>CAT Performance for Stress vs. Non-Stress Conditions</td>
</tr>
<tr>
<td>2</td>
<td>Subjects Identity Status According to Author's vs. Others Classrooms</td>
</tr>
<tr>
<td>3</td>
<td>Relationship between Total CAT Scores, EI-ISB Scores, and IQ</td>
</tr>
<tr>
<td>4</td>
<td>IQ Scores According to Identity Status</td>
</tr>
<tr>
<td>5</td>
<td>Analysis of Variance of IQ Scores for the Four Identity Statuses</td>
</tr>
<tr>
<td>6</td>
<td>Change in SEQ Score from Zero as a Function of Positive or Negative ISD for Identity Statuses</td>
</tr>
<tr>
<td>7</td>
<td>Percentage of Item-by-Item Agreement on EI-ISB Scores among Three Judges</td>
</tr>
<tr>
<td>8</td>
<td>Coefficient of Reliability on EI-ISB Scores among Three Judges</td>
</tr>
<tr>
<td>9</td>
<td>Percentages of Agreement on Identity Status Interview</td>
</tr>
<tr>
<td>10</td>
<td>Correlations of Reliability in Identity Status Interview</td>
</tr>
<tr>
<td>11</td>
<td>EI-ISB Scores for Identity Statuses</td>
</tr>
<tr>
<td>12</td>
<td>Analysis of Variance between Identity Statuses in EI-ISB Scores</td>
</tr>
<tr>
<td>13</td>
<td>Differences between Identity Statuses in EI-ISB Scores</td>
</tr>
<tr>
<td>Table</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>14</td>
<td>Relationship of EI-ISB Scores, Identity Status, F₁, and overall CAT Scores</td>
</tr>
<tr>
<td></td>
<td>to SEQ_I</td>
</tr>
<tr>
<td>15</td>
<td>Initial SEQ Scores According to Identity Status</td>
</tr>
<tr>
<td>16</td>
<td>Analysis of Variance of SEQ_I Scores for Identity Statuses</td>
</tr>
<tr>
<td>17</td>
<td>EI-ISB Scores for Ss' Year in College</td>
</tr>
<tr>
<td>18</td>
<td>Analysis of Variance of EI-ISB Scores for Year in College</td>
</tr>
<tr>
<td>19</td>
<td>Identity Status Scores for Ss' Year in College</td>
</tr>
<tr>
<td>20</td>
<td>Analysis of Variance for Identity Status According to Year in College</td>
</tr>
<tr>
<td>21</td>
<td>Differences in EI-ISB Scores, Identity Status, and F₁ Scores According to Year in College</td>
</tr>
<tr>
<td>22</td>
<td>F₁ Scores for Ss' Year in College</td>
</tr>
<tr>
<td>23</td>
<td>Analysis of Variance for F₁ Scores According to Year in College</td>
</tr>
<tr>
<td>24</td>
<td>F₁ Scores for Identity Statuses</td>
</tr>
<tr>
<td>25</td>
<td>Analysis of Variance for F₁ Scores According to Identity Status</td>
</tr>
<tr>
<td>26</td>
<td>Differences in F₁ According to Identity Status</td>
</tr>
<tr>
<td>27</td>
<td>SEQ Change Scores According to Identity Status</td>
</tr>
<tr>
<td>28</td>
<td>Analysis of Variance of Change in Self-esteem Scores for Identity Statuses</td>
</tr>
<tr>
<td>29</td>
<td>Differences in SEQ Change Scores Following either Positive or Negative ISD According to Identity Status</td>
</tr>
</tbody>
</table>
Table 30  Analysis of Variance of Change in Self-esteem for Identity Status Negative or Positive ISD .................................. 101

Table 31  Differences in SEQ Change Score Following Positive or Negative ISD According to Identity Status .................................. 102

Table 32  Reactions to ISD Across Identity Statuses .................................. 104

Table 33  Percentage of Ss in Each Identity Status Changing SEQ Scores in Direction Consistent with ISD .................................. 105

Table 34  Extent of S's Acceptance of ISD According to Type of ISD and Identity Status .................................. 107

Table 35  Number of Ss in Each Rank of Extent of Acceptance of ISD .................................. 108

Table 36  Relationship between EI-ISB Scores and CAT Scores .................................. 109

Table 37  Performance on CAT Variables According to Identity Status .................................. 110

Table 38  Analysis of Variance for CAT time Scores According to Identity Status .................................. 111

Table 39  Analysis of Variance for CAT Requests Plus Guesses Score According to Identity Status .................................. 111

Table 40  Analysis of Variance for Overall CAT Performance Scores According to Identity Status .................................. 112

Table 41  Differences between Identity Statuses in CAT Performance .................................. 113

Table 42  Number of Ss in Each Identity Status Having One or More "give-ups" on CAT .................................. 115

Table 43  Initial Estimate in CAT According to Identity Status .................................. 117
<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>Analysis of Variance for Initial Estimates in CAT According to Identity Status</td>
<td>118</td>
</tr>
<tr>
<td>45</td>
<td>D Scores on CAT According to Identity Status</td>
<td>119</td>
</tr>
<tr>
<td>46</td>
<td>Analysis of Variance for D Scores According to Identity Status</td>
<td>119</td>
</tr>
<tr>
<td>47</td>
<td>Differences in D Score between Identity Statuses</td>
<td>120</td>
</tr>
<tr>
<td>48</td>
<td>High and Low Shifters According to Identity Status</td>
<td>121</td>
</tr>
<tr>
<td>49</td>
<td>Unusual Shifts According to Identity Status</td>
<td>122</td>
</tr>
<tr>
<td>50</td>
<td>High and Low Unusual Shifters According to Identity Status</td>
<td>123</td>
</tr>
<tr>
<td>51</td>
<td>Comparison of High and Low EI-ISB Scores with LOA Measures</td>
<td>124</td>
</tr>
<tr>
<td>52</td>
<td>Percentage of Item-by-Item Agreement on EI-ISB Scores Among Three Judges</td>
<td>202</td>
</tr>
<tr>
<td>53</td>
<td>Coefficients of Reliability on EI-ISB Scores Among Three Judges</td>
<td>203</td>
</tr>
<tr>
<td>54</td>
<td>Percentages of Agreement on Identity Status Interview</td>
<td>204</td>
</tr>
<tr>
<td>55</td>
<td>Coefficients of Reliability in Identity Status Interviews among Three Judges</td>
<td>204</td>
</tr>
</tbody>
</table>
CHAPTER I
BACKGROUND

Ego Identity: An Introduction to the Construct

It is difficult to be tolerant if down deep you are not sure that you are a man or a woman, that you will ever grow together again and be attractive, that you will be able to master your drives, that you really know who you are, that you know who you want to be, that you know what you look like to others, and that you will know how to make the right decisions without once and for all committing yourself to the wrong friend, sexual partner, leader, or career (p. 43).

Thus, Erikson (1950) in discussing the origins of group snobbishness in adolescents describes the identity crisis of young people in our society. The achievement of ego identity, the successful resolution of this crisis, involves regrouping oneself from myriad childhood beliefs and identities, in the face of reawakened sexual drives, body changes, and increased social demands, in order to make those personal commitments essential to participation in the adult world.

1All underlined terms in this first section are Erikson's.
As opposed to more primitive societies where, from birth, children are progressively exposed to role-molding conditions (Whiting & Child, 1953), the emphasis in Western culture, particularly in the United States, has been on the free choice of role (Erikson, 1963). A prolonged period of experimentation is provided in adolescence during which the individual may engage in social play, trying out various occupational choices, religious orientations, and modes of sexual behavior. This moratorium becomes institutionalized for many young people in the form of college education. While this period of time is relatively free from adult concerns of making a living and caring for others, it does press the individual to make a number of crucial decisions about who he is.

Ego identity seems to be one of those terms in psychology that has been eagerly appropriated by clinical workers, perhaps because of its face validity or its psychosocial promise of some rapprochement with traditionally environmentalist academicians. On one hand, this eagerness seems premature; to date only four studies (Bronson, 1959; Gruen, 1960; Smith, 1960; and Block, 1961) have been published in which this fourteen year old concept was used. One reason for this paucity of research may be found in the
admittedly non-operational terms used by the concept's originator:

The integration now taking place in the form of the ego identity is more than the sum of childhood identifications. It is the inner capital accrued from all those experiences of each successive stage, when successful identification led to a successful alignment of the individual's basic drives with his endowment and his opportunities. In psychoanalysis we ascribe such successful alignments to "ego synthesis"; I have tried to demonstrate that the ego values accrued in childhood culminate in what I have called a sense of ego identity. The sense of ego identity, then, is the accrued confidence that one's ability to maintain inner sameness and continuity (one's ego in the psychological sense) is matched by the sameness and continuity of one's meaning for others. (Erikson, 1950, p. 39)

I can make the subject matter of identity more explicit only by approaching it from a variety of angles - biographic, pathographic, and theoretical; and by letting the term identity speak for itself in a number of connotations. At one time, then, it will appear to refer to a conscious sense of individual identity; at another to an unconscious striving for a continuity of personal character; at a third, as a criterion for the silent doings of ego synthesis; and, finally, as a maintenance of an inner solidarity with a group's ideals and identity. In some respects the term will appear to be colloquial and naive; in another, vaguely related to existing concepts in psychoanalysis and sociology. If, after an attempt at clarifying this relation, the term itself still retains some ambiguity, it will, so I hope,
nevertheless have helped to delineate a significant problem, and a necessary point of view. (Erikson, 1956, p. 57)

On the other hand, there are kinds of validation other than those depending on immediate prediction in an experimental setting. Psychoanalysis, out of which the concept of ego identity arose, suggests its own method of validation: internal consistency within a clinical setting. However, this study aims to treat ego identity as a construct (Cronbach & Meehl, 1955), develop measures of the construct, and assess its predictive validity in an experimental situation.

It should be made clear at the outset that we are not seeking to measure a structural "thing" called ego identity. What we are attempting to do is to indicate those behaviors that should follow if the criteria for ego identity, according to operationally defined referents, have been met.

In the process of specifying these referents, we have found it convenient to invent "Identity Statuses." These are four styles of meeting the identity crisis, four "brands" of ego identity. The Identity Statuses are: Identity Achievement, Foreclosure, Moratorium, and Identity Diffusion. Theoretical and empirical definition of these
terms, as well as the superordinating term ego identity, constitute the main focus of this study.

**Ego Identity: The Context of the Construct**

**Ego psychology**

The construct ego identity was developed by a practicing psychoanalyst and has arisen out of the relatively current elaboration of psychoanalytic theory known as "ego psychology." Rather than reacting against orthodox Freudian theory, as have the Neo-Freudians, the ego psychologists have set themselves the task of exploring in more detail functions ascribed to the ego. Hence, there is a greater interest among these contemporary theorists in matters that have been more typically the concern of the academicians; e.g., learning, thinking, group relationships, etc.

Rappoport (1958) defines the field of ego psychology thus:

Before beginning our survey it will be worth reminding ourselves that the ego, the id, and the superego are concepts. They are abstractions which refer to certain characteristics of behavior. In contrast to the id, which refers to peremptory aspects of behavior, the ego refers to aspects of behavior which are delayable, bring about delay, or are themselves products of delay. The ego is a general concept; the explanation of those characteristics of behavior to which it refers requires many subsidiary concepts. Ego psychology encompasses all these concepts and its propositions state
the relationships among them. Thus it is the theory of the relationships among behavioral referents of all these concepts. In addition, however, it includes propositions coordinating ego concepts with the other concepts in psychoanalysis. (p. 5)

**Historical development of ego psychology** (after Rapaport, 1958)

The first three phases of the development of the ego concept are found within the span of Freud's own theorizing. In the first phase, during the Freud-Breuer period, the ego was defined as the "self" or the "dominant mass of ideas" which served to defend the individual against the disruptive emergence of affect-laden memories by dissociating them from consciousness. Hence, the main function of the ego was to prevent the re-encountering of painful affect by preventing the recall of a reality experience.

The second phase began with Freud's discovery that patient's reports of infantile seduction (the painful reality experiences referred to above) were their own fantasies and had no basis in reality. In attempting to account for the source of these fantasies, he temporarily withdrew concern from reality relationships and concentrated on instinctual processes. The role of the ego was now to be established *vis a vis* the id, rather than external reality. Out of this new focus of concern three
important contributions were made to the concept of ego: the secondary process, the reality principle, and the analysis of the repression process.

The third phase of ego development saw an increasing degree of autonomy granted the ego. Whereas, previously, the ego had arisen solely in response to frustration of id impulses and was dependent on the id for both its contents and energies, this latter phase of Freud's theorizing assigned to the ego both genetic roots and energies of its own. It was toward the end of this phase that Freud reintroduced consideration of the role of the ego in reality relationships. The ego now stood as a structure with limited independence, having the function of coping on the one hand with instinctual demands, on the other, with external reality. This third phase culminated in Anna Freud's book on the role of ego and defense mechanisms (1946). Although Freud had progressively set the ego free from its id origins, he left to later theorists the task of elaborating the bases of true ego autonomy in terms of independent energy and ego epigenesis.

Present status of ego psychology

The fourth phase in the development of the concept of ego is the present one. Three main problems faced early
ego psychologists: the independent origins of the ego; a theory of object relations; and psychosocial considerations. The environmental aspects of human development were apparently so compelling that the Neo-Freudians (Adler, Horney, Kardiner, Fromm, and Sullivan) became preoccupied with them to the exclusion of the biological considerations (in particular, libido theory) of orthodox psychoanalytic theory (Munroe, 1955).

Hartmann, Kris, and Loewenstein (1946) established ego roots independent of instinctual drives. According to these theorists (Hartmann, in particular), both ego and id were differentiated out of a common matrix. This implied that the ego, in its origin, had both unique processes as well as its own energy. The infant entered the world "pre-adapted" to an "average expectable environment" (Hartmann, 1939, 1952). Those ego apparatuses whose origin was innate were referred to as mechanisms of "primary autonomy"; those which developed later as a result of defense processes and the subsequent binding of instinctual energies were referred to as apparatuses of "secondary autonomy." Thus, the ego was autonomous in two senses: it had its own pattern for development ("the epigenetic principle") as well as those mechanisms which, while conflict-initiated, eventually became free from their instinctual origins.
The most important recent additions to ego psychology have been made by Erikson whose concepts of ego epigenesis and psychosocial development will be discussed later in this section. One result of these later additions to theory has been an increase in the possibilities for experimental investigation of psychoanalytic propositions; although even these attempts still remain many degrees removed from fundamental metaphysical assumptions of psychoanalytic theory in general. A summary of recent theoretical advances as well as of Erikson's position relative to them is provided by Rapaport's discussion of psychoanalytic theory as psychological theory in Koch (1959):

Freud asserted as late as 1917 that the postponement of the exploration of secondary processes, ego functions, reality relations, and adaptation was a deliberate policy and not a failure to recognize their importance. Actually, Freud did take steps toward including them in the theory in 1900 and in 1911, and consolidated these steps between 1917 and 1926. But only in 1939 did Hartmann give the first systematic formulation of reality relationships and adaptation by expanding the frame of reference of ego psychology. This systematization, which was accompanied by the claim that psychoanalysis is a comprehensive system of psychology, was contained in the studies of Hartmann, Kris, Loewenstein, Rapaport, Jacobson, and Gill and Rapaport.
In the meanwhile, and even before these developments in the mainstream of psychoanalysis, adaptation and reality relationships, especially the role of interpersonal relations and society, were central to the praxis of Adler, Horney, Sullivan, and Kardiner. Erikson was the first to unite this tributary of theoretical development, which enlarged the actual realm of empirical reference, with the mainstream of the theory. (pp. 78-79)

Ego Identity: A Description of the Construct

Psychosocial stages

The achievement of ego identity is a solution to one of the eight psychosocial crises facing man from birth to death. According to Erikson (1963) each of these crises arises within a particular age period; hence, the crises are referred to as phase-specific. During each period of the life cycle, the developing individual has certain abilities and needs; society, at each period, makes certain demands and provides certain rewards. Hence, the basis of this psychosocial approach lies in a cogwheeling or mutuality of the developing individual and his social milieu.

The pattern of development on the individual's side is marked by increasingly differentiated ego functions. As each function matures, society provides both institutions
and caretakers who enable the individual to adapt that newly-developed function to social needs. One should not lose sight here of the notion of mutuality when speaking of adapting. For Erikson does not see the process as one in which the individual is squeezed into a societal mold, but rather a meshing of the individual's needs and capabilities at a particular age with society's rewards and demands at that age. Rapaport (1959) puts this nicely:

In Erikson's conception neither does the individual adapt to society nor does society mold him into its pattern; rather, society and individual form a unity within which a mutual regulation takes place. The social institutions are preconditions of individual development, and the developing individual's behavior and in turn elicits that help which society gives through its adult members directed by its institutions and traditions. Society is not merely a prohibitor or provider; it is the necessary matrix of the development of all behavior. Indeed, the development and maintenance of the ego, of the superego, and perhaps of all structures are dependent on the social matrix; behavior is determined by it and is possible only within it. (p. 104)

Erikson relates shifting zones of libido concentration, growing ego capabilities, and social institutions. The early psychosocial stages parallel psychosexual stages and then extend beyond them to encompass the whole life cycle. Also, each stage is characterized by a particular
task or crisis. These phase-specific crises, their approximate time of occurrence, as well as corresponding psychosexual stages, are presented below:

<table>
<thead>
<tr>
<th>Age</th>
<th>Psychosexual Stages</th>
<th>Psychosocial Crises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infancy</td>
<td>Oral</td>
<td>Basic trust vs. mistrust</td>
</tr>
<tr>
<td>Early Childhood</td>
<td>Anal</td>
<td>Autonomy vs. shame, doubt</td>
</tr>
<tr>
<td>Play Age</td>
<td>Phallic</td>
<td>Initiative vs. guilt</td>
</tr>
<tr>
<td>School Age</td>
<td>Latency</td>
<td>Industry vs. inferiority</td>
</tr>
<tr>
<td>Adolescence</td>
<td>Genital</td>
<td>Identity vs. role confusion</td>
</tr>
<tr>
<td>Young Adult</td>
<td></td>
<td>Intimacy vs. isolation</td>
</tr>
<tr>
<td>Adulthood</td>
<td></td>
<td>Generativity vs. stagnation</td>
</tr>
<tr>
<td>Maturity</td>
<td></td>
<td>Ego integrity vs. despair</td>
</tr>
</tbody>
</table>

This chart gives the impression that a particular crisis occurs only during its phase and that crises are solved once and for all. Neither of these is accurate. A particular crisis is more likely to arise at a particular phase and dominate behavior during that phase, but it may

\[2\text{In all of his writings prior to his most recent, Erikson has referred to the negative outcome of the identity crisis as "identity diffusion." However, in his latest book, he calls this "role confusion." Since the former term has been used throughout this study, and since the author thinks it more accurate to speak of an adolescent's commitments as "spread out" rather than "mixed up" we shall retain "identity diffusion."}\]
recur at subsequent phases. This is especially true of ego identity vs. identity diffusion. One does not achieve a permanent ego identity; an identity crisis may recur in later life. However, the extent and manner in which a crisis is solved makes definite contributions to the solution of subsequent crises. So, for example, failure to develop a sense of "basic trust" is hypothesized as leading to a "mistrust of time" during the adolescent period.

The epigenetic principle

A fundamental premise of the system is the epigenetic principle which asserts that basic patterns of development are present in infancy, and at given stages throughout life certain zones of the body and certain modes of interaction with the environment become prepotent. Research on "critical periods" in child development lends some support to this idea (Mussen, Kagan, & Conger, 1963). The majority of studies on walking and talking indicate that development of these skills awaits apparently genetically controlled maturation of structure; on the other hand, unless sufficient environmental stimulation is provided (mutuality, again) these skills will not appear.

While the epigenetic principle provides a basis for autonomous development of ego functions, it does not state
that behavior will fall into the same pattern across cultures. Any particular culture will mold and utilize a particular ego skill in its own way and toward its own ends. Different societies offer different solutions to phase-specific crises. In other words, even though "identity vs. identity diffusion" may be a cross-cultural problem, there is no necessary cross-cultural solution (Erikson, 1963).

Ego identity vs. identity diffusion

The psychosocial task facing the adolescent is essentially one of integration. To quote Erikson:

From a genetic point of view, then, the process of identity formation emerges as an evolving configuration—a configuration which is gradually established by successive ego syntheses and resyntheses throughout childhood; it is a configuration gradually integrating constitutional givens, idiosyncratic libidinal needs, favored capacities, significant identifications, effective defenses, successful sublimations, and consistent roles. (1956, p. 71)

Faced with the imminence of adult tasks (e.g., getting a job, becoming a citizen, planning marriage) in which he must now become one of the "giver" rather than the "given," the late adolescent is seen by Erikson as having three alternatives. He may form a positive identity, based on a sense of his continuity with the past as it relates to his contributions to the future; he may develop a negative identity
(Erikson, 1956, pp. 83-84), based on a repudiation of his past with an essentially negative approach to the future; or he may develop no identity—identity diffusion—in which both past and future seem relatively meaningless.

The achievement of ego identity involves a synthesis of childhood identifications in the individual's own terms, so that he establishes a reciprocal relationship with his society and maintains a feeling of continuity within himself. It represents a reformulation of all that the individual has been into the core of what he is to be.

In order to do this, he must, of course, relinquish his claims to infantile sources of gratification as well as renounce fantasies of infantile omnipotence (Fenichel, 1945). Doing this requires choosing among alternatives with a subsequent commitment to the alternative chosen.

Two crucial areas in which the adolescent must make commitments are occupation and ideology. With respect to the importance of occupational commitment, Erikson, in speaking of identity diffusion says: "In general, it is primarily the inability to settle on an occupational identity which disturbs young people" (1963, p. 252). In reference to ideology, Erikson states:

To envisage a future, the young adult may also need that something which Shaw called "a religion" and "a clear comprehension
of life in the light of an intelligible theory." I indicated at the beginning that we would call this something-between-a-theory-and-a-religion an ideology ......... Whatever else ideology is and whatever transitory or lasting social forms it takes, we will tentatively view it here and discuss it later — as a necessity for the growing ego which is involved in the succession of generations, and in adolescence is committed to some new synthesis of past and future: a synthesis which must include but transcend the past, even as identity does. (p. 97)

Differentiation of Ego Identity from Other Concepts

Identity and identification

"Children at different ages identify with those part aspects of people by which they themselves are most immediately affected, whether in reality or fantasy" (Erikson, 1956, p. 67). The question then arises as to whether identity is merely a sum of past identifications, a set of new identifications, or something more than either of these. The answer here is to be found in terms of the limitations of the mechanism of identification for the task of identity formation. Again to quote Erikson (1956, pp. 67-68): "The final identity, then, as fixed at the end of adolescence is superordinated to any single identification with individuals of the past: it includes all significant identifications, but it also alters them in order to make a unique and a reasonably coherent whole of them."
ideals or complete placation of the superego, but, in addition, the establishment of identity requires the ego to synthesize superego demands, ego ideals, the individual's capabilities, and society's expectations, so that identity formation is the result of an integration of these factors.

Translation into Research

Previous studies: measures

Having presented some of the theoretical rationale for the concept ego identity, one now asks the questions: "Is it measurable?" "Is it useful?" The answer to the second must, of course, await the solution to the first.

The three published experiments using this construct have contributed three different ways of measuring it.\(^3\) Bronson (1959) used both a structured interview, whose main focus was on topics of "continuity with the past" and "freedom from anxiety," and a semantic differential technique, which yielded "certainty of self-concept" and "temporal stability of self-rating." Gruen (1960) used a Q-sort real-ideal self discrepancy as his main measure of ego identity with a subsidiary 14-item questionnaire. Block (1961), while not purporting to measure ego identity per

\(^3\) A fourth study (Howard, 1961) is not of sufficient detail or significance to necessitate inclusion.
Superego, ego ideal, and ego identity

All three of these concepts are related in some way to an individual's self-esteem. The ego ideal, which Freud conceived of as that facet of the superego closest to social reality, is similar enough to ego identity to necessitate differentiation. The relationship between ego identity and the superego is not so close.

The superego differs from ego identity in that it is archaic, punitive, and unchangeable; whereas, ego identity is contemporary, both rewarding and punishing (seldom as harshly punitive), and subject to constant revision. A superego is to a great extent forced onto a child; an ego identity is achieved.

Salient to the concept of ego ideal is a quality of unattainability. The ego ideal is composed of internalized aspirations, particularly the aspirations a given society has for the individual. "The ego ideal opens up an important avenue for the understanding of group psychology. In addition to its individual side, this ideal has a social side; it is also the common ideal of a family, a class or a nation" (Freud, 1914, p. 101). Ego identity differs from ego ideal in that it is even closer to social reality. Also, the achievement of ego identity is not only a real possibility, as compared with the improbable attainment of ego
se, reasoned from the theory underlying the construct that the extent of "role variability" was a major referent for identity vs. identity diffusion.

From the point of view of the author, a criticism may be made of the measures used in these studies. One of the most significant and possible fruitful aspects of Erikson's theory is its emphasis on the mutuality of individual needs and social expectations. This is embodied in the term psychosocial. Yet none of these measures evaluated the individual vis a vis his society. None of them classified subjects with respect to the two phase-specific tasks which Erikson indicates are central to the formation of an ego identity; namely, selection of an occupation and formation of an ideology. What these studies seem to have done is to have investigated some feelings and behaviors associated with achievement of identity without explicitly setting up criteria for presence or absence of ego identity.

Two themes predominate the thinking of these authors' about ego identity as reflected in their measures of it. The first is a variability-stability dimension of self-concept. Bronson (1959) refers to this as "temporal stability of self-rating"; in Gruen's study (1960) it occurs as a dependent variable: the subject's degree of acceptance of a false personality sketch of himself; for Block (1961)
this takes the form of "role variability." It seems that ego identity is associated with a certain self-stability and identity diffusion with a difficulty in self-definition.

