CORRELATES OF OPENNESS TO EXPERIENCE

by

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STATEMENT BY AUTHOR

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December 11, 1959
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## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>v</td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>II. METHODOLOGY</td>
<td>19</td>
</tr>
<tr>
<td>Subjects</td>
<td>19</td>
</tr>
<tr>
<td>Measuring Instruments</td>
<td>19</td>
</tr>
<tr>
<td>Procedure</td>
<td>19</td>
</tr>
<tr>
<td>III. RESULTS AND DISCUSSION</td>
<td>24</td>
</tr>
<tr>
<td>IV. SUMMARY AND CONCLUSIONS</td>
<td>34</td>
</tr>
<tr>
<td>APPENDIX A: MEASURING INSTRUMENTS</td>
<td>36</td>
</tr>
<tr>
<td>APPENDIX B: G SCORE FOR THE EXPERIENCE INVENTORY</td>
<td>72</td>
</tr>
<tr>
<td>APPENDIX C: EXPERIENCE INVENTORY FACTORS</td>
<td>74</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>85</td>
</tr>
</tbody>
</table>
ABSTRACT

This study investigated the relationships between dimensions of openness to experience as measured by the Experience Inventory and non-academic range of information (ROI), remoteness of word associations (WA), and number of attitudes considered or endorsed over time (D). Paper and pencil tests were given to 226 psychology students.

Consistent with hypotheses, g, the general a priori openness to experience score and factor 2, unusual perceptions and associations correlated positively with WA although not at a statistically significant level. WA demonstrated a significant positive correlation with factor 7, deliberate and systematic thought. D was significantly correlated with g; factor 2, unusual perceptions and associations; factor 3, openness to theoretical or hypothetical ideas; factor 6, indulgence in fantasy vs. avoidance of fantasy; factor 7, deliberate and systematic thought; factor 10, need for involvement; factor 11, ability to relax personal identity and control; factor 12, experience of alienation; and factor 14, relaxation of conscious control of thought and action. ROI failed to demonstrate any significant correlations with g or any of the openness to experience factors.
Kris (1952) introduced the concept of "regression in the service of the ego" into psychology. It was an attempt to explain artistic creativity, fantasy, and the production and appreciation of humor and wit. According to Kris, there are two phases to regression in the service of the ego; an inspirational phase and an elaborational phase. In the inspirational phase, unconscious and preconscious primary process content becomes consciously available to the person. In the elaborational phase, the conscious primary process content is transformed to secondary process thinking and submitted to reality testing. In order for regression in the service of the ego to occur, there must be sufficient ego strength to prevent anxiety and repression when encountering primary process content.

In general, research on regression in the service of the ego has been designed to relate the concept to perceptual isolation (Goldberger, 1958; Goldberger & Holt, 1961), the products of creativity (Pine, 1959), problem solving ability (Holt, 1960; von Holt, Sengstake, Sonoda, & Draper, 1960), richness of imagination (Pine & Holt, 1960), and the ability to shift from more to less regulated thinking (Wild, 1965). Except
for Wild who used criterion groups of creative and noncreative subjects, these research efforts measured regression in the service of the ego with projective tests.

Schachtel (1959) introduced the concept of "openness to experience" which was a modified version of Kris' concept of regression in the service of the ego. Schachtel rejected Kris' belief that creativity arose from regression to primary process thinking. According to Schachtel, the person who is open to experience does not regress to primitive modes of thought, but rather, he is an individual who is not bound by conventional social rules, perceptions, or thought. He does not have fixed anticipations and sets and approaches the objects of his experience in many different ways.

E. T. Fitzgerald (1966) designed a study to assess Schachtel's concept of openness to experience. Fitzgerald defined openness to experience as, "originality, the ability to shift from more to less regulated thinking with facility, and the disposition to greet novel and unusual experiences without undue anxiety or repression and with strength of ego" (Fitzgerald, 1966, p. 657). Fitzgerald measured openness to experience with a new paper and pencil test, the Experience Inquiry. He measured anxiety and repression with the A & R scales of the MMPI (Welsh, 1956), and ego strength with the E5 scale of the MMPI (Barron, 1953). Ability to shift from more to less regulated thinking was assessed by administering the word association and object sorting tests to subjects under
usual instructions and instructions (character sketches) designed to elicit regulated and unregulated thinking. Shift scores consisted of the difference between the number of original responses given under the regulated and unregulated instructions. All subjects were asked for self descriptions on an adjective checklist.

The word association test consisted of a list of 20 words taken from the 1964 Palermo & Jenkins norms. It was given in printed form under three conditions: spontaneous, unregulated, and regulated. For the spontaneous condition the subjects were told that after reading the word they should write the first word they think of in the blank provided. For the regulated and unregulated conditions, character sketches were read to induce regulated and unregulated thinking. The regulated character was described as a "conventional, cautious, reliable person who prefers an orderly structured universe and values good common sense" (Fitzgerald, 1966, p. 658). The unregulated character was described as a person who has novel thoughts and whimsical perceptions, who enjoys fanciful speculations, and whose thoughts often leap from one novel topic to another without any obvious links between topics. Immediately after each character sketch was read, the subject was told to take the word association test as the character would take it. All responses on the word association tests were classified as original or conventional with the rationale that the ability to give original responses reflects thought processes less bound by conventional categories than does the production
of safe conventional responses. Each word on the word association test was scored conventional if it appeared on the Palermo & Jenkins norms and unconventional if it did not.