The second dominant theme is one of overall adjustment. This is reflected in the Bronson study as "freedom from anxiety" and in the Block study as "susceptibility to anxiety" as measured by the California Psychological Inventory. Both of these themes are incorporated into the present study - the first explicitly, the second implicitly.

Previous studies: results

Bronson's study attempted to specify some referents for the construct ego identity by intercorrelating two structured interview variables ("continuity with the past" and "freedom from anxiety") with two semantic differential measures ("certainty of self-conception" and "temporal stability of self-rating"). He found significant intercorrelations among all of these. While the age of his Ss was appropriate (19-22), perhaps the number and composition of the group was not. Correlations from the interview measure were based on an N of 18, of whom at least 14 were female. Now it is probably no coincidence that all of Erikson's extensive examples of ego identity are men. His book, Young Man Luther (1958), his biographical sketches of George Bernard Shaw (1956), Adolf Hitler and Maxim Gorky
(1963), as well as his description of the typical American identity (1963) - all involve ego identity in males. Certainly this is consistent with a psychosocial approach in which the society sets different tasks, delineates different roles, for men than it does for women. The achievement of ego identity likely has different criteria for women, and if this is the case, any study attempting to measure it should certainly be accompanied by some theoretical rationale for the particular variables used.

Although the Gruen study did yield the interesting finding that Ss with a high self-ideal self discrepancy tended to accept fake personality descriptions more than those with a low discrepancy, there is some question as to whether self-ideal self discrepancy is sufficient as the sole indicator of ego identity. Some support for this skepticism is found in the low correlation Gruen found between a questionnaire measure of ego identity and the dependent variable of acceptance of fake personality descriptions. Previously, he had found a high correlation between the questionnaire and the discrepancy score based on the Q sort. That is, Ss who tend to see a great discrepancy between the way they are and the way they would like to be also score low on a questionnaire measure of ego identity.
If both measures, the questionnaire and the Q-sort, are referents for ego identity and acceptance of fake personality descriptions is to be the validating criterion, then either they both should predict or not predict to it. The fact that they do not suggests that the measures may not reflect the same construct.

The same criticism of a too-limited definition of ego identity may be directed at the Block study whose sole criterion was "role variability" as determined by the S's ranking a set of twenty adjectives eight times to characterize his behavior with eight "relevant others." These were then factor analyzed and two groups of role rigid and role diffuse Ss were set up. The author had predicted a curvilinear (U-shaped) relationship between role variability and susceptibility to anxiety. That is, both rigid and role diffuse Ss should express more anxious tendencies. He found instead a linear relationship. Role rigid Ss seemed to experience least anxiety, role diffuse, the most. One factor that may account for this somewhat surprising result is the possibility that the same personality variables which lead to role rigidity may also lead to giving "socially desirable" (Crowne and Marlowe, 1960) answers on a rather non-subtle measure, The California Psychological Inventory.
In short, the measure intended to reflect consequences of role rigidity may just have been too insensitive. In addition, Block suggests that the role rigid hypothesis failed to hold up because of too homogeneous a population. That is, by the time one gets to college, enough role variability has been developed to exclude him from the category of "really" role rigid. The present study, although employing different terminology, suggests that there are role rigid individuals (the Foreclosure Status) in college and that they do exhibit different characteristics from the role diffuse (the Identity Diffusion Status).

**Summary**

A central criticism of previous studies deals with the extent of their disregard of some of the theoretical bases and the degree of complexity of ego identity. This over-simplified approach is reflected to a great extent in the means of assessing ego identity, to a lesser extent in the dependent variables used.

**Current Conception of Ego Identity**

**Basis for Identity Statuses**

There are two notions which seem to characterize Erikson's writing about the phase of late adolescence. The first is the presence of some period of re-thinking,
sorting through, trying out various roles and life plans. This is taken to be the behavioral referent for the internal process referred to in psychoanalytic theory as "the synthesizing function of the ego" (Erikson, 1956, p. 104).

We are calling this decision period crisis, a time during adolescence when the individual seems to be actively involved in choosing among meaningful alternatives.

The second indication of the achievement of ego identity is subsequent commitment, particularly in such important life areas as occupation and ideology. Commitment refers to the degree of personal investment the individual expresses in a course of action or belief.

In considering areas of the individual's life within which to evaluate his Identity Status, we have chosen occupation and ideology, the latter separated into religion and politics. These areas recur in Erikson's theoretical writings and are particularly salient in his biographical sketches (Erikson, 1956, 1958, 1963). These areas seem to be among the most crucial to the late adolescent, for it is the first time that he is required by his society to make a significant positive contribution to both his and its survival—to get a job. Also, as he stands on the threshold of responsibility for the life cycles of others, he is faced with the problem of constructing or re-constructing a
philosophy of life - a Weltanschauung - to accompany his transition from the role of taker to giver.

The Identity Statuses

All published studies thus far have dealt with the polar outcomes of the identity crisis: identity or identity diffusion. But some "identities" are purchased cheaply, while others come dearly. For example, it is difficult to speak of one achieving an identity if he becomes a Methodist Republican farmer like his Methodist Republican farmer father, with little or no thought in the matter. Nor does he meet one of our two criteria for identity achievement: experiencing some sort of crisis period. This line of reasoning began the proliferation of Identity Statuses. Among those individuals who share in common a commitment, one group having experienced also a crisis period is labelled Identity Achievement: the other group, with no apparent crisis, is called Foreclosure.

In examining those individuals called identity diffuse who seem to have in common a lack of commitment, the one outstanding factor is that some seem to have given up (or are at least presently unconcerned), while others are struggling. Those who seem relatively unconcerned over their lack of specific investments in their future are probably
properly called **Identity Diffusion** individuals. However, it was felt that another term should apply to the strugglers; **Moratorium** was chosen.

In this study, then, the individual is to be placed into one of the four Identity Statuses for each of three areas: occupation, religion, and politics. The following is a description of the way in which the two criteria of crisis and commitment are combined to yield an Identity Status. Also included is a short sketch of how each Status might appear as well as some verbatim statements from Ss in each Status.

**Identity Achievement.** Criteria: The individual has passed through a decision period or crisis and appears committed to his occupation and/or ideology (plus crisis, plus commitment).

Sketch:

**Occupation.** He has seriously considered several occupational choices or deviated from what his parents had planned for him. He is reluctant to switch fields now and seems to think of himself as a teacher, engineer, etc. (Being a something means the difference between "taking courses in education" and seeing oneself as "a teacher.") Although his ultimate choice may be only a variation of the
parental wishes, he seems to have experienced a crisis period and made a resolution on his own terms.

The S had been in college for a quarter and then went into the Navy. He was originally interested in engineering, but is currently in a pre-med program. He made this choice during the service. "There was no sudden enlightenment, really, I just got interested. I wanted to be involved with people more than an engineer would. I mean help people. ....I'd be interested in going into general practice. Anything, now, but being a doctor I don't think I'd like. I'd been pushed into engineering by people in high school and my parents. That probably had something to do with taking off to the Navy. (How willing to give this up for something better?) I don't think very willing. I don't know what better could come along, personally."

Religion. He appears to have gone through a period of doubt - either of past belief or disbelief - with a resulting re-evaluation of faith and a commitment to some action: church-going, religious discussions, etc. Whether he ends up as religious or not religious in the conventional sense is not important, only that he seems to have rethought childhood concepts and achieved a resolution that leaves him free to act.

I'm Presbyterian and so are my parents. I was president of the youth group. (Come to doubt any religious beliefs?) Yes. Well, my mother is sort of a religious fanatic; I don't mean she gets up on a soapbox, but in the house she kind of pushes it on us. And
both my brother and I just rebelled against it. I think my beliefs are different from hers now and from dad's, too.

**Politics.** The presence of a crisis period is probably more difficult to ascertain here than in the other two areas. He shows some difference from his parents' political opinions; for example, he may see himself as more liberal than they are. Evidence of commitment is usually seen in the affective nature of his pronouncements, his tendency to dispute political questions with others, and any political action-taking whatsoever.

I'm going to register as a Democrat. (How about your parents?) Well, they're Republicans. I think that I agree with much more of the Democrats' platform. Now whether this is because of the Democrats appeal more to the younger person, I don't know. I just don't think that the Republican party has as much to offer as the Democrats. (Any particular issues that you're interested in?) Civil rights, for one thing. I think the country needs the civil rights bill. I do get into a lot of discussions about political issues.

**Foreclosure.** Criteria: The individual does not seem to have passed through any real decision period but, nevertheless, appears committed to occupation and/or ideology. In this case, his choices coincide with those of parents or parent surrogates whom he does not seriously question. (minus crisis, plus commitment).
Sketch:

**Occupation.** It is difficult to distinguish where his parents' goals for him leave off and where his begin. He seems to have experienced either no choice period or only brief and inconsequential ones. He is becoming what others have influenced him or intended him to become as a child. In addition, all of this seems ego-syntonic.

The S is majoring in general science and plans to go into dentistry. "I never considered doing much else, really. My grandfather is an eye specialist - but that takes a long time. I thought of that for awhile. I think it would mostly be dentistry because my father has a practice built and every thing. (Did your parents have any plans for you?) They've always wanted me to become a dentist or an MD or both. It's just sort of been with me all the time, I guess."

**Religion.** His faith, or lack of it, is virtually "the faith of his fathers (or mothers, as the case may be) living still." College experiences serve only as confirmation of childhood beliefs. Dissonance seems absent and he participates in religiously oriented activities if this is consistent with parental background.

(Do you have any particular religious beliefs?) I'm a member of the Baptist church. Everyone in the whole family has been a Protestant. We generally go where we like the minister, if we like the sermons and all, that's what matters most. The
whole family goes to the same church. (Have you ever had any doubts about your religious beliefs?) No, I don't believe so. We discuss religion sometimes; I find myself pretty much in agreement with them."

**Politics.** Again, he is what his parents are with little or no personal stamp of his own.

(Do you have any particular political preferences?) Well, we're, rather, the whole family has been rather conservative. I'm inclined to be conservative myself. I'd probably vote for Goldwater, so would my parents. I'm positive."

Because of his commitment and apparent self-assuredness the Foreclosure may appear similar to Identity Achievement. However, one feels that if he were placed in a situation where parental values were non-adaptive, he would soon be greatly at a loss. This contrasts with the Identity Achievement, who does not appear as if he would be overwhelmed by sudden shifts in environment or by unexpected burdens of responsibility.

**Moratorium.** Criteria: The individual is presently in a crisis period, trying to make up his mind. Commitments are likely to be vague and general. An important quality here is a sense of active struggle among alternatives. (in crisis, some commitment)
Sketch:

Occupation. He is dealing with issues often described as "adolescent." He is concerned less with preparing for a specific career than with choosing what career. His parents' plans are still important to him and he seems to be caught in the conflict of achieving some compromise among them, society's demands, and his own capabilities. It is not that he feels completely overwhelmed, but that he is unusually internally preoccupied with what, at times, seem to be unresolvable questions.

I'm majoring in political science and history. Right now, it looks like I'll be teaching. But I'm still considering other things like law school or maybe some business like insurance - but it's probably teaching. I just decided on history this year. Did well on a couple of upper level courses and the professors encouraged me. Teaching seems the most attractive. I like the atmosphere and I'd have a chance to work with things I'd be interested in. But it just depends. I've only been thinking about business recently. A couple of friends of mine have had terrific offers and I'm almost in the same line. It's pretty attractive. I don't know. Law school will depend on grades. ....There's a question with law school as to whether I can get through and whether I can handle a lawyer's duties. (How willing would you be to give up teaching if something better came along?) I could, I guess, but I don't know anyone who's gotten into it that didn't like it. If I went into teaching, I'd probably stay in it a good while. ....The problem now is what to go into, but right now it looks like teaching.
Religion. He seems to be dealing with fundamental religious questions, not just a mere "shopping around" among denominations.

Gee, I'm such a poor Christian. I feel like a kind of hypocrite. I'm a Methodist; I don't like the procedure in the church here at college. I've gotten away from church, but I don't know if I'm sorry about it. I still have some basic Christian beliefs. I've begun to question a few things now. They're still pretty much questions. I don't want to decide them for awhile. (What sorts of questions?) Well, even the "virgin birth" and things like that. ....My beliefs are a little different from the folks. They accept pretty much the church doctrine completely.

Politics. He is likely to be doubtful about political and religious commitment, but he seems dissatisfied with the doubt and is trying to effect a resolution.

I've looked into it some. Well, I'd ---- my parents were Republicans and so I was Republican for a long time. I'm kind of in favor of the Democrats just to give them a chance right now. I can't see too much difference between the two parties. I'd say I'm a liberal in terms of wanting to modify or change things. I almost believe in a welfare state, I guess. I don't know though.

In some cases there may be a denial of an internal struggle which, according to the data presented by the S, must be there. For example, in the case of one S's conflict between a scientific attitude and religious belief, one suspects the finality of his stated solution: "I just keep
them separate." Also, some Ss may show two or three different Identity Statuses for one of the three main areas. That is, an occupational choice may have elements of Identity Achievement, Moratorium, and Foreclosure. Although these cases are rare, when one Status does not predominate, a scoring of Moratorium is given.

At his worst, a Moratorium is paralyzed, unable to act decisively in one way or another - not because of a lack of commitment, but because of equal and opposite commitment. His behavior closely resembles that of Identity Diffusion. At his best, he seems reasonably well put together, verbally expressive about his conflicts, somewhat utopian in his ideological outlook, and often quite intelligent. He approaches quite near Identity Achievement.

Identity Diffusion. Criteria: The individual has either experienced no crisis or has passed through a crisis; in either case, there is little, if any commitment (plus crisis, minus commitment; minus crisis, minus commitment). Sketch:

Occupation. No one occupational choice is really decided upon, nor is there much genuine concern about it (as contrasted with Moratorium). There is sometimes little conception of what a person in the stated preferred occupation
does in a day-to-day routine. He only knows that it would be "nice" to be a doctor or a teacher. The occupation would be readily disposed of should opportunities arise elsewhere.

Well, right now it looks like I might major in history, but if I pull my psych grade up, I'll major in psych. Not too much you could do with a history major. Teach or go into law, I guess. I guess I'd probably teach. With a psych major, I don't know what I'd do. I guess I'll have to talk with some psych majors. (What interested you in history?) I did pretty well in it. Got good grades in it. ....Don't have any plans for when I get out of school. ....Folks wanted me to be a lawyer. I imagine it's fine. It's good money. But I don't know enough about it. (What interests you about being a teacher?) Well, you get two months off in the summer, and I imagine if I taught in college it would be very good money. And I kind of like history. I mean, I take to it very readily. (How willing would you be to give this up if something better came along?) I'd probably give it up quite rapidly. Any definite choice is pretty much up in the air right now. I wrote home the other day and said psych might be a good major. But you have to take an awful lot of courses for that, almost fourteen, I guess.

Religion. He is either uninterested in religious matters or takes a smorgasbord approach, in which one religious faith is as good as any other, and he is not averse to sampling from all. The S will sometimes state that his denomination is the same as his parents, yet show little commitment to it.
I'm Presbyterian and, I discovered this in history - latitudinarian. I don't care what anyone else does. No, I favor any religion. I have no biases. About five or six years ago I was in this youth group, but it wasn't much. I don't talk about it much; it was a long time ago. I don't make it to church around here. (Ever have any doubts about your religious beliefs?) Well, I suppose I never did really believe thoroughly. Let's face it, the young are liberal and I never - there's many things I don't believe. I can't think of any right off hand, but if you were to name some things ---- (Well, take God, for example.) Well, I took this course in Indian religion last year and it kind of hardened me up towards God. I think he's more indifferent than anything else. I don't think he's a loving god. I think he's more indifferent and he knows there's probably better things to come later, so don't worry about life. He's not gonna push it. So in terms of doubting things, I guess I wasn't that sold to begin with. If I ever get into a discussion, I throw this Indian religion business in. That pretty well covers what I believe. I mean, I'm not as way out as the Hindus or anything; I guess I still believe a little bit in the tradition. (Who did you have the course from?) I don't remember.

Politics. Both political and social interest are low. He has little idea or concern where he stands with respect to society - as if the world went its way and he went his with little intercourse between the two. In short, cog-wheeling is absent.

(Do you have any political preferences?) No. My parents are split-ballot. They change their minds. I don't find myself going much one way or the other. I was for Nixon in '60,
but I guess I'd like Johnson in again. (Have you ever taken any political action - carried signs, written letters, joined groups, etc.?) No. I'm just generally indifferent.

There appear to be two types of Identity Diffusion. One is a pre-crisis lack of commitment. The individual would be a Foreclosure if he strongly advocated parental values. There is some possibility here that the parental attitude was one of: "It's up to you; we don't care what you do." Under this guise of democratic child-rearing, the parents may actually have provided no consistent structure which could be a guide for the growing individual, and later on, an image against which to compare himself. Because he never really was anything, it is difficult for him to conceive of himself as being anything. Child-rearing considerations aside, the problems that are so immediate and self-consuming for the Moratorium never really occur to this "pre-crisis Identity Diffuse" person.

The second type of Identity Diffusion is the "post-crisis Identity Diffuse" who seems committed to a lack of commitment. This individual actively seeks to avoid entangling alliances. His motto is: "Play the field." No area of potential gratification is really relinquished; all things are possible for him and they must be kept that
way. The main element that both pre- and post-crisis Diffuse individuals have in common is a lack of commitment.

At his worst, an Identity Diffusion exhibits the disorganized thought processes, disturbed object relations, and loosened ego boundaries associated with schizophrenia. At his best, he is a rather blithe, carefree individual who can "take or leave" both people and ideas.

Some support for the rationale back of these Statuses is found in the observations of previous researchers. Bronson (1959) does not see temporary role diffusion as a necessary pathological state. He also says that "premature identity closure could lead to a rigid denial of potentially creative personality components." His "temporary diffusion" and "premature identity closure" may correspond to Moratorium and Foreclosure. Block's (1961) "low role variability" Ss, whom he interestingly finds least susceptible to anxiety, may correspond to either Identity Achievement, or, more likely, Foreclosure.

**Summary**

Having isolated our two main criteria: crisis and commitment; delineated the life areas to which they are to be applied: occupation, religion, and politics; and constructed Identity Statuses (Identity Achievement, Foreclosure,
Moratorium, and Identity Diffusion) summarizing the individual's particular style of handling the identity crisis, our next task was to develop operational measures.

Development of Measures

The central problem in measuring Identity Status is to do justice to the complexity of the variables yet permit objective scoring. We were interested, too, in assessing not only Identity Status but also overall ego identity. The two measures finally decided upon that would allow Ss both freedom of response and yet be objectively scorable were an incomplete sentences blank and a semi-structured interview. The incomplete sentences blank was used as a measure of ego identity; the semi-structured interview was used to ascertain specific Identity Status.

The Ego Identity Incomplete Sentences Blank

A form of semi-structured projective test known as a sentence completion test was developed to measure ego identity. Some advantages of this instrument (according to Rotter, 1954, pp. 302-305) are: more economical in time than an interview; permits freedom of response; allows for objective scoring; some disguise of purpose; enough structure that Ss do not feel unduly threatened; variety of stems makes it adaptable for research purposes.
The Ego Identity Incomplete Sentences Blank (EI-ISB) (Appendix I) originally consisted of 25 stems which the S was asked to complete "expressing your real feelings."

These original 25 stems were chosen from a pool of 50 by 5 clinically trained psychologists who made their selection on the basis of the relevance of the items to the concept of ego identity. (Later, two of these items were dropped when it was found difficult to obtain agreement on their scoring. Thus, the final total of items was 23.)

Each item is given a score of 3, 2, or 1 according to criteria and examples provided in the EI-ISB Scoring Manual (Appendix II). The criteria for each item were based upon the theoretical rationale concerning response correlates of ego identity achievement. That is, scoring criteria were developed by asking the question: "If one has achieved an ego identity - either by our criteria of crisis and commitment or in terms of behaviors which Erikson indicates are associated with identity achievement - what should his responses be?" In addition, response examples were obtained empirically from a pilot study.

This first pilot study used 31 male Ss taken from introductory psychology classes at The Ohio State University. The Ss were required to participate in an experiment for class credit. They were distributed fairly evenly over the four college years.
Ss were administered the EI-ISB and then asked to make an appointment with the E at their convenience for the interview. The EI-ISB's were scored before the interview, in this first study, and individual items which might provide leads in the interview were noted. Interviews were held in a small room usually used for psychotherapy. The interview was introduced to the S as part of a study on college students' values and occupational choices. Assurance was given that the interviews would be held in confidence. Each interview lasted about 15 to 45 minutes, depending upon the time necessary for the E to get a fairly clear idea of the S's Identity Status. None of the Ss seemed to find the interviews particularly threatening; most of them expressed interest in the experiment and seemed to enjoy talking about themselves.

After manuals for the EI-ISB and the interview had been developed, EI-ISB protocols from all 31 Ss and interviews from 20 Ss were independently rated by two clinically trained raters for each measure. Since many of these EI-ISB items re-appeared in the scoring manual as examples, these particular responses were eliminated from reliability calculations.
Reliability and findings

Reliability data on the EI-ISB from this first pilot study showed an average correlation\(^4\) among the three judges on item-by-item analysis of \(r=.76\) (\(p<.0005\), \(N\) of items=440). In terms of correlation of total EI-ISB scores for the 31 Ss, the \(r=.90\) (\(p<.0005\), \(N\) of Ss=31). The overall per cent of agreement on an item-by-item analysis was 77.2%. A more complete summary of this initial reliability data for both EI-ISB and Identity Status Interviews may be found in Appendix V.

It was also found that ego identity, as measured by the EI-ISB, increased with the Ss' college year. Ss were split Freshmen-Sophomore vs. Junior-Senior - \(r_{pbis}=.29\) (\(p<.05\), \(N=31\)).

The Identity Status Interview

A semi-structured interview (Appendix III) was constructed to tap Identity Status in the three main areas of occupation, religion, and politics. In each of these areas, the S was to be judged in terms of which Identity Status his responses most closely corresponded to. Descriptions and examples of these responses are found in the Interview.

\(^4\) Correlations were converted to Fisher's \(z\) function for averaging.
Rating Manual (Appendix IV). As with the EI-ISB Manual, the Interview Manual was based both on theoretical rationale and examples drawn from the pilot study. Having made an Identity Status judgment for each of the three areas, the rater was then asked to arrive at an overall Identity Status - that Status which, in his opinion, best represented the sum of the Statuses in the three areas.

This method was chosen as much to give the E some flexibility, as it was to give the S freedom of response. It permitted the E to probe gently those areas where the S's responses didn't seem to be consistent. It also allowed the E to return to certain topics for clarification. It cannot be denied that this procedure is somewhat tedious, involving approximately a half hour per S for the original interview and about twice this time to replay and judge his tape. However, advantages in comprehensiveness, accuracy, and some elimination of response bias outweigh the mainly temporal disadvantages. And, of course, given that satisfactory reliability can be achieved, the depth and flexibility of this procedure approach the ideal in personality assessment.

Adaptability to environmental press

In addition, a rating of High, Medium, or Low "adaptability to environmental press" was included to differentiate
further Ss within an Identity Status. This variable is intended to reflect the rater's opinion of how successful, in general, the individual seems to be in coping with everyday situational demands. To a much lesser degree, it is also to be an estimate of future adaptability. While this variable does not arise so directly from theory as do the Identity Statuses, it has two advantages. It helps to take account of some obvious differences among individuals within an Identity Status; e.g., the High adaptability to press, Identity Diffuse, "playboy" as opposed to the Low adaptability to press, Identity Diffuse, schizoid personality. It also provides a continuous distribution of scores for Identity Status, making it more comparable for correlational purposes with the EI-ISB scores. Thus, once an overall Identity Status has been determined and adaptability to environmental press evaluated, a number can be assigned to the S in the following way:

<table>
<thead>
<tr>
<th>Identity Achievement</th>
<th>High: 12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Medium: 11</td>
</tr>
<tr>
<td></td>
<td>Low: 10</td>
</tr>
<tr>
<td>Foreclosure</td>
<td>High: 9</td>
</tr>
<tr>
<td></td>
<td>Medium: 8</td>
</tr>
<tr>
<td></td>
<td>Low: 7</td>
</tr>
<tr>
<td>Moratorium</td>
<td>High: 6</td>
</tr>
<tr>
<td></td>
<td>Medium: 5</td>
</tr>
<tr>
<td></td>
<td>Low: 4</td>
</tr>
<tr>
<td>Identity Diffusion</td>
<td>High: 3</td>
</tr>
<tr>
<td></td>
<td>Medium: 2</td>
</tr>
<tr>
<td></td>
<td>Low: 1</td>
</tr>
</tbody>
</table>
This continuum represents the hypothesized order of the Statuses' performance on experimental measures. Hence, within any Status, High adaptability to press Ss should perform better than Low. However, between Statuses, a Low adaptability to press S from a higher Status should perform better than a High adaptability to press S from a lower Status.

There was some question as to the validity of this continuum in terms of Identity Status categories. The first concern was whether it might not be more theoretically sound to consider the Statuses as separate categories, each with their own distinguishing characteristics. A second question arose as to the relative positions of the Foreclosure and Moratorium Statuses. One perhaps finds the Moratorium who is struggling to achieve an identity a more sympathetic character than the Foreclosure who has, in effect, let one be achieved for him. However, both in terms of the Block (1961) study results on "role rigid" individuals as well as our own hypotheses about possible performance in an experimental situation, we decided to rate Foreclosure higher than Moratorium. As to the whole question of whether or not to make a continuum, it was decided that nothing was lost by doing this and that it might provide a useful way of looking at the data.
Reliability and findings

The first pilot study used, in addition to the E, two clinically trained raters (different from the EI-ISB raters) to ascertain the reliability of Identity Status Interview ratings. The average correlation among judges on 20 Ss was $r = 0.76$ ($p < .0005, N=20$). This correlation was based on Identity Status as a twelve point continuum. Average percentage of agreement on which of the four Statuses the S fitted was 70%. The correlation between the Identity Status continuum and overall ego identity as measured by the EI-ISB was $0.65$ ($p < .0005, N=31$). The point biserial correlation between Identity Status and year in college was $0.56$ ($p < .0005, N=31$). Additional reliability data is found in Appendix V.