The results of Fitzgerald's study were as follows: separating highs and lows on the Experience Inquiry and ignoring sex differences, subjects high on openness were not repressors while subjects low on openness showed some repressive tendencies. On the word association test, high scorers were more spontaneously original than low scorers. Under instructions to become regulated, highs as opposed to lows exhibited more ability to shift from more to less regulated thinking, but highs and lows did not differ on the regulated condition. Subjects open to experience did not seem bound by conventional thought or perception, yet could control their unregulated thinking when requested to do so.

Considering sex differences, high scoring males were more anxious than low scoring males. There was no difference in anxiety level between high and low scoring females, and there was no difference between males and females in ego strength. Adjective self description checklists suggested that high scoring males were more open to inner experience and high scoring females to outer experience and that high scoring males were more anxious than low scoring males because of a role conflict not encountered by females.

Fitzgerald's Experience Inquiry was developed in part from an item pool taken from the work of As, O'Hara, and Munger (1962).
Although the scale constructed by As was concerned with prediction of hypnotic susceptibility, it was based in part on subscales derived theoretically from the concept of regression in the service of the ego. As' subscales are:

1. Tolerance for regressive experiences
2. Tolerance for logical inconsistencies
3. Constructive use of regression
4. Altered states
5. Peak experiences
6. Capacity for regressive experience
7. Tolerance for the irrational

A cluster analysis of Fitzgerald's Experience Inquiry yielded three oblique cluster domains (Fitzgerald, 1966, p. 657):

I. Openness to inner experience and altered states of consciousness with both a tolerance and a capacity for regressive experiences.

II. A desire for a closed, orderly, predictable, explainable environment and an intolerance for uncontrolled states of consciousness.

III. Intolerance for unusual personal and interpersonal experiences.

Coan (in press), feeling that Fitzgerald's Experience Inquiry overemphasized regressive experiences, developed the Experience Inventory, a true-false test containing 114 items. Though he borrowed 37 items from Fitzgerald's questionnaire, he added items covering a
greater variety of experiential content. Believing that Jung's (Jacobi, 1962) attitudes (introversion and extroversion) and psychic functions (thinking, feeling, sensation, and intuition) represent useful guidelines for classifying modes of experiencing, Coan included some items designed to tap modes of experience suggested by the Jungian system. Of his items Coan says, "Collectively the new items might be said to tap an assortment of associations, memories, ideas, impulses, feeling states, and fantasy and dream phenomena" (Coan, in press; all quotes from MS. Chapter 6).

The Experience Inventory was given to 383 college subjects drawn from psychology classes. The 114 items were intercorrelated. Sixteen factors were extracted and rotated to a position of oblique simple structure. Each factor was rotated so that the loadings would be mostly positive. In some cases the loaded items were of a non-open type. Thus the open end of any given factor may be at either the positive or negative pole. Usually one end of the pole can be viewed as more open than the other but in some cases, factors are simply differing modes of experience which contrast with one another and exclude each other. In terms of the factor scales, the open poles for the first five factors are - , + , + , + , + (or low, hi, hi, hi, hi). Factors in which the open end is high intercorrelate positively as do those in which the open end is low while the correlations between the two sets are negative. In addition to the 16 factors, an a priori general total openness to experience factor was obtained.
The factors, arranged in order of decreasing variance with observations of them based on the content of the items loaded by each of them are described by Coan (in press) thus:

**Factor 1.** The items loaded negatively by this factor report a variety of aesthetic experiences. Those at the positive pole reflect a more prosaic orientation. We may call this aesthetic insensitivity vs. aesthetic sensitivity.

**Factor 2.** The positive items indicate an inclination to perceive things in various odd and novel ways and to entertain unusual associations to all objects of perception. Negatively loaded items suggest factmindedness and adherence to logical and systematic thought. An appropriate title for this factor would be unusual perceptions and associations.

**Factor 3.** If factor 2 involves a certain freedom in the perceptual realm, factor 3 involves freedom in the realm of abstraction and thought. Here we see the sort of willingness to entertain novel and unusual ideas that is likely to be high in avid readers of fantasy and science fiction. A reasonable title would be openness to theoretical or hypothetical ideas.

**Factor 4.** A number of items loaded by factor 4 suggest an access to unconscious processes that favors their utilization for creative or constructive purposes. The subject reports creation and problem solving in dreams, reception of telepathic communications, and the experience of "inspiration." We might call this constructive utilization of fantasy and dreams.

**Factor 5.** This appears to involve openness to unconventional views of reality vs. adherence to mundane material reality. We might expect this factor to be closely related to factor 3. In comparing the two factors with respect to item content, we find that the high scorer on factor 3 describes himself as open, while the high scorer on factor 5 directly indicates an interest in a specific class of unconventional ideas (which the low scorer explicitly rejects).