Following this first pilot study, the scoring manuals for both the EI-ISB and Identity Status Interview was slightly revised. The pilot study provided most of the examples found in the manuals.

Development of Tasks

The EI-ISB and Identity Status Interviews provide an answer to the question: "Can we measure it?". Next was the problem of construct situations to test their usefulness for prediction. What was needed were tasks fairly independent of the criteria for ascertaining achievement of
ego identity. There already existed two correlated measures of the latter. Also, because of their very recent development, we were as much interested in making observations on the characteristics of each Identity Status as in the validation of each one. Tasks were needed that would yield at least high-low differences and also allow for enough individual variation in performance to permit expression of differences due to Identity Status. The high-low requirement specified fairly accurate measurability; the amenability to individual differences requirement meant a fairly complex task. In addition, the task was to reflect, if possible, not just identity achievement but also the increment to general ego strength that ought to accompany resolution of the identity crisis. Another specification for the experimental task was that it permit the addition of a stressful element. This was to discriminate the Identity Achievement from the Foreclosure - the idea being that only under stress would differences between these two Statuses become apparent.

The tasks, then, were required to: be evaluated by criteria independent of those used to establish degree of ego identity; admit of enough measurability to discriminate between high and low Identity Status; yield observations of
individual differences in performance; be related to overall ego strength; permit the addition of a stress factor.

The Self-Esteem Questionnaire

A rather complete description of this test is to be found in the Method section. The questionnaire itself is in Appendix VI. The test consists of two types of items: those related to self-esteem and "filler" items taken from the Authoritarian Submission and Conventionality cluster of the F scale (Adorno, et al., 1950). Previous studies (Janis, 1954; deCharms & Rosenbaum, 1960a; deCharms & Rosenbaum, 1960b; Rosenbaum & Stanners, 1961) using this scale as a measure of self-esteem have found it to be related to high persuasability, acute neurotic anxiety, matching (conformity) behavior, and expression of aggression, although there is some controversy about the latter. This questionnaire will hereafter be referred to as SEQ-F, since the former "filler" items are also to be used as a variable.

In line with Erikson's statement, we would expect Identity Achievement Ss to be high on this variable. "Thus, self-esteem, confirmed at the end of each major crisis, grows to be a conviction that one is learning effective
steps toward a tangible future, that one is developing a defined personality within a social reality which one understands" (1950, p. 40). The Identity Diffusion Status would be expected to score lowest. An individual in this category is seen as having either excessively high ego ideals, so high, in fact, that he seems to prefer to be "nothing" rather than to attempt the impossible, or perhaps very weak ego ideals due to disturbance in early object relations. The latter would refer to the low adaptability to press, schizoid pole of Identity Diffusion.

One can readily appreciate at least the apparent relationship between this variable and the Foreclosure Status when he considers such F scale items as:

```
Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.

Obedience and respect for authority are the most important virtues children should learn.
```

The submissive relationship to authority, rigidity, and conventionality associated with the "authoritarian personality" is also likely to be characteristic of individuals who hew unusually closely to parental values and wishes. In contrast, both Moratorium and especially Identity Achievement Ss, by virtue of their experiencing and/or
resolving of a crisis period should have achieved a certain flexibility and maturity of personality - a "live and let live" orientation that the Foreclosure cannot afford and the Identity Diffusion burlesques.

Invalidated self-definition

The SEQ-F was to be administered at the beginning of the study and then re-administered in the last part of the study about two months later. Immediately before the second administration, Ss were to be given one of two types of "invalidated self-definition." They were to be told by the E that on the basis of interview and test data they were both more (or less) mature than they thought they were, and also more (or less) mature than other Ss. The same false information was to be given for the attribute, self-confidence.

Ss high in ego identity should be less susceptible to this externally-provided information and their self-esteem scores should be less affected than those Ss low in ego identity. Thus, Ss with high Identity Status should show less change in self-esteem scores from the first to the second administration of the SEQ than Ss with low Identity Status. The term, ego identity, itself connotes an internal, as opposed to an external, locus of self-definition. To
the extent that an identity is achieved, the individual's self-definition is less susceptible to invalidation by outside sources (Gruen, 1960).

The use of the $S\Sigma Q-F$ questionnaire in conjunction with the treatment of "invalidated self-definition" was to yield the following measures: an initial measure of extent of self-esteem as related to achievement of ego identity; differences among the Identity Statuses in the extent of endorsement of F scale items; amount of change in $S\Sigma Q$ scores from the first to the second administration as related to overall ego identity and the Identity Statuses; and Ss' reactions to the invalidated self-definition - for they were not to be only passively exposed to the communication but were to be asked to account for the (falsified) findings.

**Concept Attainment Task under stress**

A second experimental task was chosen to reflect the effects of a general increment to ego strength presumably contingent upon achievement of ego identity. This task was also to be stressful in order to assess persistence of ego functioning in the face of interfering stimuli -- in this case, presumably, internal stimuli. The one chosen was the concept attainment task developed by Bruner, Goodnow, and Austin (1956) as modified by Weick (1962).
In this task, the S is required, through a process of elimination, to discover which combination of attributes the E has in mind, having been given first an example of the concept. This task has been characterized by Weick (1962, p. 7) as one which is "fairly complex, allows for wide variations in performance, requires effort to be accomplished, .... and provides several operational measures of performance." More detailed description of the task is found in the Method section.

Stress in the situation was to consist of evaluation apprehension and oversolicitousness on the part of the E. Ss were to be told that the test had relevance to both their intelligence and academic performance; in addition, they were confronted with an E who continuously reassured them against fears they might not even be experiencing. A brief discussion of a second pilot study, which was undertaken to determine whether or not these conditions were, in fact, stressful, is found in the Method section.

In addition to measures of overall quality of performance, this can also be administered so as to yield level of aspiration measures (Lewin et al., 1944).

One would expect those high in ego identity and those in higher Identity Statuses to perform more successfully on
this stressful intellectual task. This prediction could be made on the basis of the usual definition of ego strength alone. For the business of the ego is to moderate between pressing internal stimuli, in this case, presumably, anxiety, and environmental demands, here seen as completion of a complex task. If the successful solution of each psycho-social crisis increases the individual's overall ego strength, then those who have achieved an ego identity should have developed those behaviors necessary to cope with the experimental situation.

A similar line of reasoning holds for level of aspiration measures. One would expect more realistic goal-setting from those high in ego identity -- if for no other reason than the improved reality-testing of those individuals with "stronger" egos.

Overview

The study is to be divided into two sections. The first part will involve measurement of subject variables. These will be ego identity (EI-ISB), Identity Status (Identity Status Interview), and initial self-esteem and endorsement of authoritarian submission and conventionality (SEQ-P). The second part of the study will attempt to test hypotheses made on the basis of measured subject
variables. The experimental conditions under which they will be tested are these: quality of performance in the Concept Attainment Task under the stress of evaluation apprehension and oversolicitousness; realistic goal-setting assessed by level of aspiration measures in the Concept Attainment Task; reactions to both positive and negative invalidated self-definitions; and differential change in self-esteem after having been given the invalidated self-definition.
CHAPTER II
HYPOTHESES

The purpose of the study is twofold: to investigate the construct validity of the concept, ego identity, as defined by the score on the Ego Identity Incomplete Sentences Blank (EI-ISB); to investigate the construct validity of the four Identity Statuses as determined by the semi-structured Identity Status Interviews.

A note should be made about a particular characteristic of this study. Because a main criterion of a construct's value is its utility for prediction, this research has employed an experimental rather than observational approach. However, particularly in the case of the Identity Statuses, we were as much concerned with the further specification of the characteristics of the Identity Statuses as we were with immediate predictions. Accordingly, a few hypotheses are guidelines for observations rather than predictions of performance on the experimental tasks.
Ego Identity

The general prediction is that Ss who score high on the EI-ISB will attain high Identity Status, perform better on the Concept Attainment Task under stress (CAT), and be more resistant to the invalidated self-definition (ISD). Specific hypotheses are these:

1. Identity Status

HYPOTHESIS: There will be a significant positive relationship between EI-ISB scores and Identity Status scores, with Identity Status treated as a continuum.

2. Self-esteem

HYPOTHESIS: There will be a significant positive relationship between EI-ISB scores and SEQ scores.

3. Year in college

HYPOTHESIS: There will be a significant positive relationship between EI-ISB scores and lower vs. upperclassmen.

4. Change in self-esteem

HYPOTHESIS: There will be a significant negative relationship between
EI-ISB scores and the amount of change in SEQ scores from the first to the second administration. The higher the ego identity, the lower the change score.

5. Concept attainment under stress

HYPOTHESIS: There will be a significant negative relationship between EI-ISB scores and CAT scores. This will hold for all three performance measures taken from the CAT: overall points, points for requests plus guesses, and points for time. (Since high score on the CAT reflects poor performance, the higher the EI-ISB score, the lower the CAT score will be.)

6. Level of aspiration measures (LOA)

HYPOTHESIS: There will be a significant negative relationship between those LOA measures associated
with unrealistic goal-setting and EI-ISB scores. These measures are: very high or very low D scores and number of unusual shifts.

Identity Status

Predictions with respect to Identity Status, while reflecting to some extent high-low ordering such as those derived from ego identity, also deal with characteristics of the specific categories. Statements such as "those high in Identity Status" refer to the following ordering of Statuses: Identity Achievement, Foreclosure, Moratorium, and Identity Diffusion - with each Status subdivided according to the individual's estimated adaptability to environmental press. The specific hypotheses with respect to Identity Status are:

7. Self-esteem

HYPOTHESIS: Those high in Identity status will obtain a significantly higher initial SEQ score than those low in Identity Status.

8. Year in college

HYPOTHESIS: Upperclassmen will be significantly higher in Identity Status than lowerclassmen.
9. Authoritarian submission and conventionality (F)

HYPOTHESIS: Subjects in the Foreclosure Status will obtain significantly higher scores on the F scale section of the SEQ-F than subjects in the other three Statuses.

10. Change in self-esteem

HYPOTHESIS: Those high in Identity Status will show a significantly smaller change in self-esteem scores following ISD than those low in Identity Status.

11. Reactions to invalidated self-definition (ISD)

HYPOTHESIS: Each Identity Status should show qualitative differences in their reactions to ISD. No a priori categories have been set up for these reactions.

12. Concept attainment under stress

HYPOTHESIS: Subjects in the Identity Achievement Status will receive significantly lower (better) scores on the CAT than subjects in the
Identity Diffusion Status.
This relationship will hold for all three performance measures taken from the CAT: overall points, points for requests plus guesses, and points for time.

13. Level of aspiration measures (LOA)

HYPOTHESIS: Those subjects high in Identity Status will make significantly fewer LOA estimates characteristic of unrealistic goal-setting than those subjects low in Identity Status. The measures are very high or very low D scores and unusual shifts.

The means of testing these hypotheses will be discussed in the following chapter.
CHAPTER III

METHOD

This chapter describes (1) the selection of Ss; (2) the measurement of subject and task variables; and (3) the experimental procedure.

Subjects

Sixty-five of the eighty-six male Ss who served in the experiment were obtained from two introductory psychology courses taught by the author at Hiram College. An additional twenty-one were recruited from advanced history and religion classes. Participation in the study was made a course requirement in the psychology classes, so that 100% of the available Ss were used. In the other two classes, the same requirement was not possible and these prospective Ss were approached on the following bases: (1) their participation would add to the growing body of knowledge in the science of psychology; (2) they would have a chance to learn more about themselves; and (3) participation in a psychological experiment would be a unique experience. This procedure netted twenty-one out of twenty-three possible Ss (91%). These particular classes were chosen because of
their relatively high proportion of upperclassmen in comparison with the introductory psychology sample. These eighty-six Ss represented about one-fifth of the total male population at the college.

The Ss were informed of the experimental procedure ("an interview and performance on an experimental task") but not of the variables being investigated. All Ss were promised a mimeographed hand-out at the completion of the study explaining the rationale of the experimental tasks and summarizing the results.

Use of confederate experimenters

Concomitant with the advantage of obtaining a proportionately sizeable sample is a disadvantage of running a study on a small (950 student body) campus: the problem of inter-subject communication. While this was, to some extent, unavoidable in the identity Status interviews, it could at least be made known in many cases by mildly probing interview techniques. However, it was feared that the experimental task would constitute such a novel phenomenon that if it were to be administered over any long period of time, Ss might be uncontrollably contaminated. Also, in terms of the research done on "experimenter bias"
(Marcia, 1961; Rosenthal, 1959), there is an advantage in terms of experimental design in using a sample of experimenters, none of whom is aware of S's standing on the independent variables.

In view of these considerations, the study employed 10 confederate Es (hereafter, task Es) who helped administer the Concept Attainment Task (CAT) in one twelve-hour period. All Es had been members of the author's class in psychological testing and had taken three or more courses in psychology. All task Es had previously assisted in a pilot study involving the same task, CAT under stress, during the previous quarter. The task Es consisted of 7 males and 3 females; there was no significant difference among Es in the amount of CAT performance decrement due to stress induced in the pilot study.

The task Es' training consisted of the following: (1) a forty-five minute briefing session before the pilot study, concerning the nature of the experimental variables; (2) a check-out of procedure, running the E as S; (3) running at least three "stress" and three "non-stress" Ss in the pilot study; (4) a second checkout using the E as S. None of the task Es had knowledge of the Identity Status of
any of their Ss either prior to or following the CAT administration. Neither the Ss' Identity Status Interviews nor their EI-ISB's were scored until after the CAT.

Measurement of subject variables

EI-ISB. This 27 item test requires the S to complete a sentence "expressing his real feelings," having been given a leading phrase or clause, known as a stem. The advantages of this form of projective technique have been previously described. (see p. 38) Stems were selected and a manual designed according to behaviors which Erikson (1956) suggests are associated with the achievement of ego identity. Each item is given a score of 3, 2, or 1 according to the congruence of the S's response with identity achievement. Scoring criteria for each item are found in the EI-ISB Manual (Appendix II).

All Ss completed the test at one sitting. Due in part to the innocuous nature of the stems, there was little resistance to the test; the most frequent comment was that Ss found it "interesting," although a very few Ss complained about the ambiguity of some stems. (E.g., "why you could just put down anything.")

Identity Status Interview. The author assigned an Identity Status to each S on the basis of a 15-30 minute
interview. These interviews were held in the E's office, a particularly "homey" room, formerly part of a personal dwelling. All interviews were tape recorded, and the Ss were told beforehand that

We're recording all the interviews so that we have the data available to go over later. I can assure you that everything we say will be kept in confidence. Only one other psychologist and myself will have access to the tapes.

No S objected to this procedure.

A complete description of the criteria for determining Identity Status is to be found in the Manual for Identity Status Interviews (Appendix III). Briefly, each S was evaluated for each of three areas: occupation, religion, and politics - the latter two were combined to yield ideology. An overall Identity Status of Identity Achievement, Foreclosure, Moratorium, or Identity Diffusion was then assigned and an estimate of the S's adaptability to environmental press (high, medium, or low) was made.

Relationship between EI-ISB and Identity Status Interview. Although sharing many of the same criteria and expected to yield a moderately high correlation, the EI-ISB and the Identity Status Interview are intended to reflect different aspects of ego identity. The EI-ISB is intended as an overall measure of the extent to which the S has met
the criteria for establishment of ego identity. The Identity Status Interview is designed to categorize the S according to his particular style of dealing with the identity crisis.

Measurement of dependent variables

SEQ-F (Appendix VI). This is a twenty-item questionnaire developed by deCharms and Rosenbaum (1960a) on which the S indicates his degree of endorsement (6 point scale, plus 3 to minus 3) of statements concerning both his general feelings of self-confidence and worthiness as well as statements reflecting authoritarian values in the areas of submission and conventionality. An example of a self-esteem item is: "I feel capable of handling myself in most social situations." An F scale item is: "Obedience and respect for authority are the most important virtues children should learn." This test bears the title "Value Profile" on the form that Ss fill out.

The initial SEQ-F was administered at the same time as the EI-ISB in a classroom setting. The second administration of SEQ-F was during the experimental situation following the invalidated self-definition. The second SEQ-F was also administered in a group setting, although not in a classroom.
Variables of main interest on this questionnaire were (1) initial self-esteem score; (2) initial F' score; (3) relationship between self-esteem and F scores; and (4) change in self-esteem following invalidated self-definition.

Concept Attainment Task. This experimental task, developed by Bruner, Goodnow, and Austin (1956) and modified by Weick (1961), requires the S to arrive at a certain combination of attributes of cards by a process of elimination. The S is faced with a poster on which are displayed 32 cards. Each card contains five attributes: shape (square or circle), size (large or small), color (black or white), number (one or two), and position (right or left). The S was given a set of 7 problems, each using one, two, or three card characteristics. At the beginning of a problem, the task E would point to a card possessing all of the attributes he had in mind; from then on, the S might employ a combination of two strategies in attaining the E's concept. He might successively eliminate certain attributes by pointing to cards and asking the task E if that card were positive or negative for the concept attributes. Every request cost the S 5 penalty points. The S might also guess directly at the concept; e.g., "square, black." Every guess cost the S 10 penalty points. Five penalty points
were assigned for every thirty seconds that passed before S attained the concept. Complete instructions to Ss for the CAT are found in Appendix VII.

Ss were also asked to make time estimates of performance on their next problem in view of their performance on the immediately preceding one. This made possible several level of aspiration measures (Lewin, et al., 1944).

The entire task was performed under "stress" conditions which will be described in the Treatment Conditions section.

Quality of performance on the CAT was assessed by the following measures: (1) overall CAT score (time plus requests and guesses penalties); (2) points for time alone; (3) points for requests and guesses alone; (4) number of "give-ups" (problems which S refused to complete).

Level of aspiration measures were these: (1) D score (the algebraic average of the differences between a S's stated expectancy for a problem and his immediately preceding performance on a similar problem); (2) initial expectancy (S's estimate of time to complete the first problem); (3) number of shifts in estimate; and (4) number of unusual shifts in estimate (down after success, up after failure).

Reactions to invalidated self-definition. One of two treatment conditions to be described in the next section
consisted of informing some Ss (positive invalidated self-definition) that they were both "better" (i.e., more mature, more self-confident) than they estimated themselves to be and "better" than other Ss; other Ss (negative ISD) were told that they were "worse" (i.e., less mature, less self-confident). All Ss were then asked to account for this discrepancy between their "stated" self-concept and their "real" self as revealed in tests and the interview. These reactions were tape recorded. No a priori categories were set up with which to classify reactions since there were insufficient grounds for categorizing them in an established system. As is detailed more fully in the Results section, they were eventually coded into three categories: "negative interpretation" (the S was given positive ISD but perceived it as negative); "complete acceptance" (the S was given negative ISD and offered evidence in favor of the false information); and "modesty" (the S was given positive information and enthusiastically accepted it, saying that he was habitually modest). In addition, each S was assigned a rating on a 5 point scale for the degree to which he seemed to believe the ISD.
Treatment conditions

Stress in the CAT. Stress was defined here as externally imposed conditions which tend to impair performance. Although this is a far broader definition than Lazarus et al. (1963) would agree to, our purpose here is not to study the stress itself, but the performance of different Identity Statuses on the CAT under stressful conditions. The particular type of stress used was both appropriate to the situation and to the Ss' general motivation as college students. For the particular purposes of this study we need to know only: Is the stress appropriate? And is it effective? The particular types of stress used were "evaluation apprehension" and over-solicitousness.

Evaluation apprehension was created when the task E gave the S the following information prior to beginning the CAT:

By the way, I thought you might be interested to know that this test is related to tests of intelligence and that it's been found to be one of the best single predictors of success in college. So, of course, you'll want to do your very best.

A quotation from Riecken (1958) is apt here:

The subject may fear the experimenter cannot or will not take such a detached view of him but will, instead, take an evaluative view of his performance and
will make some use of this information to affect some future enterprises in which the subject may be engaged. ....

Further, in all his previous experiences with teachers, the subject has undoubtedly learned that they are capable of invoking past performance both "in" and "out" of school as the basis for present judgments and recommendations for the future. (p. 8)

The above instructions were designed to capitalize on this apprehension.

Over-solicitousness was created during the CAT performance by the task E who hovered over the S, asking him if he were comfortable, consoling him (against what?), advising him not to "tense up," not to "make it harder on yourself," and, finally, sighing with relief for the S that the "last one" was coming up. This over-solicitousness was designed to complement evaluation apprehension by reassuring the S against fears he may not have contemplated, and if he had, by making them more real and salient.

Pilot study data on stress conditions

That these operations are, in fact, stressful was determined in a pilot study in which the same task Es ran 56 Ss (27 males and 29 females) in the CAT under stress and non-stress conditions. In the latter, the stress procedures were simply omitted. Each E ran about 3 stress and 3 non-stress Ss. For all task Es, stressed Ss performed more poorly than non-stressed ones. (see Table 1)
An interesting finding in this study, apart from the effectiveness of stress, was that stressed Ss differed from non-stressed ones more in terms of frequency of response (i.e., requests and guesses) than in terms of total amount of time taken (Table 1). It would seem that Ss under these stressful conditions responded more often and less accurately than Ss not stressed.

**TABLE 1**

CAT performance for Stress vs. Non-Stress Conditions

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total points</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-stress vs.</td>
<td>26</td>
<td>751</td>
<td>201</td>
<td>2.61</td>
<td>&lt;.02</td>
</tr>
<tr>
<td>Stress</td>
<td>30</td>
<td>948</td>
<td>430</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Requests plus guesses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-stress vs.</td>
<td>26</td>
<td>602</td>
<td>155</td>
<td>2.91</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Stress</td>
<td>30</td>
<td>762</td>
<td>372</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-stress vs.</td>
<td>26</td>
<td>891</td>
<td>362</td>
<td>1.33</td>
<td>&lt;.20</td>
</tr>
<tr>
<td>Stress</td>
<td>30</td>
<td>1118</td>
<td>520</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the final study, CAT scores from 2 Ss were dropped. One S seemed to be suspicious of the stress conditions,
telling his task E that his roommate had been in a similar experiment the previous quarter and that he didn't believe either the "intelligence business" nor was he falling for the task E's apparent concern for him. The other S began reacting so bizarrely (pounding the table and swearing) that his task E suspended stress conditions.

Invalidated self-definition. This treatment, which succeeded the CAT and directly preceded the second administration of the SEQ-F, consisted of giving the S false information concerning the relationship between his evaluation of himself and his "actual personality." This information was given to the S by the E in the same office in which the original Identity Status Interview was held. Ss were successively and alternately "positive" or "negative" as they arrived in the office.

As S came into the office he found the E intently scanning a data sheet. After he had been seated and asked what he thought of the CAT he was told:

I've been looking over some of the data and it seems that while you consider yourself less (more) mature than other Ss, you actually come out as being more (less) mature. Is there any way you can account for this discrepancy? (Pause for S's response.) This seems to hold up also for self-confidence. It seems that you consider yourself as having less (more) self-confidence than other Ss, yet you actually come out having more (less).
If S questioned this last statement he was told that E meant self-confidence on a "deeper level." Relegating things to a "deeper level" seemed to have an unusual explanatory efficacy.

Several Ss seemed to be so affected by the information - two asked if counseling were available - that immediately following the second SEQ-F administration, E informed them of the deception. All other Ss received a postcard in the next mail which bade them to "disregard any information you received in the psychological experiment yesterday; it was deliberately falsified in order to create an experimental condition."

Procedure

Following is the sequence of events in the experiment:

Ss in the author's class in introductory psychology were told that a course requirement for the quarter would be their participation in a study. The EI-ISB and SEQ-F were then passed out and completed in class.

Approximately three weeks later, two other classes, one in religion, the other, history, were approached for their cooperation in the project. The two questionnaires were then administered to these classes.
Following administration of the tests to both classes, all Ss were told to make an appointment for an interview by putting their name on a sign-up sheet. Ss who did not show up for their appointments were recontacted. Only three Ss who had signed up for an interview failed to appear. One of these had dropped out of school.

Identity Status interviews were held in the E's office. Each lasted from fifteen minutes to half an hour and covered the areas mentioned before. The period of interviewing lasted for about two months. Every S was told at the completion of his interview that he would be notified of the data of the experimental situation. If S inquired about the purpose of the experiment, he was told that E was trying to categorize people on the basis of the tests taken in class and the interview in order to predict performance in the experimental situation. Further questions were answered: "I just can't tell you that; it would mess up the last part of the study."

Confederate Es were checked out on their procedure about a week prior to the experimental situation. About this time, another sign-up sheet was passed around in classes for Ss to indicate at what hour of the appointed day they would be able to come. Ss could be run from 8:00
AM until 8:00 PM, with a possibility of 10 Ss run per hour. Each S received a postcard the day before the experiment reminding him of his time.

When S arrived at the Psychology Building he was met by the first available task E who took him to a small room in which were two chairs, a table, a poster with the CAT characteristics, a stop watch, penalty cards, and a scoring sheet. The task E seated the S, read him the instructions found in Appendix VII, and gave him the list of characteristics called a Reminder Sheet (Appendix VIII). After the S's questions were answered, the task E informed him of the relationship between CAT performance and intelligence and college grades. Following this, the "over-solicitousness" began with the task E's making certain the S was comfortable and stating that they would only begin when S was ready.

S was told that "most people solve the first problem in three minutes"\(^1\) and asked how long he expected to take. The time was noted down and the task E pointed to the first exemplar card. Every time S asked whether a card was positive or negative for the concept attributes, task E answered and turned over a 5 point penalty card; task E turned over a 5 point penalty card for every thirty seconds that passed; he turned over two 5 point cards (i.e., 10

\(^1\)Some Ss were accidentally told thirty seconds.
points) for every guess at the concept. Penalty cards ran cumulatively from 5 to 50, so that after every 50 penalty points, the deck was turned over and begun again. Following a trial, the S was told: "That took you about _____; how long do you think it will take you to solve the next problem?" After the S's estimate was made, task E made some solicitous statement. These were cued for him on the scoring sheet by means of a few key words (see Appendix IX).

Comments made after each problem were these:

Problem 1. : "Now there's nothing to worry about; just try and do your very best."

Problem 2. : "You're doing fine. Most people end up doing better than they think they did."

Problem 3. : "You'll just make it harder on yourself if you tense up. Just relax. There are only a few more."

Problem 4. : --------------------------------------

Problem 5. : "Just relax now - you're doing fine."

Problem 6. : "Well, now, only one more to go."

When the CAT was finished, task E solicited the S's cooperation in keeping the task a secret until the end of the day. He then told S to have a seat in the hall and that: "Mr. Marcia will see you in just a minute." The E asked the S into his office where he gave him the ISD condition - positive or negative depending upon what the previous S had been given.
Except in a very few cases, $S$ was then sent to an upstairs lecture room to take the SEQ-F for the second time. He was told that this would be his last task and thanked for his participation. In those few cases where negative ISD seemed to upset the $S$ unduly, he was told to report back to the author after he had completed the questionnaire. He was then informed of the false information. Administration of the SEQ-F was proctored by another confederate $E$.

Each $S$ took from about forty-five minutes to an hour to run through the experimental situation. The 86 $S$s were run in a twelve hour period.

The following day, each $S$ received a postcard from the $E$ explaining the false information.
CHAPTER IV
RESULTS

**Preliminary Analyses**

Prior to the major analyses of the data, a series of preliminary analyses were undertaken. These are described in the following sections.

**Sources of error**

Two potential sources of error to be investigated were the possible differences in Ss' responses to the E as a result of his being their classroom instructor and the influence of Ss' intelligence on both their Identity Status classifications and their Concept Attainment Task performances.

The first possibility was investigated by comparing the Identity Statuses of Ss from E's classes with those from the other two classes (Table 2). A non-significant chi-square of 3.00 (df=3) indicates that assignment of Identity Status was not significantly influenced by the classes from which the Ss came.
### TABLE 2

**Subjects Identity Status According to Author's vs. Others Classrooms**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>E's</td>
<td></td>
<td>11</td>
<td>21</td>
<td>17</td>
<td>16</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td>7</td>
<td>4</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

\[ X^2 = 3.00 \]

\[ p < .30 \]

**NS**

Intelligence test scores were obtained for 78 of the 86 Ss. Most of these scores were based on group administered tests taken when the S was in high school. Such a wide variety of tests were available among the Ss (e.g., several forms of the Otis, California Test of Mental Maturity, Henmon-Nelson, SRA-PMA, Terman-McNemar, and Fintner) that no set of scores from a single test could be used to compare Ss. Although the procedure is admittedly questionable, all the obtained and estimated IQ's were treated as comparable and grouped together for purposes of establishing means and standard deviations. The choice lay between this possibly distorted estimate of intellectual performance and
no single estimate at all. For those 8 Ss for whom data were not available, an IQ was estimated on the basis of either high school or college (if available) grades.\(^1\)

It was found that while IQ scores correlated highly with CAT performance \(r^2 = -.55, p < .0005, \text{df}=82\), they seemed to bear no relationship to the Ss Identity Statuses, and very little to his EI-ISB score. A test computed between the highest and lowest Status in IQ yielded a non-significant \(t=1.70, p < .20\, ^2\), \text{df}=37. These data are found in Tables 3, 4, and 5. Thus, we may conclude that intelligence is not a contaminating factor in the hypothesized relationship between EI-ISB scores, Identity Status, and CAT performance.

### TABLE 3

Relationship between Total CAT Scores, EI-ISB Scores, and IQ

<table>
<thead>
<tr>
<th>Measures correlated</th>
<th>(r)</th>
<th>(p)</th>
<th>(N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IQ scores and CAT scores</td>
<td>-.55</td>
<td>&lt;.0005</td>
<td>84</td>
</tr>
<tr>
<td>IQ scores and EI-ISB scores</td>
<td>.15</td>
<td>NS</td>
<td>86</td>
</tr>
</tbody>
</table>

\(^1\)The criteria for assigning IQ's here was: Ss with point-hour average 2.00-2.50 received IQ 105; 2.50-3.00, IQ 115; 3.00-3.50, IQ 125; 3.50-4.00, IQ 135.

\(^2\)All correlations in this chapter are Pearson product-moment correlations.

\(^3\)All significance levels for tests are based on two-tailed tests.
TABLE 4

IQ Scores According to Identity Status

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>18</td>
<td>24</td>
<td>23</td>
<td>21</td>
</tr>
<tr>
<td>M</td>
<td>118</td>
<td>116</td>
<td>117</td>
<td>112</td>
</tr>
<tr>
<td>SD</td>
<td>9.37</td>
<td>8.21</td>
<td>10.05</td>
<td>10.09</td>
</tr>
</tbody>
</table>

TABLE 5

Analysis of Variance of IQ Scores For the Four Identity Statuses

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Statuses</td>
<td>3</td>
<td>126.65</td>
<td>1.356</td>
</tr>
<tr>
<td>Within Statuses</td>
<td>82</td>
<td>93.43</td>
<td>NS</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Effectiveness of experimental manipulation

Two forms of experimental manipulation were employed in the study. The first involved the addition of stress to the CAT. The effectiveness of this procedure had been determined previously in a pilot study. The second form of
experimental manipulation consisted of giving the Ss an "invalidated self-definition." (ISD)

It would be reasonable to expect that Ss given positive information would show an increase in self-esteem if the manipulation were successful - also, that Ss given negative information would show lowered self-esteem. Thus, the effectiveness of the manipulation should be manifested in a change in SEQ scores in either a positive or negative direction depending on whether the S was given positive or negative information. Thus, changes in SEQ scores following ISD might be either "expected" (consistent with ISD) or "unexpected" (inconsistent with ISD) changes. For example, Ss given negative ISD who then obtained higher SEQ scores on the second administration would be "unexpected" changers.

There were 42 Ss who changed in the expected direction, 35 who changed in an unexpected direction, and 9 who showed no change. This finding casts doubt on either the effectiveness of the ISD, the means of measuring self-esteem, or both.

A more detailed analysis of the relationship between the ISD treatment and SEQ change was carried out. In order to see if any groups departed significantly from zero in their SEQ change score as a function of positive or negative
ISD, the t tests found in Table 6 were run. The failure of any of these t's to reach significance indicates that the ISD condition had little effect on Ss' self-esteem scores.

**TABLE 6**

Change in SEQ score from Zero as a Function of Positive or Negative ISD for Identity Statuses

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>M</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive ISD</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identity Achievement</td>
<td>9</td>
<td>1.00</td>
<td>.66</td>
</tr>
<tr>
<td>Foreclosure</td>
<td>12</td>
<td>-.50</td>
<td>.27</td>
</tr>
<tr>
<td>Moratorium</td>
<td>11</td>
<td>-2.46</td>
<td>1.27*</td>
</tr>
<tr>
<td>Identity Diffusion</td>
<td>11</td>
<td>3.45</td>
<td>1.60</td>
</tr>
<tr>
<td><strong>Negative ISD</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identity Achievement</td>
<td>9</td>
<td>3.44</td>
<td>1.56*</td>
</tr>
<tr>
<td>Foreclosure</td>
<td>12</td>
<td>-3.33</td>
<td>1.96**</td>
</tr>
<tr>
<td>Moratorium</td>
<td>12</td>
<td>-1.42</td>
<td>.83</td>
</tr>
<tr>
<td>Identity Diffusion</td>
<td>10</td>
<td>-1.00</td>
<td>.36</td>
</tr>
</tbody>
</table>

* p < .20  NS  ** p < .10

Thus, either the ISD was not sufficient to elicit changes in self-esteem, or the SEQ, as it was administered, was an insensitive instrument. That is, either the treatment condition didn't "take" or the measuring instrument didn't record the changes it produced. Both of these alternatives are considered in the Discussion chapter.
Reliability of measurement

Although inter-scorer reliability had been investigated previously in pilot studies for the EI-ISB and Identity Status interviews, it was decided to re-evaluate them in view of the recent origins of these measures.

Twenty EI-ISB's were scored independently by three judges, one of whom was the E. Agreement was assessed on two levels, item by item and overall score, and by two methods, percentage of agreement and correlation. These data are presented in Tables 7 and 8.

Average item-by-item percentage of agreement was 74.3%; average item-by-item correlation was \( r = .94 \). Average correlation among the three judges on total score was \( r = .73 \). Considering the present stage of development of this measure, these reliability figures appear satisfactory.

TABLE 7

Percentages of Item-by-Item Agreement on EI-ISB Scores among Three Judges

<table>
<thead>
<tr>
<th>Judges</th>
<th>Per cent of agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>A with B</td>
<td>78%</td>
</tr>
<tr>
<td>B with C</td>
<td>72%</td>
</tr>
<tr>
<td>A with C</td>
<td>74%</td>
</tr>
<tr>
<td>Overall per cent of agreement</td>
<td>74.3%</td>
</tr>
</tbody>
</table>

\(^4\)All averaged r's are based on conversions to Fisher's z function.
Twenty Identity Status interviews were rated independently by three judges, one of whom was the E. Agreement was assessed both by percentage of agreement among the judges and by correlation. These data are found in Tables 9 and 10. The overall percentage of agreement on Identity Status was 75% ; the average correlation was $r = .91$. In general, the reliability of both measures, the EI-ISB and Identity Status Interviews seems adequate.

5 All correlations in which Identity Status is a variable involve treating the Statuses as if they constituted a continuum.
TABLE 9

Percentages of agreement on Identity Status Interview

<table>
<thead>
<tr>
<th>Judges</th>
<th>Per cent of agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>A with B</td>
<td>80%</td>
</tr>
<tr>
<td>B with C</td>
<td>75%</td>
</tr>
<tr>
<td>A with C</td>
<td>70%</td>
</tr>
<tr>
<td>Overall per cent of agreement</td>
<td>75%</td>
</tr>
</tbody>
</table>

TABLE 10

Correlations of Reliability in Identity Status Interviews

<table>
<thead>
<tr>
<th>Judges</th>
<th>r</th>
<th>p</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>A with B</td>
<td>.96</td>
<td>&lt;.0005</td>
<td>20</td>
</tr>
<tr>
<td>A with C</td>
<td>.88</td>
<td>&lt;.0005</td>
<td>20</td>
</tr>
<tr>
<td>B with C</td>
<td>.87</td>
<td>&lt;.0005</td>
<td>20</td>
</tr>
<tr>
<td>Average correlation</td>
<td>.91</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Main Analyses

Ego identity and Identity Status

Three techniques were employed to assess the relationship between overall ego identity as measured by EI-ISB and
TABLE 12
Analysis of Variance between Identity Statuses in EI-ISB Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Statuses</td>
<td>3</td>
<td>109.28</td>
<td>5.42</td>
</tr>
<tr>
<td>Within Statuses</td>
<td>82</td>
<td>20.16</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It was found that Ss in the Identity Achievement Status received a significantly higher EI-ISB score than did Identity Diffusion Ss (t=3.89, p < .001, df=37), and that the first three Identity Statuses taken together received significantly higher EI-ISB scores than did Identity Diffusion (t=3.62, p < .001, df=84). Thus, the distinctive group with respect to EI-ISB scores appears to be Identity Diffusion.

These findings lend some support to the hypothesized relationship between overall ego identity and Identity Status. However, the absence of a higher degree of relationship between the two indicates that although they reflect a similar component, they are not identical in what they measure. Also, the lack of differentiation among Identity Achievement, Foreclosure, and Moratorium with respect to EI-ISB scores
Identity Status as determined by the Identity Status Interviews. (Data on which the following tests were based are found in Table 11.) The techniques involved a correlation (to ascertain presence and extent of hypothesized linear relationship) between EI-ISB and Identity Status ($r = .33$, $p < .005$, df=84), an analysis of variance ($F = 5.42$, $p < .01$, df=3.82) among the four Statuses, and $t$ tests between individual Statuses. (Table 13)

### TABLE 11

**EI-ISB Scores for Identity Statuses**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N</strong></td>
<td>18</td>
<td>24</td>
<td>23</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>48.28</td>
<td>46.17</td>
<td>48.09</td>
<td>43.33</td>
<td></td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>5.10</td>
<td>4.62</td>
<td>4.23</td>
<td>3.52</td>
<td></td>
</tr>
</tbody>
</table>

6 All analyses of variance are one-way analyses for sub-groups of unequal size (Walker and Lev, 1953, pp. 212-216) unless stated differently. The $F_{max}$ test (Walker and Lev, 1953, pp. 192-192) was used to test for homogeneity of variance. In cases of heterogenous variance, internal comparisons were made by using the variance estimates based on the particular groups being compared.
suggests that the instrument does not make fine enough dis-
tinctions to discriminate among these groups.

TABLE 13
Differences between Identity Statuses in EI-ISB Scores

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identity Achievement vs. Foreclosure</td>
<td>18</td>
<td>48.28</td>
<td>5.10</td>
<td>1.37*</td>
</tr>
<tr>
<td>Moratorium vs. Identity Diffusion</td>
<td>23</td>
<td>48.04</td>
<td>4.23</td>
<td></td>
</tr>
<tr>
<td>Moratorium vs. Identity Diffusion</td>
<td>21</td>
<td>43.33</td>
<td>3.52</td>
<td>3.94**</td>
</tr>
<tr>
<td>Identity Achievement vs. Identity Diffusion</td>
<td>18</td>
<td>48.28</td>
<td>5.10</td>
<td>3.89**</td>
</tr>
<tr>
<td>Foreclosure plus Moratorium vs. Identity Diffusion</td>
<td>65</td>
<td>47.43</td>
<td>4.73</td>
<td>3.61**</td>
</tr>
</tbody>
</table>

*p < .05, NS
**p < .001

Self-esteem

Initial self-esteem scores (SEQ) were compared with EI-ISB scores, Identity Status, initial F scale scores (F),
and overall CAT performance scores. A summary of these results is found in Tables 14, 15, and 16.

The only significant relationship found here was between EI-ISB scores and $SEQ_I$ ($r = .26, p < .01, df = 84$) as hypothesized. However, the predicted relationship between Identity Status and $SEQ_I$ was not confirmed ($r = .05, NS, df = 84$; and $F = .66, NS, df = 3/82$). A $t$ test between Identity Achievement and Identity Diffusion yielded $t = 1.37 (p < .20, NS, df = 37)$, while a $t$ test comparing Moratorium and Identity Diffusion yielded $t = 1.86 (p < .10, df = 42)$.

**TABLE 14**

Relationship of EI-ISB Scores, Identity Status, $F_I$, and overall CAT Scores to $SEQ_I$

<table>
<thead>
<tr>
<th>Measures correlated</th>
<th>$r$</th>
<th>$p$</th>
<th>$N$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$SEQ_I$ and EI-ISB</td>
<td>.26</td>
<td>&lt;.01</td>
<td>86</td>
</tr>
<tr>
<td>$SEQ_I$ and Identity Status</td>
<td>.05</td>
<td>NS</td>
<td>86</td>
</tr>
<tr>
<td>$SEQ_I$ and $F_I$</td>
<td>-.03</td>
<td>NS</td>
<td>86</td>
</tr>
<tr>
<td>$SEQ_I$ and overall CAT</td>
<td>-.03</td>
<td>NS</td>
<td>84</td>
</tr>
</tbody>
</table>
TABLE 15

Initial SEQ Scores According to Identity Status

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>18</td>
<td>24</td>
<td>23</td>
<td>21</td>
</tr>
<tr>
<td>M</td>
<td>45.28</td>
<td>44.92</td>
<td>47.26</td>
<td>43.05</td>
</tr>
<tr>
<td>SD</td>
<td>10.46</td>
<td>9.14</td>
<td>6.74</td>
<td>7.94</td>
</tr>
</tbody>
</table>

TABLE 16

Analysis of Variance of SEQ Scores for Identity Statuses

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Statuses</td>
<td>3</td>
<td>50.71</td>
<td>.66</td>
</tr>
<tr>
<td>Within Statuses</td>
<td>82</td>
<td>77.33</td>
<td>NS</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It appears that while SS's self-esteem is related to overall ego identity, it does not differ significantly among the four Statuses, nor is it related to either authoritarian submission and conventionality or to CAT performance.
Year in college

Ss' year in college was compared with EI-ISB scores, Identity Status, and $F_I$ scores.

The relationship between year in college and EI-ISB scores was investigated by means of analysis of variance. Data for this analysis are found in Table 17. The analysis is summarized in Table 18. A non-significant $r$ of .75 (df=3/82) suggests no relationship between EI-ISB scores and S's year in college. This is supported by the first t test found in Table 21 between Freshmen plus Sophomores and Juniors plus Seniors which yields a non-significant $t$ of 1.15 (df=84).

### TABLE 17

<table>
<thead>
<tr>
<th>Year in college</th>
<th>Freshman</th>
<th>Sophomore</th>
<th>Junior</th>
<th>Senior</th>
</tr>
</thead>
<tbody>
<tr>
<td>$N$</td>
<td>41</td>
<td>27</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>$M$</td>
<td>46.17</td>
<td>45.22</td>
<td>46.70</td>
<td>48.75</td>
</tr>
<tr>
<td>$SD$</td>
<td>5.15</td>
<td>7.45</td>
<td>4.69</td>
<td>4.05</td>
</tr>
</tbody>
</table>
TABLE 18

Analysis of Variance of EI-ISB Scores for Year in College

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Years</td>
<td>3</td>
<td>26.77</td>
<td>.75</td>
</tr>
<tr>
<td>Within Years</td>
<td>82</td>
<td>35.82</td>
<td>NS</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An analysis of variance for data in Table 19 concerning the relationship between Identity Status scores and year in college did not yield a significant F ratio. (Table 20) However, a t test comparing Freshmen plus Sophomores with Juniors plus Seniors indicates a difference in Identity Status scores at the .05 level. (Table 21) This finding furnishes very limited support for the hypothesis of an increase in Identity Status with increase in year in college.

TABLE 19

Identity Status Scores for Ss' Year in College

<table>
<thead>
<tr>
<th>Year in college</th>
<th>Freshman</th>
<th>Sophomore</th>
<th>Junior</th>
<th>Senior</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>41</td>
<td>27</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>M</td>
<td>5.88</td>
<td>6.41</td>
<td>7.40</td>
<td>8.25</td>
</tr>
<tr>
<td>SD</td>
<td>3.10</td>
<td>3.05</td>
<td>3.26</td>
<td>2.49</td>
</tr>
</tbody>
</table>
TABLE 20

Analysis of Variance for Identity Status According to Year in College

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between years</td>
<td>3</td>
<td>16.13</td>
<td>1.66</td>
</tr>
<tr>
<td>Within years</td>
<td>82</td>
<td>9.77</td>
<td>NS</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 21

Differences in EI-ISB Scores, Identity Status, and $F_I$ Scores According to Year in College

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>M</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EI-ISB scores</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshmen plus Sophomores vs. Juniors plus Seniors</td>
<td>68</td>
<td>45.79</td>
<td>1.15</td>
</tr>
<tr>
<td><strong>Identity Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshmen vs. Seniors</td>
<td>41</td>
<td>5.88</td>
<td>2.00**</td>
</tr>
<tr>
<td>Freshmen plus Sophomores vs. Juniors plus Seniors</td>
<td>68</td>
<td>6.09</td>
<td>2.05***</td>
</tr>
<tr>
<td><strong>$F_I$ scores</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshmen vs. Sophomores</td>
<td>41</td>
<td>41.22</td>
<td>1.57*</td>
</tr>
<tr>
<td>Freshmen vs. Juniors</td>
<td>41</td>
<td>41.22</td>
<td>1.48*</td>
</tr>
<tr>
<td>Freshmen vs. Seniors</td>
<td>10</td>
<td>35.80</td>
<td></td>
</tr>
<tr>
<td>Freshmen vs. Seniors</td>
<td>41</td>
<td>41.22</td>
<td></td>
</tr>
<tr>
<td>Freshmen vs. Seniors</td>
<td>8</td>
<td>40.13</td>
<td></td>
</tr>
</tbody>
</table>

*p < .20  NS
**p < .10
***p < .05
The possibility of a change in $F_I$ (authoritarian) scores over the four college years was checked by an analysis of variance. Data for this analysis are found in Table 22. A non-significant $F$ of 1.30 ($df=3/82$) was obtained. (Table 23) Differences between various classes were investigated by the third set of t tests found in Table 21. While there seems to be an interesting trend for $F_I$ scores to decrease until the Senior year, none of the t's is significant.

**TABLE 22**

<table>
<thead>
<tr>
<th>Year in college</th>
<th>Freshman</th>
<th>Sophomore</th>
<th>Junior</th>
<th>Senior</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>41</td>
<td>27</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>M</td>
<td>41.22</td>
<td>37.33</td>
<td>35.80</td>
<td>40.13</td>
</tr>
<tr>
<td>SD</td>
<td>10.26</td>
<td>9.23</td>
<td>9.75</td>
<td>7.80</td>
</tr>
</tbody>
</table>

**TABLE 23**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between years</td>
<td>3</td>
<td>127.82</td>
<td>1.30</td>
</tr>
<tr>
<td>Within years</td>
<td>82</td>
<td>98.19</td>
<td>NS</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Authoritarian submission and conventionality ($F^I$)

The hypothesis involving $F^I$ scores centered mainly on the prediction that Ss in the Foreclosure Status would obtain significantly higher $F^I$ scores than would Ss in the other Statuses. The means and standard deviations for these data are found in Table 24. An analysis of variance is contained in Table 25. An $F$ significant at $p < .01$ (df=3/82) suggests significant differences in $F^I$ according to Identity Status.

### Table 24

$F^I$ Scores for Identity Statuses

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>18</td>
<td>24</td>
<td>23</td>
<td>21</td>
</tr>
<tr>
<td>M</td>
<td>34.28</td>
<td>45.17</td>
<td>37.57</td>
<td>38.67</td>
</tr>
<tr>
<td>SD</td>
<td>8.99</td>
<td>9.01</td>
<td>8.05</td>
<td>10.19</td>
</tr>
</tbody>
</table>

### Table 25

Analysis of Variance for $F^I$ Scores According to Identity Status

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>$F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Statuses</td>
<td>3</td>
<td>452.56</td>
<td>5.24</td>
</tr>
<tr>
<td>Within Statuses</td>
<td>82</td>
<td>86.31</td>
<td>p = &lt; .01</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In order to test the hypothesis that Foreclosure Status Ss would obtain higher $F_I$ scores than other Ss, several t tests were computed. These are found in Table 26. Confirmation of the hypothesis lies in the finding that Foreclosure Status Ss received significantly higher $F_I$ scores than both Identity Achievement Ss and all Ss combined. No other groups differed significantly.

**TABLE 26**

Differences in $F_I$ According to Identity Status

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>M</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identity Achievement vs.</td>
<td>18</td>
<td>34.28</td>
<td>.44</td>
</tr>
<tr>
<td>Foreclosure</td>
<td>24</td>
<td>45.17</td>
<td>3.88*</td>
</tr>
<tr>
<td>Identity Achievement plus</td>
<td>62</td>
<td>36.98</td>
<td>3.75*</td>
</tr>
<tr>
<td>Moratorium plus Identity Diffusion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vs. Foreclosure</td>
<td>24</td>
<td>45.17</td>
<td></td>
</tr>
<tr>
<td>Identity Achievement vs.</td>
<td>18</td>
<td>34.28</td>
<td></td>
</tr>
<tr>
<td>Identity Diffusion</td>
<td>21</td>
<td>38.67</td>
<td></td>
</tr>
<tr>
<td>Identity Achievement vs.</td>
<td>18</td>
<td>34.28</td>
<td>1.20</td>
</tr>
<tr>
<td>Moratorium</td>
<td>23</td>
<td>37.57</td>
<td></td>
</tr>
</tbody>
</table>

*p < .001

A correlation was run between EI-ISB scores and initial $F$ scores. An $r = .04$ (NS, df=84) indicated no linear relationship between these two variables (nor did inspection of a scatterplot indicate a curvilinear one). In addition, a
non-significant r of .12 (df=84) was obtained between $F_I$ scores and overall CAT performance scores.

**Change in self-esteem scores**

One of the two main hypotheses of the study concerned the relationship between the achievement of ego identity and the extent to which a $S$ was susceptible to an "invalidated self-definition." The measure of this susceptibility was to be overall (i.e., non-algebraic) change in self-esteem score from the first to the second administration of the test. However, we have already seen that no significant changes followed the ISD, regardless of whether the ISD was positive or negative, and regardless of $S$'s Identity Status. In view of this, the following array of non-significant findings should not be too surprising.

In order to determine the relationship between $EI-ISB$ scores and change in self-esteem, a correlation was computed between these two variables. The obtained $r=.001$ (NS, df=84) indicates no relationship between the two, and the hypothesis is not confirmed.

Data concerning differences in self-esteem change scores according to Identity Status are contained in Table 27. An $F=.96$ (NS, df=3/82) did not reach significance. A correlation between Identity Status and SEQ change score
yielded a low negative $r = -0.19$ ($p < 0.05$, df=84). However, this is the only positive finding for either EI-ISB or Identity Status with respect to change in SEQ. Thus, there seems to be extremely little relationship between change in self-esteem following positive and negative ISD and either ego identity or Identity Status.