**Factor 6.** The high scorer dreams in color, daydreams, experiences painful loneliness, tends to be absentminded, and
reports some experiences like those of the high scorer on factor 2. The low scorer reports an absence of night dreams and says he avoids both fantasy and rumination about the past. If we go by the most prevalent theme of the highly loaded items, this is indulgence in fantasy vs. avoidance of fantasy.

Factor 7. This is clearly a factor of deliberate and systematic thought. The high scorer frequently experiences a need for this and may find it pleasurable. On the other hand, there is little in the item content to suggest a rigid avoidance of un-systematic or capricious thought. Such a defensive pattern seems more likely in the low scorer on factor 2.

Factor 8. The high scorer reports fantasies of possessing special powers, of performing actions he would never really carry out, and of being in strange places. The remaining item content is consistent with an interpretation of this factor in terms of unrealistic fantasy content.

Factor 9. The low scorer indicates a desire for exciting activities and stimulation. The high scorer is best characterized by the things he dislikes or avoids—thrill rides, people who talk about abstract theory, doing things in new and different ways, changeable people, and unconventional people. We might call this preference for predictable consistency vs. excitement.

Factor 10. The most highly loaded items entail a need for interpersonal relationships. They refer to absorbing experiences of romantic love, a painful sense of loneliness, and boredom in solitary circumstances. The interpretation, however, is a bit too narrow to fit the content of the other loaded items. The common core of this factor is actually hard to identify, but a tentative general label that affords a reasonable fit would be need for involvement.

Factor 11. The item content loaded by this factor seems superficially to be very heterogeneous. Thus, we find from the four most salient items that the high scorer responds empathically to athletes, dancers, and story characters, that he would enjoy breaking a pile of dishes, and that he has enjoyed being cared for when ill. Perhaps the common element is a flexible "ego-boundary" or a willingness to abandon one's customary
or expected role. A tentative title would be ability to relax personal identity and control.

Factor 12. The high scorer reports thoughts of suicide, the experience of anomie, masochistic pleasure, a need for solitude, and impulses to do shocking things in public. Several items suggest a sort of Hamlet syndrome. Perhaps the core ingredient is actually self-destructive fantasy. A broad tentative label which, in several of its senses, fits much of the item content is experience of alienation.

Factor 13. Experience of unconventional impulses vs. motivational restraint.

Factor 14. Relaxation of conscious control of thought and action.

Factor 15. Passive enjoyment of imagery.


Coan (in press) found sex differences for these factors. On the average, women tended to show more openness on the Experience Inventory. Significant sex differences were evident on factors 1 (aesthetic insensitivity), 2 (unusual perceptions and associations), 4 (constructive utilization of fantasy and dreams), 6 (indulgence in fantasy), 9 (preference for predictable constancy), 13 (experience of unconventional impulses), 14 (relaxation of conscious thought and action), and 15 (passive enjoyment of imagery). Men showed greater openness on factors 9, 13, and 14 while women showed greater openness on all the others. He concluded that, "Broadly speaking, men tend to be more open than women in the realm of action, while women tend to be more open than men in the realm of feeling and thought." (Coan, in press). And,
The Experience Inventory variables tend to be related to other measures that suggest emotional sensitivity, aesthetic interests, liberalism, and independence. More surprising, perhaps is a tendency for the openness variables to go with measures that suggest emotional distress—anxiety, lack of control over internal processes, tension, and psychosomatic symptoms. This trend is most pronounced for the a priori total openness score, but the effect is mirrored in most of the specific factors—in particular, factors 2 (unusual perceptions and associations), 8 (unrealistic fantasy content), and 10 (need for involvement). To some extent, the Experience Inventory shares a response bias with the measures of distress. The subject earns a score that indicates openness or distress to the extent that he is willing to report qualities that people are likely to view as abnormal or undesirable. It is doubtful, however, that the apparent relationship between openness and distress can be entirely dismissed as an artifact of our measurement techniques. There is reason to believe that a willingness to face new experiences carries with it a willingness to experience some unpleasant consequences. To some degree anxiety is an inevitable price that one must pay for the growth afforded by openness. (Coan, in press).

Perhaps the most significant point Coan has made about the concept of openness to experience is that,

It is a bit more complicated than it might seem at first glance. . . . There seem to be vast individual differences in sensitivity. One individual may seek large amounts of stimulation of any kind that occurs to him and appear unable to obtain enough. On closer examination we find that much of the stimulation has little effect on him. He is relatively unreactive to stimuli that others find quite disturbing, basically perhaps because of the way his nervous system is constructed. Another individual who is constitutionally more prone to autonomic upsets, may have to ration his stimulation to avoid an excess. We might be tempted to regard the former individual as more open to experience were it not for the fact the more sensitive person readily experiences very intense sensations that his insensitive counterpart may never encounter. The contrast is still sharper when we note that sensitivity may mean additional qualities of experience as well as greater intensity. Thus, a highly sensitive person may readily
experience strong empathetic reactions to people, intense aesthetic reactions, vivid images, and affective responses of various kinds. Another person who is capable of a much more limited range of effects may relish bright lights, loud noises, and social interaction in a quantity that the more sensitive man would find exhausting or intolerable. . . . It seems essential to consider not only the range and intensity of the stimuli the individual seeks but his basic capacity for experience as well (Coan, in press).

The concept of openness to experience is a relatively new one (Schachtel, 1959). Fitzgerald and Coan are the first to operationalize and make explicit the domain of observable behaviors to which the concept refers. Though the concept is a broad one and much still needs to be made explicit, many psychologists intuitively feel that the concept does refer to an important personality domain. Clinicians frequently refer to persons as rigid-flexible, open-closed, guarded, defended, fixated, prejudiced, creative, etc. Personality change, growth, and development are often explained in terms of the effects of new or different experiences. It is generally felt that the personality which is guarded and defended against the possibility of new or different experiences does not undergo the process of change. Thus one of the techniques of therapy to induce change is an attempt to make the person more open to experiences to which he has thus far been closed.

Many personality theories include concepts which in part connote the openness to experience of the personality. In Freudian theory, for example, both primary and secondary process thinking makes the individual
more open to some kinds of experiences and less open to others. Mechanisms defend against anxiety by preventing the occurrence of threatening experiences. Fixation refers to a lack of openness to experiences and regression like primary process thinking can result in more openness to certain kinds of experiences and less openness to others. The pleasure principle, for example, postulates that persons seek pleasurable experiences and avoid painful ones.

In Jungian theory (Jacobi, 1962), four modes of apprehending and assimilating data and two attitudes or directions of libido combine to yield 16 personality types of experiencing. It is when the functions are differentiated and integrated so that all four are accessible to consciousness that the individual is most open to experience; that is, he is free to consciously experience in a greater variety of ways.

Lewin's concept of permeability of boundary and his ways of representing the extent of influence or accessibility between regions such as nearness-remoteness, firmness-weakness, and fluidity-rigidity certainly address themselves to the concept of openness to experience (Hall and Lindzey, 1957). Allport's traits or predispositions to respond and attitudes or attractions and repulsions toward stimuli are concerned with openness (Hall and Lindzey, 1957). And Cattell's ergs and metaergs (Hall and Lindzey, 1957) permit the individual to acquire attention and recognition to certain classes of objects more readily than to others, to experience a specific emotion in regard to them, and to
start on a course of action which ceases more completely at a certain goal than at any other.

We could continue listing personality concepts which though not yet operationalized, theoretically connote relationships to and implications for the scope or range of human experience. It is a concept which receives much attention in Eastern thought and which is slowly being imported into Western thought via such writers as Watts (1957, 1961), Suzuki (1962), and Leary (1968). But it is not new to American psychology. Many psychologists have felt that creativity, originality, flexibility, lack of dogmatism, and capacity for personality growth and development depend on being open to experience. Humanistic and existential psychology have for a long time emphasized the development of the fully human personality which is capable to consciously experiencing a broad range of things in a variety of ways.

The purpose of this study was to explore the openness or scope of experience in college students and to seek measures of openness which would correlate with Coan's Experience Inventory. Four measurements of openness to experience were administered to 226 college subjects. The four measurements were:

1. Coan's Experience Inventory
2. Word Association Test
3. Change of Attitude Test
4. Range of Non-Academic Information Test
The rationale for the word association test was Fitzgerald's finding that subjects high on openness to experience gave more unusual, less frequently given original responses than subjects low on openness to experience who gave conventional, frequently given words. The word association test consisted of 20 stimulus words taken from the Palermo & Jenkins (1964) norms. The norms were obtained from 500 college students by sex (250 males and 250 females). The stimulus words were randomized and presented in booklet form with one word to a page. The words presented were: dark, blossom, eagle, light, doors, bed, ocean, baby, guns, blue, cottage, bible, earth, soldier, bath, beautiful, lion, shoes, high, become.

Although Fitzgerald classified responses as conventional if they appeared in the Palermo & Jenkins norms and original if they did not, this study used a different classification system. Since for each word in the Palermo & Jenkins norms, some responses were given over a hundred times while others were given only once or twice, it was felt that a scoring system ought to discriminate between responses given with a very high frequency and those given with a low frequency. Certainly a response given only a few times by 250 subjects is more original than one given, for example, 141 times. Word association responses can be classified as primary, secondary, and tertiary depending on whether the response is the most, second most, or third most frequently given response. Words were selected for the test so as to optimize the
differences in frequency between the primary, secondary, and tertiary responses. An attempt was made to select words in which the frequency of the primary response was at least twice that of the secondary response and, if possible, five times that of the tertiary response. Therefore responses to the word association test were weighted thus:

0 - A primary response (the most frequently given response according to the Palermo & Jenkins 1964 norms).

1 - A secondary response (the second most frequently given response according to the Palermo & Jenkins 1964 norms).

2 - A tertiary response (the third most frequently given response according to the Palermo & Jenkins 1964 norms).

3 - Any other response for that word listed in the Palermo & Jenkins 1964 norms.

4 - Any response not listed for that word in the Palermo & Jenkins 1964 norms.