**TABLE 27**

**SEQ Change Scores According to Identity Status**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>18</td>
<td>24</td>
<td>23</td>
<td>21</td>
</tr>
<tr>
<td>M</td>
<td>4.78</td>
<td>4.83</td>
<td>5.04</td>
<td>6.67</td>
</tr>
<tr>
<td>SD</td>
<td>3.49</td>
<td>4.13</td>
<td>4.15</td>
<td>4.49</td>
</tr>
</tbody>
</table>

**TABLE 28**

**Analysis of Variance of Change in Self-esteem Scores for Identity Statuses**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Statuses</td>
<td>3</td>
<td>16.94</td>
<td>.96</td>
</tr>
<tr>
<td>Within Statuses</td>
<td>82</td>
<td>17.66</td>
<td>NS</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
An analysis of variance of the data in Table 29, contained in Table 30, was performed to investigate the possible differential effects of positive or negative ISD on self-esteem changes for given Statuses. In other words, even though no overall change in self-esteem occurred, there remained the possibility that some Statuses might be more affected by positive than by negative ISD. However, none of the F's in the above analysis reached significance.

**TABLE 29**

Differences in SEQ Change Scores Following either Positive or Negative ISD According to Identity Status*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive ISD</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>9</td>
<td>12</td>
<td>11</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>21.00</td>
<td>19.50</td>
<td>17.55</td>
<td>23.45</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>4.27</td>
<td>7.36</td>
<td>6.11</td>
<td>6.81</td>
<td></td>
</tr>
<tr>
<td><strong>Negative ISD</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>9</td>
<td>12</td>
<td>12</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>23.44</td>
<td>16.67</td>
<td>18.58</td>
<td>19.00</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>5.61</td>
<td>5.65</td>
<td>6.33</td>
<td>8.39</td>
<td></td>
</tr>
</tbody>
</table>

*Constant of 20.00 added to each S's average change score in order to eliminate negative numbers.*
TABLE 30

Analysis of Variance* of Change in Self-esteem for Identity Status Negative or Positive ISD

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invalidated self-definition</td>
<td>1</td>
<td>1.82</td>
<td>.44</td>
</tr>
<tr>
<td>Identity Status</td>
<td>3</td>
<td>9.20</td>
<td>2.25</td>
</tr>
<tr>
<td>Interaction</td>
<td>3</td>
<td>5.20</td>
<td>1.27</td>
</tr>
<tr>
<td>Error</td>
<td>78</td>
<td>4.10</td>
<td></td>
</tr>
</tbody>
</table>

*Two-way analysis of variance for unequal frequencies in sub-classes.

(Walker and Lev, 1955, pp. 381-382)

Investigation of differences between sub-groups (Table 31) revealed only one significant difference. This was between Identity Achievement and Foreclosure Ss who were given negative ISD (t=2.60, p < .02, df=19). It appears that Foreclosure Ss given negative ISD show a greater decrease in self-esteem than do Identity Achievement Ss under similar conditions.

Reactions to invalidated self-definition (ISD)

The Ss' reactions to the E's invalidation of their alleged self-definition were tape-recorded. Ss were asked to account for either the positive or negative discrepancy between their self-estimates and E's interpretation of
TABLE 31

Differences in SEQ Change Score Following Positive or Negative ISD According to Identity Status

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>M</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identity Achievement - negative ISD vs. Foreclosure</td>
<td>9</td>
<td>23.44</td>
<td>1.38*</td>
</tr>
<tr>
<td>Foreclosure - positive ISD 12</td>
<td>12</td>
<td>19.50</td>
<td></td>
</tr>
<tr>
<td>Foreclosure - positive ISD vs. Moratorium plus Identity Diffusion - positive ISD 11</td>
<td>12</td>
<td>19.50</td>
<td>1.40*</td>
</tr>
<tr>
<td>Identity Achievement - negative ISD vs. Forelosure</td>
<td>10</td>
<td>23.44</td>
<td>2.60***</td>
</tr>
<tr>
<td>Forelosure - negative ISD 12</td>
<td>12</td>
<td>16.67</td>
<td></td>
</tr>
<tr>
<td>Moratorium plus Identity Diffusion - negative ISD vs.</td>
<td>33</td>
<td>20.13</td>
<td>1.43*</td>
</tr>
<tr>
<td>Forelosure - negative ISD 12</td>
<td>12</td>
<td>16.67</td>
<td></td>
</tr>
<tr>
<td>Identity Achievement - negative ISD vs. Moratorium</td>
<td>9</td>
<td>23.44</td>
<td>2.02**</td>
</tr>
<tr>
<td>Moratorium - positive ISD 11</td>
<td>11</td>
<td>17.55</td>
<td></td>
</tr>
</tbody>
</table>

*p < .20
**p < .10
***p < .02

"the data." The three types of reactions that occurred with any significant frequency were: 1. negative interpretation of positive information; 2. practically complete acceptance of E's information; and 3. protestations of modesty.
In the case of "negative interpretation," a S, told that he was more mature than he had estimated himself to be, and more mature than other Ss, reacted by saying that he had an "inferiority complex" or "sold himself short" or "didn't know himself well," etc. Rather than being pleased by the positive information, these Ss seemed somewhat dismayed.

"Complete acceptance" involved the S's supplying additional evidence for the E's negative information. This tendency on S's part to supply validating information did not seem to extend to those Ss receiving positive information. The furthest they went was to declare their modesty. However, "complete acceptance" Ss, told they were not as self-confident as they thought they were, or as other Ss were, agreed and related instances from their own lives to support this.

The final category was "modesty." In response to the E's positive information, a S might say that he tended to be "modest" or "didn't like to build himself up too much" or thought it a better interpersonal technique to "play it safe," etc. As opposed to the negative interpretation group, the modest group was clearly pleased with the information.
Distribution of these reactions across Identity Statuses is shown in Table 32. It is surprising to note that these categories encompass only 34 of the 86 Ss. However, other Ss had either unique reactions and couldn't be grouped, or, as was more often the case, had no distinctive reactions at all.

Inspection of Table 32 suggests that the sole difference of possible significance lies in the "complete acceptance" category, where a binomial test (Siegel, 1956, pp. 36-42), based on combining Identity Achievement with Foreclosure and Moratorium with Identity Diffusion, yields $p < .09$. This suggests a limited tendency for low Identity Status Ss to accept ISD more than high Identity Status Ss.

<table>
<thead>
<tr>
<th>TABLE 32</th>
<th>Reactions to ISD Across Identity Statuses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Identity Status</strong></td>
<td><strong>Ident. Ach.</strong></td>
</tr>
<tr>
<td><strong>Negative Interpretation</strong></td>
<td>5</td>
</tr>
<tr>
<td><em><em>Complete</em> Acceptance</em>*</td>
<td>0</td>
</tr>
<tr>
<td><strong>Modesty</strong></td>
<td>1</td>
</tr>
</tbody>
</table>

*Combining Identity Achievement with Foreclosure and Moratorium with Identity Diffusion, binomial test yields $p < .09$. 
While the above finding does not reach an acceptable level of significance, it corresponds with another interesting, yet non-significant, finding. Table 33 presents the per cent of Ss in each Identity Status who change self-esteem scores in the direction of the particular type of ISD they were given. The table answers the question: What percentage of Ss in any Status showed a positive SEQ change score when given positive information, and what percentage went down in self-esteem having been given negative ISD? These data indicate that a higher percentage of Identity Diffusion Ss change consistently with ISD than Identity Achievement Ss. However, a test of the significance of this difference yields a non-significant t of 1.13.

**TABLE 33**

Percentage of Ss in Each Identity Status Changing SEQ Scores in Direction Consistent with ISD

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive ISD</td>
<td>56%</td>
<td>36%</td>
<td>40%</td>
<td>73%</td>
</tr>
<tr>
<td>Negative ISD</td>
<td>22%</td>
<td>75%</td>
<td>60%</td>
<td>50%</td>
</tr>
<tr>
<td>Total percentage changing in ISD - consistent direction</td>
<td>39%</td>
<td>54%</td>
<td>44%</td>
<td>57%</td>
</tr>
</tbody>
</table>
Another method of analyzing the taped reactions to ISD was to rate each tape on a five point scale according to the extent to which the S seemed to accept the information. If the S appeared to accept completely both the maturity and self-confidence statements, he was given a 5; if he accepted both statements, but less enthusiastically, he was given a 4; if he accepted one, but rejected the other, he received a 3; if he seemed to reject both, he was rated a 2; and if he completely rejected both, he was given a 1. The reliability coefficient between the E and another judge for 30 of these ratings was \( r = .83 \) (\( p < .0005 \), \( df = 28 \)).

Table 34 shows the extent of Ss' acceptance of ISD according to Identity Status and positive or negative ISD. By inspection, it is evident that few overall differences were obtained. Although Identity Diffusion Ss again showed a total higher degree of acceptance of ISD than other Statuses, the difference between them and Identity Achievement Ss was not significant (\( t = 1.16, p < .20, df = 37 \)).

It might be expected that a relationship would exist between the extent to which Ss accepted ISD and the amount of change in SEQ scores. However, a correlation computed on this data yielded \( r = .03 \) (NS, \( df = 84 \)).
TABLE 34

Extent of S's Acceptance of ISD According to Type of ISD and Identity Status

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive ISD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>9</td>
<td>12</td>
<td>11</td>
<td>11</td>
<td>43</td>
</tr>
<tr>
<td>M</td>
<td>4.00</td>
<td>3.83</td>
<td>3.82</td>
<td>3.91</td>
<td>3.88</td>
</tr>
<tr>
<td>SD</td>
<td>1.05</td>
<td>1.46</td>
<td>1.08</td>
<td>1.00</td>
<td>1.271</td>
</tr>
<tr>
<td>Negative ISD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>9</td>
<td>12</td>
<td>12</td>
<td>10</td>
<td>43</td>
</tr>
<tr>
<td>M</td>
<td>2.78</td>
<td>3.75</td>
<td>3.58</td>
<td>3.80</td>
<td>3.51</td>
</tr>
<tr>
<td>SD</td>
<td>1.40</td>
<td>.92</td>
<td>1.66</td>
<td>1.17</td>
<td>3.51</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>24</td>
<td>23</td>
<td>21</td>
<td>43</td>
</tr>
<tr>
<td>M</td>
<td>3.39</td>
<td>3.79</td>
<td>3.70</td>
<td>3.86</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>1.38</td>
<td>1.22</td>
<td>1.54</td>
<td>1.08</td>
<td></td>
</tr>
</tbody>
</table>

With the preceding information concerning Ss' reactions to ISD, we are in a somewhat better position to deal with the question concerning the failure of ISD to produce changes in SEQ scores. The fact that Ss can be ranked reliably on a five-point scale with respect to their apparent acceptance of ISD, and the additional finding (see Table 35) that significantly more Ss exhibit high as opposed to low
acceptance of the information \( (X^2 = 22.60, p < .001, df = 4) \) provides evidence for the effectiveness of ISD. The problem would then seem to rest with the use of SEQ difference scores and/or the method of obtaining them.

**TABLE 35**

Number of Ss in Each Rank of Extent of Acceptance of ISD

<table>
<thead>
<tr>
<th>Acceptance Rating</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Ss</td>
<td>4</td>
<td>13</td>
<td>19</td>
<td>19</td>
<td>31</td>
</tr>
<tr>
<td>( X^2 = 22.6047 )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( p &lt; .001 )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Performance in the Concept Attainment Task (CAT)

The second main hypothesis of the study concerned the relationship between ego identity, Identity Status, and performance on a conceptual task administered under the stressful conditions of evaluation apprehension and oversolicitousness.

EI-ISB scores. The relationship between EI-ISB scores and CAT scores was investigated via correlational methods, the results of which are found in Table 36. Inspection of these data reveals all correlations non-significant, but in the expected direction.
TABLE 36

Relationship between EI-ISB Scores and CAT Scores

<table>
<thead>
<tr>
<th>Measures correlated</th>
<th>r</th>
<th>p</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>EI-ISB and CAT time scores</td>
<td>-.17</td>
<td>NS</td>
<td>84</td>
</tr>
<tr>
<td>EI-ISB and CAT requests and</td>
<td>-.12</td>
<td>NS</td>
<td>84</td>
</tr>
<tr>
<td>guesses score</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EI-ISB and CAT overall score</td>
<td>-.14</td>
<td>NS</td>
<td>84</td>
</tr>
</tbody>
</table>

In view of the significant findings relating SEQ₁ and EI-ISB, a correlation was run between SEQ₁ and overall CAT performance scores. This yielded a non-significant $r = -.027$ (df=84), indicating no relationship between the two variables.

Identity Status. Analysis of data concerning the relationship between Identity Status and CAT performance was complicated somewhat by heterogeneity of variance for all three analyses; time, requests plus guesses, and overall score. In view of this, as noted earlier, t tests were computed using variances of the groups compared.

Data for amount of time taken by each Identity Status is recorded in the first section of Table 37. Analysis of variance for these data is presented in Table 38. A significant $F$ of 3.11 ($p < .05$, df=3/80) indicates that the Identity
Statues differ in the amount of time taken on CAT problems.

**TABLE 37**  
Performance on CAT Variables  
According to Identity Status

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CAT time</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>18</td>
<td>23</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>M</td>
<td>18.17</td>
<td>34.20</td>
<td>24.50</td>
<td>29.73</td>
</tr>
<tr>
<td>SD</td>
<td>7.94</td>
<td>13.84</td>
<td>15.77</td>
<td>18.52</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAT requests plus guesses</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>18</td>
<td>23</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>M</td>
<td>599.17</td>
<td>875.82</td>
<td>807.14</td>
<td>767.38</td>
</tr>
<tr>
<td>SD</td>
<td>186.63</td>
<td>285.44</td>
<td>495.58</td>
<td>266.43</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAT overall score</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>18</td>
<td>23</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>M</td>
<td>791.94</td>
<td>1147.83</td>
<td>1024.82</td>
<td>1078.57</td>
</tr>
<tr>
<td>SD</td>
<td>244.15</td>
<td>407.98</td>
<td>612.04</td>
<td>352.38</td>
</tr>
</tbody>
</table>
Overall CAT performance scores for the four Identity Statuses are found in the third section of Table 37. When these data were subjected to analysis of variance (Table 40) a non-significant F of 2.28 (df=3/80) was obtained. This, again, suggests little apparent difference between Identity Statuses in their overall CAT performance.

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between statuses</td>
<td>3</td>
<td>448648</td>
<td>2.28</td>
</tr>
<tr>
<td>Within statuses</td>
<td>80</td>
<td>196881</td>
<td>NS</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

However, when investigating differences in CAT performance between different Statuses by means of t tests, it was found that for all three analyses of CAT performance, Identity Achievement Ss do significantly better than Identity Diffusion Ss (p's ranging from <.01 to <.05). Identity Achievement Ss also perform significantly better than the other three Statuses combined (p's ranging from <.02 to <.05). These data, found in Table 41, are consistent with the second main hypothesis of the study.
TABLE 38
Analysis of Variance for CAT time Scores
According to Identity Status

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between statuses</td>
<td>3</td>
<td>961.90</td>
<td>3.11</td>
</tr>
<tr>
<td>Within statuses</td>
<td>80</td>
<td>309.24</td>
<td>p= &lt; .05</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td>3.11</td>
<td></td>
</tr>
</tbody>
</table>

The total points for requests plus guesses is contained in the second part of Table 37. Analysis of variance of these data (Table 39) yields F=1.86 (NS, df=3/80), indicating no effect of Identity Status on CAT performance as reflected in the guesses plus requests score.

TABLE 39
Analysis of Variance for CAT Requests
Plus Guesses Score According to Identity Status

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>NS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between statuses</td>
<td>3</td>
<td>218182.83</td>
<td>1.86</td>
</tr>
<tr>
<td>Within statuses</td>
<td>80</td>
<td>117431.98</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td>NS</td>
<td></td>
</tr>
</tbody>
</table>
TABLE 41
Differences between Identity Statuses in CAT Performance

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>M</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identity Achievement vs. Identity Diffusion</td>
<td>18</td>
<td>18.17</td>
<td>2.39*</td>
</tr>
<tr>
<td>Identity Achievement vs. Foreclosure plus Moratorium plus Identity Diffusion</td>
<td>66</td>
<td>29.55</td>
<td></td>
</tr>
<tr>
<td>Foreclosure vs. Identity Achievement</td>
<td>23</td>
<td>34.20</td>
<td>2.90***</td>
</tr>
<tr>
<td>Foreclosure vs. Identity Achievement plus Moratorium plus Identity Diffusion</td>
<td>61</td>
<td>24.43</td>
<td></td>
</tr>
<tr>
<td><strong>Requests plus guesses</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identity Achievement vs. Identity Diffusion</td>
<td>18</td>
<td>599.17</td>
<td>2.189*</td>
</tr>
<tr>
<td>Identity Achievement vs. Foreclosure plus Moratorium plus Identity Diffusion</td>
<td>66</td>
<td>805.15</td>
<td></td>
</tr>
</tbody>
</table>

* p < .05  
** p < .02  
*** p < .01
### TABLE 41 (continued)

**Differences between Identity Statuses in CAT Performance**

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>M</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Requests plus guesses (continued)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreclosure vs. Identity Achievement</td>
<td>23</td>
<td>875.82</td>
<td>3.47****</td>
</tr>
<tr>
<td>Foreclosure vs. Identity Achievement plus Moratorium plus Identity Diffusion</td>
<td>61</td>
<td>732.08</td>
<td></td>
</tr>
<tr>
<td>Overall Score</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identity Achievement vs. Identity Diffusion</td>
<td>18</td>
<td>791.94</td>
<td>2.83****</td>
</tr>
<tr>
<td>Identity Achievement vs. Foreclosure plus Moratorium plus Identity Diffusion</td>
<td>66</td>
<td>1078.95</td>
<td>2.45****</td>
</tr>
<tr>
<td>Foreclosure vs. Identity Achievement</td>
<td>23</td>
<td>1147.83</td>
<td>3.19****</td>
</tr>
<tr>
<td>Foreclosure vs. Identity Achievement plus Moratorium plus Identity Diffusion</td>
<td>61</td>
<td>968.30</td>
<td>1.63*</td>
</tr>
</tbody>
</table>

* *p < .20  
** *p < .10  
*** *p < .05  
**** *p < .02  
***** *p < .01  

---

NS
Supplementary findings. Since Ss were permitted to give up on a CAT problem if they wished, it was possible to calculate total number of "give-ups" per Identity Status. These data are contained in Table 42. When comparing Identity Achievement Ss with other individual Statuses separately, Chi-square equals 7.00, $p < .10$. However, when comparing Identity Achievement Ss with other Ss as a group, $X^2 = 17.19$, and is significant at $p < .001$. These Chi-squares are based on number of individuals per Status who obtained one or more give-ups, rather than on total number of give-ups per Status, as the latter method would inflate the N.

### Table 42

Number of Ss in Each Identity Status Having One or More "give-ups" on CAT

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>9</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>$X^2 = 7.0000$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$p &lt; .10$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

<table>
<thead>
<tr>
<th>Ident. Ach.</th>
<th>All other statuses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>$X^2 = 17.1904$</td>
<td></td>
</tr>
<tr>
<td>$p &lt; .001$</td>
<td></td>
</tr>
</tbody>
</table>
Another interesting supplementary finding is that the Moratorium Status is significantly more variable in overall CAT score than the other three Statuses combined ($F_{\text{max}}=2.62$, $p^7<.05$, df=21/61). (McNemar, 1955, pp. 244-247) This greater variability in performance is consistent with the theoretical definition of the Moratorium Status.

In view of the hypothesis that low SEQ change scores and low CAT performance scores are both indicators of achievement of ego identity, one would expect them to correlate significantly. The obtained correlation was $r=.20$ ($p<.05$, df=82). This positive finding indicates at least some relationship between the two factors.

**Level of aspiration measures**

Level of aspiration measures were obtained on the CAT by asking the S to estimate the amount of time it would take him to solve the next problem having been given his time on the previous problem. The measures obtained from this procedure were: the initial estimate; attainment discrepancy (D) score; total number of shifts in estimate; and unusual shifts in estimate.

Although no hypothesis was made concerning initial estimate (i.e., S's estimate of time he would take to solve the first problem, having been told that it took most people...
3 minutes), one might expect Identity Achievement Ss would be somewhat more optimistic in their estimate than other Ss. This was not found to be the case. Data concerning the relationship between Identity Status and initial estimates are found in Table 43. Analysis of variance of these data is contained in Table 44. This analysis yields a non-significant F of .40 (df=3/80), indicating no overall difference in initial estimate according to Identity Status. A t test between the two most discrepant Statuses, Identity Achievement and Moratorium, yielded t=.83 (NS, df=37).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>18</td>
<td>23</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>X</td>
<td>3.12</td>
<td>3.10</td>
<td>3.02</td>
<td>3.06</td>
</tr>
<tr>
<td>SD</td>
<td>.30</td>
<td>.19</td>
<td>.41</td>
<td>.36</td>
</tr>
</tbody>
</table>
The next LOA measure investigated was attainment discrepancy or D score. This was obtained by comparing a S's stated expectancy with his actual performance; i.e., by subtracting his stated time estimate from his actual solution time immediately preceding. Hence, an overall positive D score means that the S tends to set his level of aspiration higher than his attainment; a negative D score means the opposite.

Data on D scores according to Identity Status are presented in Table 45. Inspection of original data revealed that no Status obtained a negative average D score, the range being from .60 for Identity Achievement to 2.06 for Foreclosure. The analysis of variance for D scores across Identity Statuses is found in Table 46. An F significant at $p < .01$ was obtained from this analysis ($F=5.10$, df=3/80).
D Scores* on CAT According to Identity Status

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>18</td>
<td>23</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>M</td>
<td>3.60</td>
<td>5.06</td>
<td>4.11</td>
<td>3.91</td>
</tr>
<tr>
<td>SD</td>
<td>.80</td>
<td>1.65</td>
<td>.72</td>
<td>1.49</td>
</tr>
</tbody>
</table>

*Constant of 3.00 added to each S's D score to eliminate negative number.

Analysis of Variance for D Scores According to Identity Status

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between statuses</td>
<td>3</td>
<td>8.43</td>
<td>5.10</td>
</tr>
<tr>
<td>Within statuses</td>
<td>80</td>
<td>1.65</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td></td>
<td>p &lt; .01</td>
</tr>
</tbody>
</table>

When t tests were applied to the data (Table 47) it was found that Ss in the Foreclosure Status had significantly higher D scores than those in Identity Achievement Status (t=3.35, p < .001, df=82). One may conclude from this that Foreclosure Ss do not seem to respond to failure in the generally accepted realistic manner of revising their goals.
They tend to maintain high goals in spite of failure. No other differences reached an acceptable level of significance, although there seemed to be a tendency toward over-estimation among Moratorium Ss also.

**TABLE 47**

Differences in D Score between Identity Statuses

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>N</th>
<th>M</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreclosure vs. Identity Achievement</td>
<td>24</td>
<td>5.06</td>
<td>3.35**</td>
</tr>
<tr>
<td>Foreclosure vs. Identity Achievement plus Moratorium plus Identity Diffusion</td>
<td>62</td>
<td>3.90</td>
<td>3.70***</td>
</tr>
<tr>
<td>Identity Achievement vs. Moratorium</td>
<td>18</td>
<td>3.60</td>
<td>1.90*</td>
</tr>
<tr>
<td>Identity Achievement vs. Foreclosure plus Moratorium plus Identity Diffusion</td>
<td>66</td>
<td>4.38</td>
<td>.567</td>
</tr>
</tbody>
</table>

*<.10  **<.01  ***<.001

Total number of shifts in estimate was computed and the mean number of shifts per S was found to be 4.14 out of a possible 6. Ss were dichotomized above and below 4.00
into High and Low groups, so that each S, except those with exactly 4 shifts, was categorized into either a High or a Low group. This was analyzed by means of chi-square and is found in Table 48. The obtained chi-square of .56 (df=3) was not significant. There seems to be no relationship between shifting estimates and Identity Status.

**TABLE 48**

High and Low Shifters According to Identity Status

<table>
<thead>
<tr>
<th>Group</th>
<th>Identity Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>8</td>
</tr>
<tr>
<td>Low</td>
<td>5</td>
</tr>
</tbody>
</table>

$x^2 = .5598$

NS

The final LOA measure was the frequency of unusual shifts in estimate. These were divided initially into two classes: major unusual shifts which involved the S's shifting his estimate up after failure or down after success; and minor unusual shifts which involved the S's refusal to change estimate following success or failure. A summary of the data on unusual shifts is presented in Table 49.

---

8 Since there is some question as to whether or not "shifting" determined by counting number of shifts per S, is a continuous variable, a non-parametric test was used here.
TABLE 49

Unusual Shifts According to Identity Status

<table>
<thead>
<tr>
<th>Category</th>
<th>Identity Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major:</td>
<td></td>
</tr>
<tr>
<td>Up after failure</td>
<td>3</td>
</tr>
<tr>
<td>Down after failure</td>
<td>3</td>
</tr>
<tr>
<td>Minor:</td>
<td></td>
</tr>
<tr>
<td>Same after failure</td>
<td>21</td>
</tr>
<tr>
<td>Same after success</td>
<td>12</td>
</tr>
<tr>
<td>Total same after failure</td>
<td>101</td>
</tr>
<tr>
<td>Total same after success</td>
<td>55</td>
</tr>
</tbody>
</table>

\[ x^2 = 13.56 \]

\[ p < .001 \]

A surprisingly low number of major unusual shifts (15) occurred, especially taking into account the fact that Ss had a total of 504 opportunities for such shifts. Among minor shifts, there is a preponderance of Ss who maintain their same estimates in the face of failure \( (x^2=13.45, p < .001, df=1) \). This is consistent with a pattern of high need for achievement which one might expect of college students.
The mean number of unusual shifts (major plus minor) per $S$ was 2.04. $S$s were dichotomized above and below 2.00 into two groups representing High and Low shifting. The data were then analyzed by means of chi-square for differences in frequency of unusual shifting according to Identity Status. These data are presented in Table 50. A non-significant chi-square of 1.66 (df=5) indicates that unusual shifts are not associated with any particular Identity Status.