The attitude test (Appendix A), constructed by the author, consisted of a set of 53 pairs of contrasting attitude items. The subject was given the test twice. The first time he was asked to circle all the items with which he currently agreed or which presently applied to him. The second time he was asked to circle all the items with which he currently agreed plus any attitudes he once held or considered even though he did not now hold them. Subjects were instructed that they could circle one, none, or both of any pair of items. Subjects received three scores for this test; the
sum of items circled under the first set of instructions, the sum of items circled under the second set of instructions, and the difference between the number of items circled on the first and second test \((2-1)\). The rationale for this test was the assumption that subjects relatively more open to experience should have considered or entertained a greater number of experiences than they now hold and that therefore they should circle more items under the second instructions than under the first. Thus it was assumed that subjects high on openness to experience would have a greater difference score of \(2-1\) than subjects low on the openness to experience inventory. The quality of the attitude items circled was not considered.

The Range of Information test (Appendix A), designed by the author, was 54 multiple choice questions concerning relatively non-academic information currently available to college students living in Tucson, Arizona. The test concerned practical everyday knowledge available to everyone and some questions about current events. Thus some of the questions were: Where are the Viet Nam Peace talks being held? A jump cable is ____? Which of the following is not a brand name of a camera? Baskin-Robbins advertises that they make how many flavors of ice cream? A golden anniversary is the ____? The rationale for this test was that the person who is open to experience, rather than limiting himself to a narrow range of interests would attend to a broad range of varied information available to him in everyday life. Also, both
Fitzgerald's Experience Inquiry and Coan's Experience Inventory tend to emphasize openness to inner experiences and are tests in which the Jungian introvert would tend to score higher than the extrovert. Thus it was thought interesting to view the correlations between a test designed to tap openness to everyday, practical, action oriented experiences and the factors of the Experience Inventory. It should be noted that although the range of information test would probably correlate highly with intelligence and the length of time the subject had resided in Tucson, these variables were not measured in this study. The main reason for not including them was that it was necessary to insure that the length of time needed for a subject to complete the battery did not exceed three hours.

In total, there were 22 variables in this study:

1. The general a priori total openness score \((g)\) on the Experience Inventory. (Appendix B contains the key for obtaining the \(g\) score.)

2 - 17 Sixteen factors extracted from the Experience Inventory. (Appendix C lists the items of the Experience Inventory which are substantially loaded by each factor and indicates the keyed responses (true or false) for the items.)

18. A word association score \((WA)\) which was the sum of the weighted scores for each response to each stimulus word. A high \(WA\) indicates originality and a low \(WA\) indicates conformity.
19 - A Range of Information score (ROI) which is the total number of correct responses on the Range of Information Test.

20 - The sum of the number of attitudes endorsed under the first set of instructions ($A_1$).

21 - The sum of the number of attitudes endorsed under the second set of instructions ($A_2$).

22 - The difference ($D$) between $A_1$ and $A_2$ or $A_2 - A_1$.

It was hypothesized that $g$, the total openness to experience score would correlate positively with WA, the total word association score. In addition, it was expected that certain factors would tend to go with remoteness or originality of word associations, most particularly factor 2, and that $g$ and openness to experience factors would also tend to correlate with ROI and $D$. 
CHAPTER II

METHODOLOGY

Subjects

The subjects in this study were all undergraduate students at The University of Arizona enrolled in psychology classes. The sample consisted of 226 volunteers. There were 117 male and 109 female subjects. Most of them were enrolled in introductory psychology classes; though some were enrolled in personality theory.

Measuring Instruments

The instruments used for this study were the Experience Inventory developed by Coan, a word association test, and an Attitude Test and Range of Non-Academic Information Test both developed by the author (Appendix A).

Procedure

The subjects were tested in groups of 40 during a 4 day time interval. Subjects volunteered for one of eight three hour testing sessions. All subjects took all the tests in a prescribed order. The subjects were told that they were taking personality tests. When a subject arrived for testing, he was given a packet of tests, a pencil, and a typewritten page
of instructions which he was asked to read. All subjects were asked to wait for verbal instructions before beginning the tests. After all subjects for the given session arrived, the experimenter read the instruction sheet handed them which said:

Read these instructions carefully. Then wait for verbal instructions before beginning.

1. You have a packet of 5 tests that are arranged in the order in which you will take them. Do not rearrange the order of the tests.

2. Each test is numbered at the top in black. This is your code number. In order to receive individual results, put your code number on the back of your self-addressed envelope and print your name on each test being careful not to rearrange their order.

3. The first two tests are similar except that they have different instructions. Read the instructions very carefully, for if you do not follow them, your tests will be invalid. If you do not understand these instructions, feel free to ask the experimenter to explain.

4. Two of the tests have machine scoring answer sheets attached to them which you may detach when taking the tests. If you detach these answer sheets be sure you use the right answer sheet with the right test. Use the number two pencils handed you when using the machine scoring answer sheet.

5. Please Check Off this list. Have you done these things?
   a. Read the instruction sheet
   b. Written your code number on the back of your envelope
   c. Printed your name on all tests including machine scoring answer sheets if you want individual results.
   d. Noted that the first two tests have very different instructions
   e. You have a number two pencil

6. If you want results mailed to you, in addition to putting your name on all tests and code number on your
envelope, please write your name, code number, and address on the bottom of this instruction sheet.

7. Please write your sex, male or female, on the top of each test next to your code number.

8. After you have finished the tests hand in this sheet, the pencil, all tests, and your envelope to the experimenter.

After reading the instruction sheet to the subjects, the experimenter read aloud the directions for the first two tests (attitude tests) as the subjects followed along. The subjects then began the test battery and read the instructions for the other three tests as they came to them. The tests in the packet were in the following order:

1. Attitude Test with first set of instructions
2. Attitude Test with second set of instructions
3. Range of Information Test
4. Experience Inventory
5. Word Association Test

The directions for the first attitude test (read aloud) and appearing in print were:

Here is a list of attitudes or opinions. The items are printed in pairs because they concern the same topic, but they are not necessarily opposites.

Please circle all the statements that you presently agree with. Do not circle statements which you perhaps once agreed with but now disagree with. Circle only those items with which you agree right now.
The directions for the second attitude test (read aloud) and appearing in print were:

Here is a list of attitudes or opinions. This time, instead of circling only the ones you agree with right now, also circle any and all statements that you have ever agreed with even if for only a short time.

1. Circle all the statements you agree with right now.

2. And also circle all the statements that you have ever at any time agreed with even if you now disagree.

The directions for the Experience Inventory were:

Below are some statements about different ideas and feelings that many people have experienced. You are to read each statement and decide whether it is true or false for you. Use your answer sheet. Mark 2 if it is true and 1 if it is false. Work quickly but try to be truthful. Neither answer is necessarily "better" or "healthier" than the other.

The directions for the word association test were:

On each of the following pages you will find one word with a blank space following it. After reading the instructions carefully, turn to the next page, read the word, and then write down the first word you think of. As soon as you finish with each page, turn to the next one until you have finished the booklet.

The experimenter stayed throughout the test session and checked each subject's test packet individually as he finished to make sure the name, code number, and sex were in the appropriate places on all tests. If subjects requested individual results, and all but two did, a letter was sent to them explaining the nature of the study and
giving individual feedback on scores on the factors of the Experience Inventory.
CHAPTER III

RESULTS AND DISCUSSION

To determine the relations between the variables in this study, the Pearson r was computed for each pair of measures. Correlations were obtained between the Experience Inventory variables and the three other measures of openness to experience: ROI, WA, and D (Table 1).

It was hypothesized that g, the total a priori openness to experience score would correlate positively with WA, the total word association score. In addition, it was expected that certain factors would tend to go with remoteness or originality of word associations, most particularly factor 2 and that g and openness to experience factors would also correlate positively with ROI and D.

As expected, g and factor 2 did correlate positively with WA although not at a statistically significant level. WA demonstrated a significant positive correlation with factor 7, deliberate and systematic thought \((r = .145, p < .05)\). The relations predicted between openness to experience factors and ROI were not obtained. ROI had near zero correlations with g and all openness to experience factors. As expected, g and the openness to experience factors did correlate positively with D.
<table>
<thead>
<tr>
<th>Experience Inventory Variables</th>
<th>Range of Information Score (ROI)</th>
<th>Remoteness of Word Association Score (WA)</th>
<th>Attitude Test Score D</th>
</tr>
</thead>
<tbody>
<tr>
<td>g score</td>
<td>.050</td>
<td>.108</td>
<td>.188**</td>
</tr>
<tr>
<td>Factor 1</td>
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<td>-.057</td>
<td>-.071</td>
</tr>
<tr>
<td>Factor 2</td>
<td>.010</td>
<td>.118</td>
<td>.175**</td>
</tr>
<tr>
<td>Factor 3</td>
<td>.008</td>
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<td>Factor 4</td>
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<td>.064</td>
<td>.089</td>
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<td>Factor 5</td>
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<td>Factor 16</td>
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*p ≤ .05 when r = .132, d.f. = 224

**p ≤ .01 when r = .173, d.f. = 224
The following significant correlations were obtained: D was significantly correlated with g ($r = .188$, $p < .01$). D was significantly correlated with factor 2, unusual perceptions and associations ($r = .175$, $p < .01$); factor 3, openness to theoretical or hypothetical ideas ($r = .183$, $p < .01$); factor 6, indulgence in fantasy vs. avoidance of fantasy ($r = .134$, $p < .05$); factor 7, deliberate and systematic thought ($r = .134$, $p < .05$); factor 10, need for involvement ($r = .165$, $p < .05$); factor 11, ability to relax personal identity and control ($r = .155$, $p < .05$); factor 12, experience of alienation ($r = .266$, $p < .01$); and factor 14, relaxation of conscious control of thought and action ($r = .132$, $p < .05$).

One of the reasons D scores correlated more highly with the Experience Inventory than did WA scores might be that the format of the D measures (attitude tests) was more similar to the Experience Inventory than was the word association test. In both the attitude tests and Experience Inventory, subjects were given an opportunity to endorse many items whereas the word association test limited the subjects to one response per word. Response styles in the test taking habits of the average person tend to be more similar on similar tests than on different tests. The attitude tests and Experience Inventory, because they both allow the person to endorse many items and tell much about himself, have more in common with each other than they do with either the word association or Range of Information test. Acquiescence or the tendency to agree regardless of item content may contribute to higher correlations
between D and the Experience Inventory variables than between the Experience Inventory variables and the other measures (ROI and WA).