**TABLE 50**

High and Low Unusual Shifters
According to Identity Status

<table>
<thead>
<tr>
<th>Group</th>
<th>Identity Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>7</td>
</tr>
<tr>
<td>Low</td>
<td>7</td>
</tr>
</tbody>
</table>

$X^2 = 1.6561$

NS

In order to compare EI-ISB with the various LOA measures, $S$s were split into High and Low groups at the median EI-ISB score of 46.5. Table 51 shows these comparisons, none of which reaches significance. It appears that EI-ISB scores bear a negligible, if any, relationship to LOA measures.
TABLE 51
Comparison of High and Low EI-ISB Scores with LOA measures

<table>
<thead>
<tr>
<th>Variables</th>
<th>EI-ISB</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>D scores</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>42</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4.17</td>
<td>4.14</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>2.74</td>
<td>1.62</td>
<td></td>
</tr>
<tr>
<td>Frequency of shifts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>18</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>14</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$X^2$ 0.0007</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>Major unusual shifts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$X^2$ 0.48</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>Combined unusual shifts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>81</td>
<td>94</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$X^2$ 0.97</td>
<td>NS</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER V
DISCUSSION

This chapter will elaborate on some of the findings reported in the previous chapter. It is divided into two parts. The first deals with the experimental findings, per se; the second considers some implications of the findings in terms of both the present and future studies.

Experimental Findings

Relationship between EI-ISB and Identity Status

The hypothesis of a significant positive relationship between these two measures was confirmed. Although the study was not specifically designed in such a way as to test the theoretical difference between the two (i.e., EI-ISB as a more broad-guage measure of ego identity than the more narrowly conceived "styles of life" constituting Identity Statuses), the moderate value of the correlation at least suggests that the two variables are not completely overlapping ones.
Initial self-esteem

It was predicted that both EI-ISB scores and Identity Status would be positively related to self-esteem scores. While this was found to be the case to a limited, but significant, extent for EI-ISB, it was not confirmed for Identity Status. In fact, one finds the greatest (albeit, non-significant) difference on this variable between Moratorium and Identity Diffusion, rather than in the expected Identity Achievement - Identity Diffusion discrepancy.

No specific theoretical rationale will be advanced as to why the above results were achieved. One might speculate that Moratorium SSs tend to respond more defensively to the SEQ and, hence, receive inflated scores. However, there is no support for this in the criteria on which the Moratorium Status is based.

Year in college

The hypothesized relationship between both EI-ISB scores and Identity Status and year in college was found for only one of the variables, Identity Status. There seemed to be no significant increment to EI-ISB scores with advancing year in college, although underclassmen do receive non-significantly lower average EI-ISB scores than do upperclassmen.
The hypothesis concerning Identity Status increase with increase in year in college received support, although not at a high level of significance.

F<sub>I</sub> scale

Foreclosure Status Ss received significantly higher F<sub>I</sub> scores than either Identity Achievement Ss or other Ss combined. This finding constitutes confirmation of the hypothesis and contributes a valuable empirical referent for the Foreclosure Status.

Change in self-esteem

It was hypothesized that Ss high in Identity Status and Ss who received high EI-ISB scores would show the least change in self-esteem following ISD. No confirmation of this was obtained for either EI-ISB scores or for Identity Statuses treated as separate groups. Extremely limited support for the hypothesis was found in a low correlation between Identity Status treated as a continuum and change in SEQ scores.

A possible reason (the two-month span between SEQ<sub>1</sub> and SEQ<sub>2</sub>) for the failure of confirmation of this hypothesis will be discussed later in this chapter. Until this possibility is investigated, it would probably be best to
reserve judgment on the fate of the hypothesis, at least in terms of extending it beyond the present study.

An additional finding was that among the Statuses, Foreclosure Ss seem to show a greater decrease in self-esteem when given negative information about themselves than do Identity Achievement Ss under the same conditions.

Reactions to invalidated self-definition

There were somewhat fewer distinctive reactions among the Statuses to ISD than were expected. However, considering those which did occur, the following characteristics were noted. There was a slight tendency for low Identity Status Ss (Moratorium and Identity Diffusion) to fall into the "complete acceptance" category of reactions to negative ISD than for high Identity Status Ss (Identity Achievement and Foreclosure). This corresponds with the similarly limited tendency for a higher percentage of Identity Diffusion Ss as opposed to Identity Achievement Ss to change self-esteem in a direction consistent with ISD.

The general reaction among all Ss to ISD was one of acceptance, with somewhat greater acceptance by low than by high Identity Status Ss.
Concept Attainment Task performance

It was hypothesized that both EI-ISB and Identity Status would be related to the three performance measures taken from the CAT: time, requests plus guesses, and overall score.

All correlations between EI-ISB and measures of CAT performance were in the expected direction; all were non-significant. A tendency for Ss high in ego identity to do well on the CAT seems to exist, but not to such an extent as to constitute confirmation of the hypothesis.

The relationship between Identity Status and CAT performance, particularly in terms of differences between Identity Achievement Ss and Ss from other Statuses, is less equivocal. Identity Achievement Ss showed significantly better performance on all three measures than either Identity Diffusion Ss or the three other Statuses combined. A possible contaminating factor, intelligence, was ruled out because of its failure to relate to Identity Status.

It is of some import that Ss placed in a particular category on the basis of such molar criteria as crisis and commitment in the areas of occupation and ideology should show such significant differences in behavior on a seemingly far-removed experimental task. It is also interesting to
note that one of the reasons for adding a stress factor to the CAT was to facilitate discrimination between Identity Achievement and Foreclosure Statuses. Foreclosure Ss, in general, performed significantly more poorly than Identity Achievement Ss and somewhat more poorly than all other Statuses combined. An additional finding supporting this is that Identity Achievement Ss give up on CAT problems significantly less frequently than do Ss in other Statuses - once again indicating superiority of Identity Achievement's CAT performance.

Moratorium Ss were found to be significantly more variable in CAT performance than other Ss. This points up what seems to be a distinguishing feature of this Status - its tendency to vary between positive and negative attributes according to the particular variable under study. In connection with this, it might be noted that at one time during the data analysis, Moratorium Ss were dispersed into the other Statuses into which they seemed to fit best. This was done merely to see what the data would look like. Several more significant findings than were obtained by the present method were noted. However, this did not constitute in any way a major part of the data analysis and is neither experimentally nor theoretically justifiable. It is
mentioned here only to contribute more information as to the extreme variability within the Moratorium Status.

To the extent that both CAT performance and change in SEQ reflect the degree of identity achievement, one would expect them to be correlated. This was found to be the case to a limited, but significant, extent.

Level of aspiration measures

The original hypothesis predicted a negative relationship between high Identity Status and LOA measures associated with unrealistic goal-setting. While this hypothesis, per se, was not confirmed, it was found that Foreclosure Status Ss achieved significantly higher D scores than both Identity Achievement Ss and Ss in all Statuses combined. This reflects a tendency on the part of Foreclosure Ss to overestimate their performance even though they received continual feedback of their attainment, and suggests a degree of defensiveness and rigidity in their goal-setting behavior.

The second LOA variable related to unrealistic goal-setting was the number of unusual shifts. This variable did not discriminate among either Identity Statuses or EI-ISB scores. Other LOA measures such as initial estimate and number of shifts in estimate bore no relationship to
Identity Status. There may have been several reasons for the lack of relationship between these latter LOA measures and Identity Status or ego identity. The simplest is that the CAT provided only 6 opportunities for shifts and only 7 for estimates, perhaps not enough to get a clear picture of an expectancy pattern using this particular measure. Another possibility is that this LOA measure on this conceptual task just does not reflect differences in Identity Status.

Treatment conditions

**ISD and SEQ change.** It is somewhat puzzling to be confronted with the obvious ineffectiveness of the ISD - change in self-esteem condition. The SEQ itself seems to have well-established validity, both in terms of the Rosenbaum studies (1960a, 1960b, 1961) and in terms of its relationship with the EI-ISB in the present study. On the other hand, Ss were also reliably observed to have been affected by the ISD treatment - so that the difficulty apparently does not lie with this factor either. Moreover, the general paradigm of susceptibility to external sources of self-definition has been used previously and found successful in the Gruen study (1960). Since neither the measure nor treatment condition nor the two in concert seem
to be at fault, the conclusion is that one might look into the particular method of procedure that this study employed.

The most salient factor seems to be the length of time - in most cases, two months - between the first and second administration of the SEQ. It is quite possible that variability due to Ss' changes in self-esteem over this period of time obscured differences due to the treatment alone. The non-significant, but directionally appropriate, relationships between Identity Status and SEQ change would lend some tentative support to this possibility.

Fortunately, if this is the case, the situation can be easily remedied. The first step would be to construct an alternate form, preferably split-half, of the SEQ and obtain a high test-retest reliability coefficient for the two forms over a period of, say, two weeks. This having been done, Ss would then take form I of the SEQ within two weeks prior to the ISD treatment; immediately following ISD, they would be given form II and the difference score between these two would be used as a measure of self-esteem change.

Another possibility that might account for the insignificant results of the ISD treatment deals with the particular form in which the ISD was presented to Ss. It
was worded in such a way that it might have aroused dual cognitions. One was the intended idea that the S was better (or worse) than he had estimated himself to be and better (or worse) than other Ss. The other was that the S simply had an inaccurate self-image, a less threatening possibility than lack of maturity and self-confidence, and, hence, less crucial in effects on self-esteem.

One of the categories used in analyzing the taped reactions to ISD was a S's "focus on discrepancy." This applied to Ss who exhibited just the reaction tendency described above; they dealt, not with the consequences of possible immaturity and low self-confidence, but with their faulty estimations of themselves. However, only 3 of the 86 Ss appeared to fall into this category. In addition, if this were an adequate explanation, all Ss would, in effect, be receiving negative information. That is, they would perceive being told that their self-concepts were inaccurate. To the extent that this has any consequences for self-esteem and was at all widespread among Ss, one would expect more negative self-esteem changes than positive ones. This was not the case. Thirty-eight Ss change positively in their SEQ scores, thirty-nine changed negatively, and eight showed no change.
The conclusion, then, is that although the possibility of the Ss receiving two types of information and focussing on the less threatening one still exists, the available evidence does not support it. It would seem more fruitful at this time to pursue the elimination of test-retest variability suggested previously.

If positive results (i.e., more change for low ego identity Ss than for high, and more change for Identity Diffuse Ss than for Identity Achievement ones) were not obtained, then one could revise the ISD to a more straightforward form. However, the value of the treatment in its present form lies in the opportunity it provides to elicit Ss' reactions to the information.

In short, it appears that the "change in SEQ" hypothesis failed of confirmation due to a defect in experimental procedure, and that the hypothesis is still viable, though presently unsupported.

CAT under stress. The stress conditions of evaluation apprehension and over-solicitousness were generally effective in helping to discriminate CAT performances among Identity Statuses. Of course, by using two types of stress, one is not certain which of the types or, more likely, whether both are effective. The answer to this question was not crucial
to the present study; however, investigation of these two conditions would be an interesting project in its own right.

Pilot study data, both empirical and anecdotal, suggested that both types of stress were effective. This is not too surprising in the case of evaluation apprehension; but if over-solicitousness is an equally effective stressor, then this might have some interesting ramifications for research in psychotherapy.

Many clinicians are suspicious of that type of supportive therapy called "ego-bolstering" aimed at gratification of the patient's immediate needs for nurturance. Erikson, in discussing the appropriateness of such techniques, states:

A weak ego does not gain substantial strength from being persistently bolstered. ....A war, however, can be an unfair test to ego strength. ....Ego bolstering is a legitimate measure in such days of collective danger. ....The indiscriminate application of the philosophy and the practice of "ego bolstering" to peacetime conditions, however, would be theoretically unsound, and therapeutically unwholesome. (1946, p. 47)

Of course, there was no intent on the part of the task E to "bolster" the S's flagging ego; the adjective over-solicitousness specifies that. However, might it be the case that persistent reassurance (support) in the face of
an anxiety-provoking situation, well within the S's capabilities, actually produces a decrement in performance as opposed to, say, very brief reassurance or no reassurance at all?

This question could be approached by using the same experimental procedure (CAT) as employed in the present study, but with varying degrees of solicitousness. Naturally, any indications for psychotherapy arising from such a study would be suggestive only and would await testing in a controlled therapeutic situation.

Implications of Findings

Measures

EI-ISB. With respect to the main purpose of the study, the development of measures of ego identity and assessment of their validity in an experimental setting, one may say that the task has been about half completed. There is little question that reliable measures have been developed; but, at least in the case of EI-ISB, the validity is questionable.

As was expected, this test correlated significantly with both Identity Status and SEQ. However, it seemed to bear no significant relationship to such other important variables as SEQ change scores, CAT performance, or year
in college - although for the latter, two results were in the expected direction.

The failure of EI-ISB to predict to the major experimental tasks brings its evaluation dangerously close to little more than a test of "general maturity" or "adolescent adjustment." Of course, EI-ISB would be expected to correlate with such measures, but both the stems and their criteria were chosen on a more subtle and theoretically derived basis than what such a label would imply.

Necessary steps in refining this test are two-fold: first, eliminating those two or three items still present which seriously diminish reliability of scoring; and second, running an item analysis, retaining those items which correlate significantly with both Identity Status and those experimental tasks (in this case, CAT performance) with which Identity Status correlates.

There are two reasons for retaining the EI-ISB. The first is that it is more convenient to administer and score than the Identity Status Interview. The second is that it seems to measure factors similar to, yet not completely accounted for, by the Identity Status Interview. This may be seen in its correlation with SEQ, which did not correlate with Identity Status, together with its significant correlation with Identity Status. It was originally
thought that this common factor was overall ego identity; however, in view of the test's failure to discriminate Ss' performance in either experimental situation, this claim is presently not justified.

**Identity Status Interview.** This seems to have been a situation in which a more clinically attuned measure paid off. Reliability coefficients were quite satisfactory, considering the difficulties entailed in such complex clinical judgments. Experimental findings indicate significant relationships between Identity Status and one of two major experimental variables, CAT performance - as well as initial F score, year in college, and LOA measures.

An important question concerning Identity Status was whether to consider the Statuses as a continuum with gradations based on the "adaptability to environmental press" variable, or to consider them as discrete groups. Although the data were not reported in the Results section, for no variable did ratings of High, Medium, or Low adaptability to press discriminate among Ss within Identity Statuses. Criteria for ascertaining this variable were not well spelled out nor were interviews so focussed as to provide a good estimate of it. These generally negative findings lead one to question the meaningfulness of the
points - identity "types." In line with the major approach of this study, one can derive the following empirical descriptions of each Status, based on experimental findings.

Identity Achievement. This group attains the highest EI-ISB scores; it also tends to have more members in the Junior and Senior classes in college. Identity Achievement Ss are somewhat less submissive to authority than other Statuses, although not significantly so. Their self-esteem seems a little less vulnerable to external manipulation, particularly manipulation in the form of negative communications, than does that of other Ss, although, again, this tendency is not significant.

Identity Achievement Ss tend to perform significantly better on a stressful concept attainment task than do Ss in other Statuses, yet they are not significantly more intelligent. They also tend to persevere on conceptual problems, giving up significantly less frequently than other Ss. They seem to hew fairly closely to their attainment level when setting goals on a conceptual task, although they do not seem to differ much from other Ss in tendencies to shift levels of aspiration unexpectedly; e.g., down after success.

Foreclosure. This Status' most outstanding characteristic was its significantly higher endorsement of
"adaptability to press" factor except as a somewhat artificial means of stretching the concentration of four points of Identity Status into a twelve-point scale.

In addition to this, many tables in the Results section show the Foreclosure Status scoring less favorably than Moratorium. This finding casts some doubt on the relative positions assigned Foreclosure and Moratorium when converting the Statuses into a continuum.

The weakness of the continuum approach is evident when one considers that it is based on a non-discriminating variable and there is no certainty of the relative position of Statuses along the continuum.

Thus, while certain of the analyses were based on the presumed continuous distribution of Statuses, the most significant findings were obtained when each Status was considered as a separate group with its own distinctive characteristics. It appears that the interview criteria were not sufficiently explicit and detailed to permit a refined ordering in which each Status merges into its neighboring Status, and in which they are continuously ordered on a scale from high to low identity achievement. Or, perhaps, identity theory is not explicit enough now to accomplish more than the delineation of concentration
authoritarian submission and conventionality items on the SEQ-F scale. Attributes such as obedience, strong leadership, and respect for authority seem to be attractive to these Ss. Foreclosure Ss' self-esteem seems particularly vulnerable to externally-supplied negative information. They also do significantly more poorly on a stressful concept attainment task than do Identity Achievement Ss and somewhat more poorly than other Statuses combined. More Foreclosure Status Ss give up on CAT problems than do Ss from other Statuses.

Almost as distinguishing a feature as the high F score for this group is their rather unrealistic response to failure on the CAT. Rather than moderating their high goals, they tend to persist in maintaining them, even though they remain unfulfilled. It is interesting to note that a high D score, on which the above statement is based, is one of the indicators of what Rotter (1954) refers to as "low freedom of movement." Among the characteristics associated with low freedom of movement is "the achievement of superiority through identification." (Rotter, 1954, pp. 196-197) This is consistent with both the theoretical definition of the Foreclosure S as one who is becoming his parents' alter ego, as well as the empirical findings
concerning the high value he places in authoritarian principles together with the shakiness of his self-esteem when presented with negative information about himself by an external prestigeful source.

**Moratorium.** The distinguishing features of the Moratorium Status are its variability and its resemblance to Identity Achievement. This group, at times, exceeds Identity Achievement in positive characteristics such as self-esteem. On the other hand, one finds it second only to Identity Diffusion on such variables as SEQ change score. This tendency toward variable performance among Moratorium Ss is best documented by Moratorium's significantly more variable performance on the CAT.

Resemblance to Identity Achievement is shown on several measures. Moratorium Ss obtain EI-ISB scores very close to ones obtained by Identity Achievement Ss, and, hence, higher than those obtained by the other two Statuses. They also most closely resemble Identity Achievement Ss in $F_I$ scores. Their self-esteem seems to be somewhat less susceptible to increase after having been given positive information than that of other Statuses; in fact, one finds a very slightly greater tendency among Moratorium Ss to place a negative interpretation upon positive externally-provided information than other Ss show. On the whole,
tendency among the Statuses to change his self-esteem in a
direction consistent with an external source of self-
definition, particularly if that source supplies positive
information. In line with this, his apparent reactions to
ISD are more accepting than those of other Ss.

The CAT performance of the Identity Diffusion S, while
not the lowest of the Statuses, is uniformly significantly
poorer than that of Identity Achievement. A positive
factor in the Identity Diffusion's predominantly negative
profile is his apparently realistically oriented reaction
to failure, which does not seem marked by the defensive
patterns one might expect. In general, he seems to keep
his level of aspiration fairly close to his level of attain­
ment.

These "profiles" of the Identity Statuses are drawn -
admittedly somewhat freely at times - from empirical
sources, and are intended to complement the more theoretical
descriptions found in the first section of this study and
in the Identity Status Interview Manual.

Future research

The next step in research on these Statuses could
profitably be filling out their empirical referents by
using a different set of experimental tasks and observing
they are quite close to Identity Achievement Ss in their
general reluctance to change self-esteem in the direction
of ISD. The CAT performance also more closely resembles
Identity Achievement than it does the other two Statuses.

In view of the earlier considerations, although never
taken too seriously, of dropping the Moratorium Status, one
may say that Moratorium Ss, while not exhibiting such
clearly distinguishing characteristics as other Statuses,
do behave discriminably differently, if only by virtue of
their variability, and their inclusion rounds out the
Identity Statuses. Also, it must be kept in mind that the
present study was designed to elicit behavior more charac­
teristic of other Statuses than Moratorium.

Identity Diffusion. The Identity Diffusion S truly
seems to be low man on the Status totem pole. He is the
anchor point for most high-low comparisons with Identity
Achievement. His EI-ISB scores are significantly lower
than all Statuses combined, and his self-esteem is somewhat
lower than others'. While he does not exhibit quite the
same proclivity for authoritarian values as the Foreclosure,
he is next highest among Statuses in their endorsement.

His self-esteem shows a greater extent of change when
compared with other Statuses and he exhibits the greatest
differentiating characteristics of performance among the Statuses. Some tasks that might be amenable to this purpose, mainly because of their strongly ideographic nature, are responses to TAT pictures (Murray, 1958), role variability assessed by means of the Role Construct Repertory Test (Kelly, 1955), and a semantic differential technique (Osgood, Suci, and Tannenbaum, 1957). Descriptions of Statuses by means of responses to these tests would add new descriptive dimensions as well as suggest hypotheses for further research.

Another possibility is the further discrimination of Statuses by differential stress. That is, if the Statuses are reliably distinguishable, then there ought to be types of stress that would be more effective with one Status than another. One such situation might be stimulus deprivation; in a setting so devoid of environmental supports as this is, one might expect Foreclosure Ss to show even more disturbance than Identity Diffusions.

Following the filling in of the behavioral profiles for each Status, perhaps the most exciting task in this line of research could be begun: the specification of antecedent conditions. In fact, the claim of the present study to deal with "construct validity" is somewhat exaggerated. We are not dealing with S-R type relationships...
here nearly to the extent that we are engaged in establishing R-R ones (Bergmann and Spence, 1944). We cannot consider "construct validity" to be established for either ego identity or the Identity Statuses until we can locate at least some of their antecedent conditions.

To accomplish this task, one would need to specify parent variables associated with each Identity Status, measure these variables, relate them to the EI-ISB and Identity Status Interviews, for which, in turn, we would have established some predictive validity. To elaborate and go beyond some of Erikson's (1963) suggestions, at least the following maternal variables would be important to explore:

**Intrusiveness.** This is a characteristic of the "auxiliary mom" who, when her child joins the Boy Scouts, becomes a Den Mother, when he joins the band, becomes a member of the Band Parents Association, and when he joins a fraternity, is active in the Mother's Club. She makes it nearly impossible for him to do anything completely on his own. There is a certain penetrating omnipresence about her.

**Availability.** Closely akin to intrusiveness is "availability." This is characteristic of the "mom-back-home." There are really few impelling reasons for a boy with such
a mother to relinquish infantile sources of gratification, for "mom" will always be available when needed, nurturance inexhaustible.

**Social desirability** (after Crowne and Marlowe, 1964). This mother with a high need for social approval tends to instill a "glad-to-be-proper" attitude in her son. He is taught to be unaware of his less acceptable feelings until he may begin to doubt what his "real" feelings are. For this mother, the important concern is not for what one does feel, but for what one ought to feel.

**Dominance.** This mother is the home arbiter. She has the final word on what clothes, what college, what vacation, what girl, etc. The boy with this type of mother need not trouble himself to establish an identity; his mother will provide a pre-fabricated one.

Among important paternal variables might be the following two:

**Submission.** This is the "dad" who lives in essentially two different realms. In one, "the office," he is a ruler; in the other, "home," he is merely one of the subjects. He is the complement to the "dominant" mom. It is not submission in general that is referred to here, but particularly submission to the wife in the home.
Inappropriate dependency. This might be referred to as the "sibling dad." His own needs for affection and nurturance make him a covert competitor with the son for the mother's favors. This may evolve into a "pal" relationship between father and son, making it difficult for the son to transcend the period of boyhood, since he is not presented with a model who has successfully made the transition.

The above descriptions tend to create the impression of uni-variable "types" of mothers and fathers. Of course, any parent might show any of these characteristics to a greater or lesser extent. The preceding "types" have been constructed solely to illustrate the variables.

Especially so long as one is dealing with college students, there would seem to be little reason why a structured interview could not be constructed to tap these parent variables, interviewing the students' parents in their own homes.

One further point that has not been mentioned since a somewhat cursory reference in the Background section is that all the existing psychosocial criteria for ego identity apply primarily to males in our society, and perhaps to a somewhat selective sample of them. Future research
might undertake to answer the questions: What are the criteria for ego identity in females? To what extent do these overlap with those for males? Can we construct similar Identity Statuses? Certainly the following statement suggests no solution, but the answer to the above questions lies at least partially in answering the tripartite question that American women must deal with in resolving the identity crisis: What does it mean to be one who can be a mother, must be an attractive lover, and ought to be an intellectually competent (and competitive?) individual.

To summarize, the most fruitful lines for extension of the present research on measures of ego identity would seem to be: further establishment of empirical referents for the Statuses; specification and measurement of antecedent conditions, particularly parent variables; and extension of inquiry into the criteria for ego identity in females.
CHAPTER VI

SUMMARY

The main task of this study was to develop and validate measures of ego identity, a concept describing the successful resolution of the phase-specific identity crisis occurring during adolescence. In the process of developing these measures, four styles of meeting the identity crisis were described. These were referred to as Identity Statuses and consisted of Identity Achievement, Foreclosure, Moratorium, and Identity Diffusion. Criteria for membership in a Status involved a S's standing on two variables, crisis and commitment, in two main areas, occupation and ideology, the latter divided into religion and politics. Identity Achievement and Identity Diffusion represent concentration points at the extremes of a continuum of the achievement of ego identity; the Diffuse individual has failed to solve the issues of identity crises and has not committed himself in major areas of his life. Foreclosure and Moratorium are stylistic concentration points roughly intermediate in this distribution.
Measures constructed were the Ego Identity Incomplete Sentences Blank, a twenty-three item sentence completion test intended to measure overall ego identity, and the Identity Status Interview, a semi-structured interview designed according to criteria for Identity Statuses and intended to locate an S in one of the four Statuses. Inter-judge reliability was established for these measures in both a pilot study and the present study.