While scoring the word association test, the author noticed several things which might have interfered with the capacity for WA to measure remoteness or originality of word associations. First, associations were scored very strictly according to the Palermo & Jenkins norms so that singulars and plurals were distinguished. We will remember that each response was given a score of 0-4 where 4 represented maximum originality. Thus, for example, flowers in response to blossom received a score of 0, but flower received a score of 4. Although it may be more "grammatically" conventional to respond to blossom with flowers rather than flower, both flower and flowers have very similar connotations, denotations, and probably imagery and therefore should have been given a similar score.

Second, it appeared that the Palermo & Jenkins 1964 norms for college students for some (at least 6 out of the 20) stimulus words presented in this study are becoming outdated. The stimuli referred to are: doors, guns, soldier, high, earth, and shoes. The three most frequently given responses to doors, according to the norms, were windows, open, and house, but because the popular musical group named "The Doors" has become well known and on the tip of the tongue for college students, "The Doors" or "Musical Group" were very frequently given responses for the subjects in this study.
The Palermo & Jenkins normative responses for soldier were man, army, and gun and for guns, shoot, bullets, and fire, yet probably because of popular negative feelings towards U. S. involvement in the Viet Nam war, the majority of the college students in this study definitely deviated from these norms. Words with strong negative connotations were most frequently given in response to soldier and guns. Typical and frequently given responses were: kill, dangerous, bad, ugly, death, murder, die, metallic, and stupid. Yet if associations are to be considered original only in relation to the norms of the peer group, then these responses, though given a score of 4 in this study, should not have been considered original because they seem to be the normally typical responses for current college students.

The stimulus word high because of its current usage to describe drug experiences, particularly marihuana, presently estimated to be used by more than half the student body, also received a group of responses which seemed very common for this group of students but which were scored 4. The Palermo & Jenkins normative responses to high were low, mountain, and tall, but frequently given responses in this study were: stoned, pot, WOW, great, drunk, and beautiful. Likewise, the word earth whose Palermo & Jenkins norms were dirt, ground, and round seemed to receive an undue proportion of words connoting this decade's experience with the NASA projects, the astronauts, and the moon
shots. Thus a large number of subjects responded with words such as: moon, spaceship, astronauts, oceans, bowling ball, etc.

Finally, the word shoes whose Palermo & Jenkins norms were feet, socks, and laces, probably because of a southwest geographical variable, received a lot of either geographically local or negative responses all of which were scored 4 yet seemed quite typical for Tucson, Arizona. Such responses were: sandals, moccasins, boots, tight, hot, bad, take them off, and barefoot.

Thus it appeared that the 1964 Palermo & Jenkins norms for college students are becoming outdated or at least that subjects in this study tended to deviate from those norms. It is possible that devising word association norms for the subjects in this study from their own responses to the word association test might have resulted in higher correlations.

However, it is possible that word association norms are not an adequate measure of the type of creativity tapped by the Experience Inventory. This study assumed that remote, less frequently given responses on word association tests reflect original, creative thought processes less bound by conventional categories than normative responses. Yet the kind of creativity measured by the Experience Inventory may not be the same as the kind of originality measured by remoteness of word associations. It is possible that if we want to tap the kind of openness
to experience that is reflected in the items of the Experience Inventory, an important question might be, "On what basis or along what dimension is one forming his associations?" It appears that words are linked or associated with one another along many different dimensions. Typical dimensions for associating words with one another seem to be the use of grammar, synonyms, antonyms, causes, effects, and functions. Thus we see that along a grammatical dimension shoes tends to elicit socks, not sock and guns elicits bullets, not bullet. An example of the use of a synonym might be beautiful-pretty and an antonym black-white. The use of an effect might be guns-kill. We also see that objects or events referred to by the stimulus may be described such as earth-round and baby-small. Also, one's attitudes towards the stimulus may be given such as guns-dangerous; shoes-bad, and girl-pretty. It becomes obvious that there are many different ways of associating words, and the above are examples of just a few of them. It is possible that the dimension along which the word association is formed is as significant if not more significant than the frequency of association in determining openness to "inner experience" (and the Experience Inventory tends to tap the introvert's receptiveness to inner experience).

The author is of the opinion, however, that the low correlations between word associations and the Experience Inventory are not merely due to inadequate norms, and also, that categorizing word associations according to the type of association (synonym, antonym, cause, effect,
evaluation, etc.) would not greatly increase ability to measure the kind of openness described by the Experience Inventory. She is of the opinion that the Experience Inventory items and word association test are not really tapping the same type of phenomena. It has already been suggested that there may be distinctions between the influence of grammar, connotation, denotation, and imagery in forming associations to words, and this raises questions concerning the nature of the word association test and its capacity to tap the kind of perceptions, memories, ideas, impulses, and feeling states tapped by the items in the Experience Inventory. The author suggests that whereas the Experience Inventory tends to tap pre-verbal, pre-grammatical, pre-syntactical thought, perceptions, associations, memories, ideas, images, and feeling states, the word association test tends to tap grammatically structured words and sentences which, as a result of syntax, are not the same as the above mentioned pre-syntactical thought. The remainder of this thesis will be concerned with explicating this idea.