The experimental tasks, designed to validate the constructs underlying these measures, consisted of Ss' change in scores on a self-esteem measure following either a positive or negative invalidated self-definition and their performance on a concept attainment task administered under stressful conditions. Supplementary measures included a test drawn from the "authoritarian submission and conventionality" cluster of the F scale, Ss' reactions to the invalidated self-definition, and level of aspiration measures on the concept attainment task.

The two central hypotheses of the study stated that Ss who scored high on the EI-ISB and Ss high in Identity Status, particularly Identity Achievement Ss, would change less in self-esteem after an invalidated self-definition and perform better on the concept attainment task than Ss low in EI-ISB.
and in a low Identity Status, particularly Identity Diffusion. Other hypotheses involved the predictions that Foreclosure Ss would score higher on the F scale than other Ss, that ego identity would increase with year in college, that high EI-ISB and high Identity Status Ss would obtain higher initial self-esteem scores, and that Ss high in ego identity and Identity Status would show more realistic goal-setting patterns in LOA measures on the concept attainment task.

All of the 86 Ss who served in the experiment were college males between the ages of 18-21, most of whom were required to participate in an experiment for course credit. The concept attainment task was administered by ten trained confederate Ss in one day so as to minimize contamination by inter-subject communication.

Ss were given the measure of ego identity and the combined self-esteem - authoritarian scale in class. Each S was then seen in a fifteen-thirty minute interview to establish his Identity Status. The EI-ISB's were not scored until the interviews were all completed; in addition, they were independently coded and names of Ss blocked out. The interviews extended over two months. On the day of the experimental situation, Ss went through the following sequence of events: concept attainment task under the stressful
conditions of evaluation apprehension and over-solicitousness provided by the task E; a positive or negative invalidated self-definition given by the author, in which the S was told that he was either more or less mature and self-confident than he estimated himself to be or than other Ss were; and a second administration of the self-esteem scale. All Ss were subsequently informed of the false information they had been given by the E. The task Es were not aware of either the Ss' EI-ISB scores or his Identity Status, and, of course, CAT performance scores were not known at the time Identity Status Interviews were given.

Results, on the whole, for the EI-ISB were insignificant except for its relationship to Identity Status and self-esteem. The conclusion here was that EI-ISB in its present form is extremely limited in its validity and that no justifiable claim can be made for it as an overall measure of ego identity.

Results for Identity Status indicate that those Ss high in Identity Status perform better on the stressful concept attainment task and that Identity Status increases with year in college. Findings for the individual Statuses showed Identity Achievement generally superior on all measures to Identity Diffusion. The Foreclosure Status received significantly higher F scale scores and higher D
scores, the latter being a level of aspiration measure indicating unrealistic goal-setting. Ss in the Moratorium Status performed significantly more variably on the CAT than other Statuses, and, in general, seemed to most resemble the Identity Achievement Status. Categories as well as ratings of Ss' reactions to the invalidated self-definitions were made and while there were no significant differences among the Statuses, there seemed to be a trend for low Identity Status Ss to accept the false information more than high Identity Status Ss.

The hypothesis concerning greater change in self-esteem as a function of low ego identity and low Identity Status failed to be confirmed. It was suggested that this was due to fluctuation in Ss' self-esteem scores, independent of the experimental treatment, over the two month period between the test's first and second administration - essentially a problem in unreliability.

Suggested extensions of this research include: item analysis of the EI-ISB; refinement of experimental design to adequately test the change in self-esteem hypothesis; development of criteria for ego identity in females; possible ramifications of over-solicitousness as stress for psychotherapy; and the specification of antecedent conditions, in the form of parent variables, to Identity Status.
The main contribution of this study lies in the development, measurement, and partial validation of the Identity Statuses. It cannot be said that an adequate measure of overall ego identity has been developed here.
APPENDIX I

INCOMPLETE SENTENCES BLANK

Name_________________________ Age____ Class____

Marital Status_________ Date_________

Complete these sentences to express your real feelings. Try to do every one. Be sure to make a complete sentence.

1. For me, success would be ___________________________

2. The difference between me as I am and as I'd like to be ___________________________

3. When I consider my goals in the light of my family's goals ___________________________

4. I'm at my best when ___________________________

5. Sticking to one occupational choice ___________________________

6. When I let myself go I ___________________________

7. I chose to come to this college after ___________________________

157
8. If someone were to ask me who I am, I would say _______

9. I am really convinced that __________________________

10. When I was a child, I __________________________;
    whereas, now I __________________________

11. I know that I can always depend on __________________________

12. (Choose only one) I am __________________________
    I am not __________________________

13. It seems I've always __________________________

14. I wish I could make up my mind about __________________________

15. Getting involved in political activity __________________________

16. I would most like to be like __________________________

17. What happens to me depends on __________________________

18. As compared with four years ago, I __________________________

19. I belong to __________________________
20. To change my mind about feelings toward religion

21. If one commits oneself

22. My place in society

23. If I had my choice

24. Ten years from now I

25. It makes me feel good when
APPENDIX II

EGO IDENTITY

ISB

In general:

1. Any answer indicating a commitment to one of the three major areas* is, a priori, higher than a 1.

2. Any blatantly pathological or self-derogatory statements and those containing mutually exclusive clauses are scored 1.

3. All blanks are scored 1.

4. Trivia and inappropriate humor are given a 1—except where noted in the specific question criteria.

5. When the individual sees himself as having overcome, or capable of overcoming barriers to achievement of personal goals, generally scored 3.

*occupation, religion, politics
1. For me, success would be _______________________________

2 -- In line with occupational choice.

E.g.--"realizing my ambition to be a practicing veterinarian."
"to obtain a degree in optometry, have a profitable practice, and a home, and a family."
"the achievement of a large amount of competence in my main career, namely engineering."
"being a brilliant and recognized authority in my academic field."

2 -- Any goal involving action on the part of the individual -- an emphasis on attaining--i.e., doing or getting as opposed to having or being given to.

E.g.--"fulfilling my state in life in the career I am following."
"in what I do, not in how much money I earn." (philo.)
"attainment of the Ph.D. degree and its associated prestige and status." (specific)
"knowing, loving, and serving God daily more and more with my wife, family, and friends."
"a good job with a family and enough money to support them."

1 -- General security and happiness -- the idea that success would be "nice," but no specification of what its components might be. Or mutually exclusive clauses.

E.g.--"would be in the form of pleasure."
"desirous."
"to be superior and to be accepted by others." (for most of us, mutually exclusive)
"an inner feeling of self-satisfaction."
2. The difference between me as I am and as I'd like to be

3. Any indication that the difference is generally small. The answer can be somewhat trivialized (see first example) if it is meaningful in terms of the S.

E.g.—"three quarters of college."
"is small."
"is very likely to be dissolved in time."

2. Mention of a specific trait.

E.g.—"I have potential, but lack a certain amount of drive."
"is that I'd like to have more strength of character and security in what I am."
(close to a 1)
"I'm not aggressive enough and don't try as hard as I should in all I do."
"I have yet to attain success in engineering."

1. A very great discrepancy between real and ideal self.

E.g.—"is physical and personal shortcomings."
"I'd like to be a better person in the eyes of God."
"is great."
3. When I consider my goals in the light of my family's goals

3 -- Either directly opposite to family goals with evidence of some commitment, or a difference from family's goals with commitment. Not enough to say amply: "They're different." Ideally, a 3 here would reflect a continuity—family goals transformed by the individual into his own style.

E.g.—"they do not tend to approve of my goals and thinking."
"they are of a higher nature than my family's."
"I realize that the ultimate goal is similar, although the pathway is different."
"I feel that they're missing a lot."

2 -- Some goals the same, some different, but very little evidence of firm commitment. Or indeterminate statements, such that one cannot assess whether or not a difference exists.

E.g.—"I find them somewhat the same."
"not much difference, but a little."
"I wonder if I'm aiming too high."
"there is no comparison." (indeterminate)
"I am happy and so are they." (indeterminate)

1 -- Direct harmony, exactly the same.

E.g.—"they are basically the same."
"we end up agreeing on my family's goals."
"they are consistent."
4. I'm at my best when ____________________________________________

3 — Self-initiated action (i.e., doing something) or competition, or little dependence on environment, or activity in line of occupational choice.

E.g.—"I'm on my own and have sole responsibility to get a given job done."
"I'm doing work I enjoy."
"I'm talking about music." (career)
"I'm competing with others in the classroom or under conditions conducive to pressure."

2 — When the environment shifts to suit the individual, or when there is absolutely no pressure at all.

E.g.—"my mind is clear of all worries, even trivial ones."
"I'm happy."
"I'm with my family and being alone."
"under a small amount of tension."
"I'm in familiar surroundings." (dependent on environment)

1 — Either seldom "at his best" or completely dependent on external factors.

E.g.—"I've had something to drink."
"other people are helping me."
"someone tells me what should be done."
5. Sticking to one occupational choice

2 -- Practically unequivocal endorsement.

E.g.—"is not difficult for me -- it is law."
"until I have determined whether or not I
will enjoy it is very important."
"is what I plan to do -- teaching."
"suits me fine."

2 -- Conditional endorsement; or generally low commit­
ment to the whole principle, or concern with diffi­
culty of following through on it.

E.g.—"is all right if you're a success in it."
"is difficult to do since it demands a great
deal of assuredness as to one's capability
of making a choice."
"is sometimes difficult."

1 -- Generally negative feelings toward the idea, or
very little endorsement accompanied by a tone of
pessimism as to feasibility, or statement of a de­
sire to remain uncommitted. In a 2, one may be
convinced that it's a fairly good idea but can't
achieve it; in a 1, one isn't so sure it's even a
good idea.

E.g.—"has too much hindrance on one's personality."
"does not enchant me, but it will probably be
necessary."
"is something I have not yet been able to do."
"can be a bad idea if the choice is poor."
EGO IDENTITY

6. When I let myself go I ________________________________

2 -- Non-disastrous self-abandonment. Luxuriating in physical release.

E.g. -- "have a good time and do not worry about others' thoughts and standards.
"enjoy almost anything that has laughter and some physical activity involved."
"enjoy myself more."
"am most apt to do well."

2 -- Cautiousness, or don't quite know what will happen, or have to be careful. Defensive or trivial.

E.g. -- "never know exactly what I will say or do."
"laugh and have a good respectable time."
"act very silly."
"sleep."
"might be surprised since I don't remember letting myself go."
"don't change much from my regular self."
"that is, withdraw and analyze any problem or situation, I am usually able to return to it and solve it satisfactorily."

1 -- Go all to pieces, or dangerous, or self-destructive, or better not to.

E.g. -- "think I talk too much about myself and my personal interests."
"sometimes say things I later regret."
"tend to become too loud when sober and too melodramatic when drunk."
"say or act in a way that is not of benefit to me or to anyone associated with me."
7. I chose to come to this college after ____________________

2 — Some thought or consideration on the part of the S went into planning. Going to a college because it offers the best training in his occupation.

E.g.---"considering others in view of what they had to offer me."
"deciding on my career."
"I found it was the best in numerical analysis."
"comparison of what costs were at OSU and other schools, taking into account my financial means."

2 — An answer indicating only a chronological sequence, not an active decision. Or, some indication that there was little choice, although not entirely precluding choice. Or, more convenience.

E.g.---"deciding to take summer work and have my credits transferred to Dartmouth."
"moving to this city."
"my junior year."
"I found it was the only agriculture college in the state."

1 — There was little or no choice - choice practically precluded; or S had to, or was made to; he took little part in decision.

E.g.---"not too much consideration."
"I was rejected from other schools."
"my parents talked me into it."
8. I am really convinced that ________________________________

3 -- A positive statement relating to commitment in one of the three major areas - or relating directly to the concept of ego identity; or Protestant ethic type statements.

E.g. -- "music is the finest career for me."
"success at anything is achieved mainly through hard work."
"my goal in life is to be with God forever."
"if a person tries, he can be a success on his own terms."

2 -- Introspective, philosophical, "searching for truth," generally positive statements but not so directly related to the three main areas or to ego identity. Statement characterizing self, but not necessarily showing ego strength - perhaps just self esteem.

E.g. -- "sex is the primary motivation in my life and a number of others' lives."
"most things turn out best in the end."
"I must work harder and develop better study habits if I am to have success in the graduate study of my choice." (more introspective than just a bald statement of the "hard work" ethic)
"I will someday have most of what I want." (emphasis on "having" rather than "getting")
"I am a far better person since coming to college."

1 -- Humour, trivia, or statements concerning purely external factors which signify little investment on the part of the S.

E.g. -- "Americans are growing fat, lazy, and too complacent, although Compoz seems to be needed for a few."
"A college education has done many good things for me."
"two plus two equals four."
9. When I was a child, I _____; whereas, now I __________

2 -- Strong change in over-all personality; or a re-formulation in adult terms of childhood antecedents; or change in one of the three major areas.

E.g.—"was a babe in arms" -- "am a father and a teacher with many babes in arms."
"very timid" -- "reserved and respond when necessary." (adult form of childhood antecedent)
"took religion more or less seriously" -- "find belief in God truly necessary."

2 -- Change in most any specific trait, e.g., in personality or body image.

E.g.—"fatter than I am now" -- "not as fat."
"was lonely" -- "I am not."
"not as aware of reality" -- "I am."

1 -- Trivial or stereotyped. Also, no change, or negative change.

E.g.—"played in the sandbox" -- "no longer do." (trivial)
"thought about everything" -- "like to do the same." (no change)
"thought as a child" -- "am a man and I think as a man." (stereotyped)
"little and insecure" -- "big and insecure." (negative change)
"spent money too freely" -- "know better, but still tend to do the same thing." (no change)
10. I know that I can always depend on ________________

2 -- Self

E.g.--"my own self, then maybe my aunt, then possibly my mother."
"my mind and diligence to surmount any barrier."
"my reflexes to get me out of a hard situation."

2 -- Others, if I do my part.

E.g.--"myself and my parents."
"nothing except books. They will always respond if you demand it of them."
(questionable)
"the good will of others, if I treat them right."

1 -- Others solely, or no one, or trivia.

E.g.--"on my Army commission for security in the future."
"God, when I am down or troubled."
"Columbus weather to change."
COMMITMENT

11. (choose one) a. I am _____________________________
   b. I am not _____________________________

2 -- Choice of a. (excluding trivia) A positive statement indicating ego strength in the form of a self-characterization, or a statement of commitment to one of the three major areas.

   E.g.—"the right type of person to go into my chosen vocation."
   "determined to be a successful veterinarian."
   "happy to be a fireman in Asheville."

2 — Choice of either a. or b. If a., a much more limited self-description, perhaps related to imminent direct action or to future activity outside of the three main areas; or mention of a singular personal trait or hobby; or any searching, introspective, philosophical answer. If b., must be a fairly positive statement about self in order to get a 2.

   E.g.—"anxious to get married."
   "going to raise my children in a Christian home."
   "inclined to think carefully before acting."
   "an amateur radio operator."
   "a realistic perfectionist."
   b. "hard to get along with."

1 — Choice of b. unless quite positive as noted in 2; or trivia or pathological answers.

   E.g.—"entirely pleased with what I have made of my life up until the present."
   "sure I will be able to finish school."
   "as grateful as I should be."
   a. "6'9" tall."
   b. "living a waiting existence."
EGO IDENTITY

12. It seems I've always ________________________

2 -- Statement reflecting self-initiative or commitment in one of three main areas, or indication of some sense of continuity with past.

E.g.--"done everything on my own with little advice from anyone."
"wanted to be a teacher."
"been able to make friends."
"been given a chance and it's up to me to do something with it."
"been happy with my religion."

2 -- Introspective, yet not negative self-evaluation; also, vague commitment.

E.g.--"been a perfectionist."
"wanted to go to college."
"had a desire to travel."

1 -- Negative self-evaluation or trivia, or responses indicating a conflict.

E.g.--"tended to make life difficult for myself--been my own worst enemy."
"been inhibited from reacting to certain things."
"wanted to be liked and respected, yet wanted to be a leader." (some conflict)
COMMITMENT

13. I wish I could make up my mind about __________________

2 — Specific goal-directed issues — unless trivial.

E.g.—"being a full-time fireman or making use of my education in industry."
"what to do about the girl I'm dating."
"my college choice for law school."

2 — More broad philosophical questions, weltenschauung and weltschmerz, introspective.

E.g.—"sex."
"what is really important in life to me."
"my true vocation."
"the mentality of the average person and what he is like."

1 — Either nothing to very many things; or trivia.

E.g.—"buying a new car."
"where I want to go on my vacation."
"nothing, really."
COMMITMENT

14. Getting involved in political activity

3 -- Full personal endorsement, something that the S, himself, should do.

E.g.---"appeals to me on an international, geopolitical level."
"is necessary."
"is my duty, as well as every citizen's."

2 -- Endorsement with reservations; or S feels it's a good idea for other people - what they should do. Or conflicted.

E.g.---"is interesting to me, but not in any excess."
"is for someone who desires it."
"is as futile as it is necessary."

1 -- Disclaims personal interest; or sees mainly obstacles involved.

E.g.---"doesn't appeal to me."
"is not my idea of a good thing to do."
"is dangerous because your job may depend on one party or another."
15. What happens to me depends on________________________

2 -- Self, and self is not seen as inadequate.

E.g.--"how well I adjust to the world."
"what I do with situations as they confront me."
"my ability to make correct decisions."
"my school work and my ability to learn outside of school."

2 -- Others and self; also, if self is seen as inadequate.

E.g.--"my desires, God's plan, and surmountable obstacles."
"on me, and to some extent, society."
"my maturity, as yet, not developed extensively."
"my actions and the cooperation or lack of cooperation of my associates."
"my grades in college and whether or not I'm accepted at vet school."

1 -- External factors.

E.g.--"time."
"fate."
"my days in college."
16. As compared with four years ago, I ____________

2 -- Change in occupational plans or future goals.

E.g.—"am much more mature and dedicated to my goals."
"have improved in my knowledge of earthly and spiritual goals.
"I've consolidated my goals and made them seem a little more realistic."

2 -- Change in an area of personality or non-specified change, or general maturity increased.

E.g.—"feel more sure of self, more able to make correct decisions."
"am wiser, more settled, more mature and understanding, can think more objectively."
"more realistic, and, I think, more intelligent."

1 -- Not much different now than then. Also attempts at humour and trivia.

E.g.—"am the most evil of evil."
"haven't changed much."
"have put on some weight."
EGO IDENTITY

17. I belong to______________________________________________

2 -- Specific group mentioned, or strong group feeling.

E.g.--"a Protestant church."
"the numerical computation lab."
"my fiancee, my parents, the Caucasian race, and the Presbyterian Church."
"the Ashville fire department, the Ashville Community Club, and the Kiwanis--and I am proud of all these.

2 -- Non-specific mention of group, or endorsement of group affiliation.

E.g.--"to my family and then society."
"nothing, but will join an organization of my own volition."
"the conformist society, although I'd much rather be a sensible individualist."

1 -- No one (alienation), one person, or trivia.

E.g.--"Carole."
"no one crowd or click (sic) but have friends of many different backgrounds."
"few organizations."
"God."
"no one but those to whom I want to belong to."
"a mutual admiration society."
18. To change my mind about my feelings toward religion

2 -- Extremely difficult or impossible.

E.g.-"would require a terrific amount of convincing by some authority."
"would be difficult."
"is impossible."

2 -- Might not be probable, but retains a feeling of possibility.

E.g.-"would be somewhat difficult unless a convincing argument is presented."
"I would have to find a better one."
"is not hard to do, but I keep going back to the religion I started with."

1 -- Would not be too difficult.

E.g.-"seems a logical thing to do if my inner belief changes."
"I would have to know something about religious beliefs."
"is something I'd be likely to do."
COMMITMENT

19. If one commits oneself _________________________________

2 -- Personal endorsement of the principle, a feeling that one must fulfill commitment.

E.g.--"he should finish the task."
"he should follow that path until he finds barriers, at which time he should challenge the barriers or pursue another course."
"he should follow through."

2 -- There still remain some loopholes, or dubious endorsement of the principle, or cautiousness.

E.g.--"one must know oneself."
"and firmly believes he is right (using the knowledge he has, I think he should forge on. Of course, when circumstances change, he should change."
"he should have made certain beforehand he was correct."
"he should never be so proud that he won't change his expressed opinion if proven wrong."

1 -- Disastrous, or a better idea not to.

E.g.--"then he isn't free to change his mind when he wants to."
"then he's stuck with his choice."
"then he's liable to miss a lot of opportunities."
20. My place in society

2 -- An answer reflecting some knowledge of individual's position or role and some active commitment to it. Contribution.

E.g.--"is in the lower middle class and I hope to raise my status through a college education."
"is in the technical fields such as math, physics, etc."
"is to help others."
"is to get a good education and to use it to further my knowledge of my field."

2 -- In definite opposition to society or indeterminate or no particular contribution mentioned. Also, any assertion that the individual can make it what he wants to.

E.g.--"is presently mobile."
"is in the upper middle class."
"wavers between that of a critic and that of an acceptor."
"where I make it."

1 -- Pre-determined, individual plays no part, or doesn't really belong anywhere. Lack of social conscience.

E.g.--"is not what it should be."
"has not been revealed yet."
"probably much smaller than I like to think."
"is to better my own position and what I contribute to society is incidental."
21. If I had my choice

3 -- Occupation or career-oriented positive statement; also realistically positive statement about self, or making reasonable changes in world.

E.g.—"I would rather have my DVM than a Ph.D. in anything."
"I would do things as I have."

2 -- Career or self-oriented but unrealistic or with regrets over past. Or philosophical statements.

E.g.—"I might have entered medicine."
"I would not change anything I have done so far in life or plan to do in the future." (unreal)
"I would always choose what is good and right."
"I would finish college as soon as possible."

1 -- A disavowal of having any choice. Or trivial statements.

E.g.—"I have no choice, my events are determined."
"I'd buy a new Buick."
"I would vote for Romney instead of Goldwater."
"I would live in a warm climate such as S. Calif. or Hawaii."
"I would be playing golf now."
"I would remain unmarried." (anti-commitment)
COMMITMENT

22. Ten years from now, I

3 -- Fairly well established occupational plans - mention of occupation - realistic.

E.g.--"hope to be established in a community practicing veterinary medicine."
"expect to be a successful engineer."
"will be teaching school."

2 -- Ideals of what "the good life" would be without specifying occupational role. More fantasy-oriented.

E.g.--"would like to hold an executive position in a large corporation."
"hope to have settled in the community, have a good job, have a family, and be able to enjoy the riches of life."
"hope to be doing my share in the world where I have been blessed to live."
"hope I will be capable of settling down with one woman."

1 -- Pessimistic, trivial, or doesn't know.

E.g.--"shall still be unhappy."
"will be 34."
"don't know where I will be or what I will be doing."
EGO IDENTITY

23. **It makes me feel good when** _________________

2 -- Self-initiated action. Self is the center of gravity in evaluation.

*E.g.*—"I know I'm learning."

"I look back on the progress I have made in life."

"I do something that someone else has failed or something that helps me attain what I want."

"I am praised for things I consider worthy of praise."

2 -- Not directly self-involved, or when the environment works out the right way, or vague accomplishment, or when others do things for themselves.

*E.g.*—"I think of Dr. _____ and hope someday I, too, will be a success as he is."

"I think of all the nice things that can happen in a lifetime."

"I please other people and myself."

"people put out extra effort to accomplish what they strive for."

1 -- Other-centered, others are central to evaluation of self.

*E.g.*—"the female of the species tells me I have sex appeal."

"I know that people think favorably of me."

"I can be with my fiancee and know that she loves me."
APPENDIX III
IDENTITY STATUS INTERVIEW

Introduction

What year are you in?
Where are you from?
How did you happen to come to Hiram?

Did your father go to school? Where? What does he do now?
Did your mother go to school? Where? What does she do now?

Occupation

You said you were majoring in ____; what do you plan to do with it?
When did you come to decide on ____? Ever consider anything else? When? What seems attractive about ____?

Most parents have plans for their children, things they'd like them to go into or do - did yours have any plans like that?
How do your folks feel about your plans now?

How willing do you think you'd be to change this if something better came along? (If $S$ responds: "What do you mean by better?") Well, what might be better in your terms?

Religion

Do you have any particular religious preference? How about your folks?
Ever very active in church? How about now? Get into many religious discussions?
How do your parents feel about your beliefs now? Are yours any different from theirs?

Is there any time when you've come to doubt any of your religious beliefs? When? How did it happen? How are things for you now?

Politics

Do you have any particular political preference? How about your parents? Ever take any kind of political action - join groups, write letters, carry signs - anything at all like that? Any issues you feel pretty strongly about? Any particular time when you decided on your political beliefs? Whom would you like to see president?

Do you have any questions to ask me?
The main objective of rating each interview is to locate the individual on a dimension of the variable, ego identity. This construct refers to the outcome of a particular life crisis faced by older adolescents in our culture. Elements in this crisis include deciding upon and committing oneself to what one is "to be" in terms of an occupation, as well as formulating and taking action on what one "believes" in terms of an ideology. In a more formal sense, the achievement of ego identity involves the synthesis of childhood identifications in the individual's own terms, so that he establishes a reciprocal relationship with his society and maintains a feeling of continuity within himself. Erikson has referred to this psycho-social relationship (individual to society) as a "cogwheeling" of mutual needs. Elaborating further, childhood can be viewed as a period when society provides the materially and emotionally nutritive milieu for survival of the almost wholly dependent child. Adulthood involves a shift in responsibility, so that the individual is expected to contribute to the previously nurturant environment in a
more mutual relationship. Adolescence, in particular, late adolescence, is the period during which this shift takes place. The achievement of an ego identity at this time represents the reformulation of all that the individual was into the core of what he is to be.

The interviews are to be classified into one of four categories which form a continuum representing the degree of ego identity achievement. These four categories, known as "identity status" are: Identity Achievement, Foreclosure, Moratorium, and Identity Diffusion. Each category is to be further subdivided into High, Medium, or Low "adaptability to environmental press." Thus, the ratings one ends up with look like: Foreclosure - High.

The two referents which this study employs for determining identity status are "crisis" and "commitment." The term, crisis, was chosen less for its sense of immediacy than for its connotation of struggle, or more accurately, of a period of decision. Commitment refers to a certain unwaveringness of choice, a reluctance to abandon a path set out upon. Although these two referents are separately assessed, some overlap occurs. For example, when a subject says that he decided to go into industrial management in his junior year as a result of scanning the college catalogue, one does
not get a sense of either an active selection among personally meaningful alternatives (crisis) or an unswerving investment in a course of action (commitment).

Instructions for rating

The following is a description of the way in which these two criteria are combined to yield an identity status and a short sketch of how each type might appear.

1. **Identity Achievement**

   **Criteria:** The individual has passed through a decision period or crisis and appears committed to his occupation and/or ideology.

   **Sketch:**

   **Occupation** - He has seriously considered several occupational choices or deviated from what his parents had planned for him. He is reluctant to switch fields and seems to think of himself as a teacher, engineer, etc. (Being a something meaning the difference between "taking courses in education" and seeing oneself as "a teacher." ) Although his ultimate choice may be only a variation of the parental wishes, he seems to have experienced a crisis period and made a resolution on his own terms.

   1. Has tried business--focused on general medical profession--tried dentistry, tried pharmacy--now in optometry. Likes it because it's
it's in the area of helping people medically and has variety. (willing to change?) "I really like what I'm doing. I have too much investment in it now to do anything else."

2. Came from farm background and likes farming, but being a farmer not too interesting or feasible. Decided to go into agricultural economics which is sort of an over-all farming as a viable career.

3. When first went to college felt no sense of purpose. Left and joined the Army. Came back with renewed interest. Finds present choice interesting and would be willing to change only routine functions, not the general area.

4. Father was a farmer and wanted him to be one; mother and townspeople wanted him to be a minister; he decided to be a veterinarian. "I would rather have my DVM than a Ph.D. in anything."

Religion - He appears to have gone through a period of doubt—either of past belief or unbelief—with a resulting re-evaluation of faith and commitment to some action (church-going, religious discussions, etc.). Whether he ends up as religious or not religious (in the conventional sense) is not important—only that he seems to have rethought childhood concepts and achieved a resolution that leaves him free to act.

1. Gotten further away from religion. At one time, 10-11 years old, wanted to be a rabbi. Goes to Hillel sometimes now. Disputes religious questions with Christian friends—tried to convert a Roman Catholic nurse.

2. Went through a period of rejecting father's religion. Period of atheism followed disillusionment with a God that would permit an evil world.
Resolved by deciding that amount of good balanced evil. Is active in church and plans to raise his children in it.

3. Parents were fundamentalist; they think man shouldn't explore space. He's more liberal, thinks they're old-fashioned—doesn't like denominational splits. Active in church.

**Politics** - The presence of his crisis period is probably more difficult to ascertain here than in the other two areas. He shows some difference from his parents' opinions; for example, he may see himself as more liberal than they are. Evidence of commitment is usually seen in the affective nature of his pronouncements, his tendency to dispute political questions with others, and any political action-taking whatsoever.

1. No affiliation with any one party. Argues with parents about particular candidates and issues.

2. Period in Army angered him at being given things and being reacted to according to group membership rather than as an individual. Attracted to the individualism of conservatism and is anti-social welfare. Applies principles learned in college classes about human nature to his political beliefs.

**General Comment** - He seems generally able to "make it." Particularly, he does not appear as if he would be overwhelmed by sudden shifts in environment or by unexpected burdens of responsibility. He also seems to be making some solid interpersonal commitments—e.g., marriage, engagement, etc.
2. **Foreclosure**

Criteria: The individual does not seem to have passed through any real decision period, but, nevertheless, appears committed to occupation and/or ideology. In this case, his choices coincide with those of parents or parent surrogates whom he does not seriously question.

Sketch:

**Occupation** - It is difficult to distinguish where his parents' goals for him leave off and where his begin. He seems to have experienced either no choice period, or only brief and inconsequential ones. He is becoming what others have influenced him or intended him to become as a child. In addition, all of this seems ego-syntonic. Childhood identification figures ("like my father," "like my mother," etc.) keep cropping up in the interview.

1. "I'm not in any mood to leave home. I'm not tied to my mother's apronstrings, but all my friends are there." Wants to go into a large corporation where "they'll run me through training and tell me how they want things done." Is also considering being a fireman like father was. Went home every weekend throughout college and maintained membership in social groups there (e.g., Kiwanis, Volunteer Fire Dep't.).

2. Father was a farmer, he'll be a farmer. "I plan to go back and help dad farm." Took agriculture at college because "that's all I knew." Although he gave some consideration to other fields, "farming was always at the top of the list." "I was brought up like my family was--I was with them so long I just stayed that way."
Religion - His faith (or lack of it) is virtually "the faith of his fathers (or mothers, as the case may be) living still." College experiences serve only as confirmation of childhood beliefs. Dissonance seems absent, and he participates in religious or anti-religious activities.

1. Although in science, sees no conflict with religion. "Just helps strengthen the belief I grew up with." Goes to church several times a week.

2. Parents were Lutheran and so is he. No doubting of religion during college. Got a girl pregnant and prayed—everything turned out all right. "Hand of God was there; I'm not smart enough to figure it all out, but I believe."

3. "Same as my parents." (any doubts?) "My beliefs are the same as they were—only stronger since I've been out in the world."

4. Religion is the same as parents. "Maybe it's a habit with me, I don't know." "I've thought a lot and you meet all kinds of people here. But I really haven't changed any basic beliefs. Just have more understanding than I did before." "I plan to bring my children up in the church—just the way my dad did with me."

Politics - Again, he is what his parents are with little or no personal stamp of his own.

1. His parents were Republican and so is he. "There was a lot of influence from my parents."

2. He and his parents are Republican. "I guess it stems from the family. Both Mom and Fop are Republicans."

3. "I'm a Democrat and so are they (parents)—so that's why, I guess."
4. Referring to him and parents both being Republican: "You still pull that way, Republican, if your parents are that way. You feel like it's where you should be."

General Comment - Because of his commitment and apparent self-assuredness, he appears similar to the Identity Achievement; although he may be characterized by a certain rigidity. One feels that if he were placed in a situation where parental values were non-functional he would soon be greatly at a loss. In many instances, only a situation of severe ego stress would differentiate him from Identity Achievement. However, his hallmark is the notable absence of decision periods. Frequently, his plans include returning to his hometown and continuing life there.

3. Moratorium

Criteria: The individual is presently in a crisis period—trying to make up his mind. Commitments are likely to be vague and general. An important quality here is a sense of active struggle among alternatives.

Sketch:

Occupation - He is dealing with issues often described as "adolescent." He is concerned less with preparing for a specific career than with choosing that career. His parents' plans are still important to him, and he must somehow achieve a compromise among them, society's demands,
and his own capabilities. It is not that he feels totally bewildered and all at sea, but that he is vitally concerned and somewhat internally preoccupied with resolving what at times seem to be unresolvable questions.

1. "Other people think I'm jolly and freelancing. Inside, I'm a big knot. I'd just like some peace and quiet." "The future seems better than the past, though." "I'm not so concerned about what people think, and I can control my temper better." Majoring in Speech, wants to work for degree in Psychology and Sociology while in Army. In general, wants to do something to help people.

2. Has considered rabbinate, law, and teaching. Present major is philosophy and religion. Thinks now he wants to teach—struggling with parents' demands that he choose a career more financially rewarding.

3. Chemistry—physics—biology major. Considers teaching high school and then going into industry. Also in the back of his mind is the ministry—still considering it. Seems to be an idealistic vs. economic conflict. "I can go into teaching, industrial chemistry, the ministry. I can see myself in any of those three fields."

Religion — He seems to be dealing with fundamental religious questions, not just a mere "shopping around" among denominations.

1. Doubts existence of God and wonders whether there is a Supreme Being. Scares him when he thinks about it, but he still does. Has tentatively decided there is a God.

2. Articulates pseudo-solution to science-religion conflict by: "deciding that what I believe and what I study are two different things—just keep them separate."
Politics - Although he is in doubt about political and religious commitment, he seems dissatisfied with the doubt and is trying to effect a resolution.

1. Leans toward Democrats—still votes for the best man. Maybe later he'll turn toward Republicans.

2. "I just don't want to define myself in terms of reactions against things." "Sometimes the whole political realm seems sort of futile."

3. Confused about politics. Is a Democrat, but has heard about conservatism and is questioning it. But then Rhodes disenchants him. Doesn't really know.

General Comments - In some cases, there may be a denial of an internal struggle that, according to the data presented by the subject, must be there. For example, in the case of one subject's conflict between a scientific attitude and religious belief, one suspects the finality of his stated solution: "I just keep them separate." Also, some subjects may show two or three different identity statuses for one of the main areas. That is, occupational choice may have elements of Identity Achievement, Moratorium, and Foreclosure. Although these cases are rare, when one status does not predominate, a scoring of Moratorium is given. At his worst, a Moratorium is paralyzed, unable to act decisively in one way or another—not because of a lack of commitment, but because of equal and opposite commitment.
4. Identity Diffusion

Criteria: The individual has either experienced no crisis or has passed through a crisis—in either case, there is little, if any, commitment.

Sketch: There appear to be two types of Diffusion. One is a pre-crisis lack of commitment. The individual would be a Foreclosure if strong enough parental values had been established. However, it is possible that the parental attitude was one of "it's up to you; we don't care what you do." Under the guise of democratic child-rearing, the parents may have provided no consistent structure which could be a guide for the growing individual and later on, an image against which to compare himself. Because he never really was anything, it is almost impossible for him to conceive of himself as being anything. Whatever the case, the problems that are so immediate and self-consuming for the Moratorium never really occur to this "pre-crisis Diffuse" person.

The second type of Diffuse is the "post-crisis Diffuse" who seems committed to a lack of commitment. This individual actively seeks to avoid tangling alliances; his motto: "Play the field." No area of potential gratification is really relinquished; all things are possible, and must be kept that way. The main element that both pre- and post-crisis Diffuse persons have in common is a lack of commitment.
Occupation - No one occupational choice is really decided upon, nor is there much real concern about it (as contrasted with the Moratorium). There is sometimes little conception of what a person in the stated preferred occupation does in a day-to-day routine. The occupation would be readily disposed of should opportunities arise elsewhere. There is sometimes an "external" orientation, so that what happens to the individual is seen as a result of luck or fate.

1. Has considered priesthood, law, and teaching math. Sees himself as "bouncing around" from one thing to another. Language is strange and answers oblique. Takes roles of others and speaks to himself during the interview in admonishing tones as they would speak to him. Although there is some closure on choice of teaching, the whole interview is pretty bizarre. E.g., regarding leaving seminary: "It was shown to me not to be my vocation. Some people have desire, some don't. I didn't."

2. Going into optometry--likes it because there's not too much work, make money at it, and doesn't take too long to study for it. If something better came along, he'd change "quite easily."

3. Claims greater maturity after having flunked out of school and gone to service. Major in marketing, interested in business, also in being a golf pro. Main focus of interest in life is playing golf. Emphasis not on what his father wants him to "be" but on what his father gives him. "Very apt" to give up occupational choice for something better.

4. Major is engineering. In response to "willingness to change?": "Oh, I can change. I want to travel, want to try a lot of things, don't want to get stuck behind a drawing board. Want a degree mainly as an 'in' to production or something else. Don't want to get tied down."
Religion - He is either uninterested in religious matters or takes a smorgasbord approach, in which one religious faith is as good as any other and he is not averse to sampling from all. The subject will sometimes state his denomination as being the same as his parents, yet show little commitment to it. In this case, the identity status has elements of both Foreclosure and Diffusion.

1. "Don't believe in any one particular religion. All of them have something to offer, I guess. I like to look around a little and see what each has to offer."

2. "Haven't picked one religion. Not interested in any. Guess it's all right for some people. Just don't care a whole lot about it."

Politics - Both political and social interest are low. Little idea or concern where he stands vis a vis society, as if the world went its way and he went his with little intercourse between the two. In short, no cogwheeling.

1. "Politics just doesn't interest me." Doesn't vote. Doesn't discuss politics at home. Would probably vote for Kennedy.


General Comments - At his worst, a Diffuse exhibits the disorganized thought processes, disturbed object relations, and loosened ego boundaries associated with schizophrenia.
Environmental Press

Having once determined the subject's identity status, some evaluation of his over-all reaction to environmental press is to be made. This is intended to reflect the rater's opinion of how successful, in general, the individual is in coping with everyday situational demands. To a lesser degree, it should also be an estimate of future adaptability. While this is admittedly a global impression, its meaningfulness becomes apparent when considering, for example, two levels within the Identity Diffusion status. On one hand, one may find the High adaptability to press, Identity Diffuse, "playboy" to whom everything in life is still "up for grabs," and who, although he makes sure that his grabbing never leads to his really holding fast to anything, still manages to maintain reasonable contact with reality and gratify most basic needs. On the other hand, one finds the Low adaptability to press, Identity Diffuse, pre-schizophrenic who appears extremely confused, very intensely internally pre-occupied. In a sense, he is stumbling and falling while the "playboy" is running around.

Summary

This, then, is the plan for rating the interviews. There are three main areas covered: occupation, religion, and politics. The latter two are combined to yield ideology.
Each area is assessed according to two criteria: the presence or absence of a crisis period, and the degree of commitment. According to the subject's standing on these two criteria, he is to be assigned to one of the four categories of identity status for each of the three main areas. In addition, once the over-all identity status has been determined, some estimate of the subject's adaptability to environmental press is to be made.

A sample of a complete interview rating is on the last page of the manual.

There are no rigid criteria for combining the three areas to yield an over-all identity status. Many times the rater will get a general impression from the interview that would not strictly coincide with an arithmetic sum of the three areas; these "hunches" are valuable and should not necessarily be abandoned for the sake of false rigor. Of course, in most cases, the final identity status will directly reflect the sum of the ratings of the areas. It should be clear that clinical judgment is to be exercised, not suspended.
IDENTITY STATUS - INTERVIEW RATING SHEET
(Sample)

Occupation: Foreclosure

Religion: Foreclosure-Diffusion

Politics: Identity Achieve. - Foreclosure

Ideology: Foreclosure

IDENTITY STATUS: Foreclosure

ADAPTABILITY TO ENVIRONMENTAL PRESS: Medium

COMMENTS:

Use this space for note-taking and demurrers.
APPENDIX V

PILOT STUDY RELIABILITY DATA
FOR EI-ISB AND IDENTITY STATUS INTERVIEWS

TABLE 52

Percentage of Item-by-Item Agreement
on EI-ISB Scores Among Three Judges

<table>
<thead>
<tr>
<th>Judges</th>
<th>Per cent of agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>A with B</td>
<td>76%</td>
</tr>
<tr>
<td>B with C</td>
<td>78%</td>
</tr>
<tr>
<td>A with C</td>
<td>75%</td>
</tr>
<tr>
<td>Overall</td>
<td>77.2%</td>
</tr>
</tbody>
</table>

202
<table>
<thead>
<tr>
<th>Measures correlated</th>
<th>r</th>
<th>p</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Item-by-item</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A with B</td>
<td>.73</td>
<td>&lt;.0005</td>
<td>442</td>
</tr>
<tr>
<td>B with C</td>
<td>.80</td>
<td>&lt;.0005</td>
<td>442</td>
</tr>
<tr>
<td>A with C</td>
<td>.73</td>
<td>&lt;.0005</td>
<td>442</td>
</tr>
<tr>
<td><strong>Average item-by-item correlation</strong></td>
<td>.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total scores</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A with B</td>
<td>.89</td>
<td>&lt;.0005</td>
<td>31</td>
</tr>
<tr>
<td>B with C</td>
<td>.94</td>
<td>&lt;.0005</td>
<td>31</td>
</tr>
<tr>
<td>A with C</td>
<td>.89</td>
<td>&lt;.0005</td>
<td>31</td>
</tr>
</tbody>
</table>
**TABLE 54**

Percentages of Agreement on Identity Status Interview

<table>
<thead>
<tr>
<th>Judges</th>
<th>Per cent of agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>A with B</td>
<td>65%</td>
</tr>
<tr>
<td>B with C</td>
<td>65%</td>
</tr>
<tr>
<td>A with C</td>
<td>65%</td>
</tr>
<tr>
<td><strong>Overall per cent of agreement</strong></td>
<td><strong>70%</strong></td>
</tr>
</tbody>
</table>

**TABLE 54**

Coefficients of Reliability in Identity Status Interviews among Three Judges

<table>
<thead>
<tr>
<th>Judges</th>
<th>r</th>
<th>p</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>A with B</td>
<td>.71</td>
<td>&lt;.0005</td>
<td>20</td>
</tr>
<tr>
<td>B with C</td>
<td>.79</td>
<td>&lt;.0005</td>
<td>20</td>
</tr>
<tr>
<td>A with C</td>
<td>.77</td>
<td>&lt;.0005</td>
<td>20</td>
</tr>
<tr>
<td><strong>Average correlation</strong></td>
<td><strong>.76</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX VI

NAME ___________________________________ AGE_____

Last First Middle Initial

VALUE PROFILE

INSTRUCTIONS (Please read carefully)

This questionnaire is designed to measure the extent to which you hold each of several general attitudes or values about which people in our society have different opinions.

This is not a test of intelligence or ability. There are no "right" or "wrong" answers—each person's values differ from those of other persons in many respects.

Here is a series of general statements. You are to indicate how much you agree or disagree with them. Record your opinions in the blank space in front of each item according to the following scale:

+1 Slight agreement      -1 Slight disagreement
+2 Moderate agreement    -2 Moderate disagreement
+3 Strong agreement      -3 Strong disagreement

Read each item and decide quickly how you feel about it; then record the extent of your agreement or disagreement. Put down your first impressions.

The test is for research purposes only. Your results will be kept strictly confidential.

BE SURE TO ANSWER EVERY QUESTION

1. I feel capable of handling myself in most social situations.

2. No sane, normal, decent person could ever think of hurting a close friend or relative.
3. If people would talk less and work more, everybody would be better off.

4. I seldom have fears that my actions will cause my friends to have a low opinion of me.

5. It doesn't bother me to have to enter a room where other people have already gathered and are talking.

6. In group discussions I usually feel that my opinions are inferior to those of others in the group.

7. Every person should have complete faith in some supernatural power whose decisions he obeys without question.

8. I don't make a very favorable first impression on people.

9. What this country needs most, more than laws and political programs, is a few courageous, tireless, devoted leaders in whom the people can put their faith.

10. When confronted with a group of strangers, my first reaction is always one of shyness and inferiority.

11. Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.

12. There is hardly anything lower than a person who does not feel a great love, gratitude, and respect for his parents.

13. It is extremely uncomfortable to accidentally go to a formal party in street clothes.

14. I don't spend much time worrying about what people think of me.

15. People can be divided into two distinct classes: the weak and the strong.

16. When in a group, I very rarely express an opinion for fear of being thought ridiculous.

17. What the youth needs most is strict discipline, rugged determination, and the will to work and fight for family and country.

18. I am never at a loss for words when I am introduced to someone.
19. Obedience and respect for authority are the most important virtues children should learn.

20. Science has its place, but there are many important things that can never possibly be understood by the human mind.
APPENDIX VII

CONCEPT-ATTAINMENT TASK

Instructions

In front of you is this chart with 32 different cards. Every one of these cards has 5 different characteristics. The characteristics are listed on this sheet. (hand S "Reminder Sheet") Each card has some shape, some color, some position, quantity, and size. For example, look at card 4. On this card the shape is square, the color is white, the position is left, the quantity is two, and finally the size is small.

As you can see, different cards on the display share different characteristics in common. All of these cards (3-8, 17, 18) share the characteristics "white left." What characteristics do cards 1, 9, 19 share in common? (large, black)

This is how the test will operate. I shall choose 1, 2, or 3 characteristics from your list of 5 (five). I shall not tell you which ones I have chosen. I will have in mind
all of the cards on the display that show that particular set of characteristics I have chosen. I will point to one of these cards. The task is for you to tell me, as soon as possible, which characteristics I have chosen.

You can determine this by finding out which other cards on the display also contain the characteristics I'm after. You will point to other cards that you think will help you and I will tell you whether they are positive or negative. If I say positive, this means that everything that I have chosen is on that card as well as on the first card I pointed to. If the card is negative, this means that not all of the characteristics I have in mind are on that card. For example, suppose I chose the characteristics "2 large circles." If you pointed to any of these cards (7, 15, 19, 27) I would call them positive. If you pointed to any other cards I would call them negative since no other card contains exactly "2 large circles."

You can guess what I have in mind any time you want and as many times as you want. However, let me explain how your performance will be scored. You are trying to make as LOW a score as possible. You will be penalized 5 points every time you ask whether a card is positive or negative; 5 points for every 30 seconds that passes before you guess
the correct answer; and 10 points for every wrong guess. I will turn over a penalty card here on this stand so that you may know at any time the amount of penalties you have accumulated.

Let's go through an example. Suppose I chose the concept "black square." I might point to card 20 as the first positive instance. You're trying to figure out which of the 5 characteristics I have chosen. You might suppose that I had chosen "2 large." To test this hunch, you would ask if card 19 is positive or negative. The card would be called negative and you know that your hunch was wrong. You would also know that the characteristic "square" might be in the answer. Next, you might point to card 21. This card is called positive. What you're trying to figure out is what characteristic does this card share with card 20. You can see that the quantities on the two cards differ. Card 20 has two figures; this card has one. This tells you that "quantity" is not one of the things I have in mind. Size also can't be part of the concept because the figures aren't large on the first card and small on this one. At this point you might guess that I have "black square left" in mind since these are the only characteristics that are common to the positive cards. I would say no. Next you
might choose card 28 to see if position is important. This card is called positive so you know that position is not important. You might guess that the answer is "black square" and you would be right. Remember, however, the answer might just be one thing such as "black" or "square" by itself since I can choose 1, 2, or 3, characteristics.

This is how the test works. Do you have any questions?

---

On first trial - E: "How soon do you hope to solve this problem? Most people solve it in 3 minutes."

Each trial is conducted until the problem is solved.

After each trial - E: "That took you _____ seconds. How soon do you hope to solve the next problem?"

Pilot study only

After the S works exactly 2'30" on problem 8 - E: "I think you realize that this one is much more difficult than the other ones. Actually very few people solve this one, so work on it until you want to stop."

After 10' - E: "We do have a couple of other things to do. Can you finish up soon?"

After 12' - E: "I'm afraid we'll have to stop because our time is getting short."
APPENDIX VIII

REMEMBER SHEET

The Five Characteristics

1. Figure
   Square
   Circle

2. Color
   White
   Black

3. Position
   Left
   Right

4. Quantity
   One
   Two

5. Size
   Large
   Small
The Points

5 points off for each request
5 points off for each 30" that passes
10 points off for every wrong guess

The Correct Answer

The correct answer may include 1, 2, or 3 characteristics. Subjects often forget that the experimenter may have less than 3 characteristics in mind.
APPENDIX IX

Subject

1. Estimate _______ Time _______ Points_____
   White, small Example: #5 (3, 4, 5, 6, 21 Time _______
   "Nothing - worry - best." Total ______

2. Estimate _______ Time _______ Points_____
   Left, two Example: #26 (2, 4, 6, 7, 13 Time ______
   "Doing fine - most end up better than - think -" Total ______

3. Estimate _______ Time _______ Points_____
   Circle Example: #16 (5, 6, 7, 8, Time ______
                     14, 16, 17, Total ______
   "Harder on self if tense - relax - just a few." 18, 24, 25, Total ______
                     26, 27, 29, 30, 31, 32)

4. Estimate _______ Time _______ Points_____
   Square, black, small Example: #20 (19, 20, 23, Time ______
                                 28) Total ______

5. Estimate _______ Time _______ Points_____
   Black, one, small Example: #28 (20, 25, 28 Time ______
   "Relax. Do fine" 29) Total ______

214
6. Estimate ________ Time ________ Points ________
   Circle, right  Example: #32 (16, 17, 18 Time ________
   "One - go."  27, 29, 30, Total ________
   31, 32)

7. Estimate ________ Time ________ Points ________
   Square, white Example: #13 (3, 4, 11, Time ________
   "Promise - secret - thanks."  12, 13, 15, ________
   21, 22)  Total ________
BIBLIOGRAPHY


Marcia, J. E. The need for social approval, the condition of hypothesis-making, and their effects on unconscious experimenter bias. Unpublished master's thesis, The Ohio State University, 1961.


I, James Edward Marcia, was born in Cleveland, Ohio, February 10, 1937. I received my secondary school education in the public schools of Grandview Heights and Upper Arlington, Ohio, and my undergraduate training at Wittenberg University, which granted me the Bachelor of Arts degree in 1958. From the Ohio State University, I received the Master of Arts Degree in 1961. I held United States Public Health Fellowships during my four years at Ohio State, participated in the Veteran's Administration training program, and served as a teaching assistant in the Department of Psychology in the last quarter of my fourth year. During the present year, while completing requirements for the Doctor of Philosophy degree, I have been employed as Instructor in Psychology at Hiram College.

For the coming year, I have accepted a position as Assistant Professor of Psychology at the State University of New York at Buffalo.