Psycholinguistic theory seems to be in its infancy and certainly we do not know very much about specifically what is being tapped by word association tests. Fitzgerald assumed that word associations tap conventionality or originality of "thought processes" and this study assumed that word associations tap "unusual perceptions and associations, and original impulses, ideas, and feeling states." Neither study has attempted to differentiate or define associations, thoughts, ideas,
impulses, images, memories, feeling states, etc., and neither has concerned itself with the degree to which the Experience Inventory and word association test tap the connotative, denotative, and syntactical components of these processes.

Some psycholinguists attempt to describe the origin or formation of language in terms of levels or categories of language responses. We are familiar, for example, with the distinction between denotation in which meaning is clearly stated, directly expressed, precise, and explicit and connotation in which meaning is implicit, suggested, implied, tacitly understood, or naturally involved though not plainly apparent. Psycholinguists distinguish between syntax or grammar and semantics or meaning. Chomsky (1964, 1965, 1968), for example, assumes the individual has various levels of awareness of his language processes and that the content, connotations, denotations, images, feeling states and immediate "gut level" tacit understanding and experience of phenomena underlie and precede both words and grammatical structure. He refers to this pre-verbal, pre-grammatical, pre-word level of language as the unconscious core or foundation of formatives and "K-terminal strings." What Chomsky means by this level of language is similar to what Polanyi (1958, 1959) means by tacit understanding.

According to this theory, thinking can occur without words, and perhaps the most basic formative thoughts had by individuals are
non-verbal, pre-grammatical, pre-word experiences. Perhaps it is this level of thought, perception, and association that if tapped would most closely measure the same thing that is measured by the items on the Experience Inventory. Most likely the word association test does not measure these pre-grammatical, pre-word, tacit experiences. Chomsky (1964, 1965, 1968) postulates that these unobservable, unconscious, deep structures of formatives and K-terminal strings are acted upon by generative and transformational syntactical rules to yield words and grammatically structured sentences. But the basic meaning of a thought can most accurately be tapped at the core of deep structure of language development before it is transformed into a grammatically structured word or group of words. It seems to the author that it is at this deep structure that non-verbal imagery and ideas, much dream and fantasy content, and unconscious perceptions and feeling states occur. If this is the type of thing tapped by the Experience Inventory, and the author believes it is, then most likely, the word association test, does not correlate with it because it does not measure the same thing.
CHAPTER IV

SUMMARY AND CONCLUSIONS

The purpose of the present study was to investigate the relationships between dimensions of openness to experience as measured by the Experience Inventory and non-academic range of information (ROI), remoteness of word associations (WA), and number of attitudes considered or endorsed over time (D) as measured by tests developed by the author. It was hypothesized that the total openness to experience score would correlate positively with WA, the total word association score. In addition, it was expected that certain factors in the Experience Inventory would tend to go with remoteness or originality of word associations, most particularly, factor 2 (unusual perceptions and associations). It was also hypothesized that g and openness to experience factors would tend to correlate with ROI and D.

The Experience Inventory, the Range of Non-Academic Information Test, a Word Association Test, and two attitude tests were administered to 226 psychology students. The Pearson r was calculated for each pair of measures to test the hypotheses advanced.

As expected, g and factor 2 did correlate positively with WA although not at a statistically significant level. WA showed a significant
positive correlation with factor 7, deliberate and systematic thought. D was significantly correlated with g, factor 2, unusual perceptions and associations; factor 3, openness to theoretical or hypothetical ideas; factor 6, indulgence in fantasy vs. avoidance of fantasy; factor 7, deliberate and systematic thought; factor 10, need for involvement; factor 11, ability to relax personal identity and control; factor 12, experience of alienation; and factor 14, relaxation of conscious control of thought and action. ROI failed to produce any significant correlations.

A comparison was made between the Palermo & Jenkins (1964) word association norms for college students and typical responses of subjects in this study to 6 of 20 stimulus words presented. The use of the word association test to measure the kind of openness to inner experience tapped by the Experience Inventory was discussed.
APPENDIX A

MEASURING INSTRUMENTS

The measuring instruments used in this study are located in this section in the following order:

1. Experience Inventory
2. Attitude Test (A₁)
3. Attitude Test (A₂)
4. Range of Non-Academic Information Test
Experience Inventory

Below are some statements about different ideas and feelings that many people have experienced. You are to read each statement and decide whether it is true or false for you. Then write either T (for true) or F (for false) in the space provided. Work quickly but try to be truthful. Neither answer is necessarily "better" or "healthier" than the other. Use the answer sheet provided. True = 2, False = 1.

_____ 1. Sometimes I get so absorbed in my thoughts that I fail to notice a lot of things going on around me.

_____ 2. I think any painting or sculpture should represent something recognizable.

_____ 3. Sometimes I enjoy thinking through problems in a very logical, systematic way.

_____ 4. I often invent formulae or schemes to organize my ideas or help me remember something.

_____ 5. I often feel a need to gather a lot of clear-cut facts before I come to a conclusion about something.

_____ 6. I often enjoy playing with theories or abstract ideas.

_____ 7. To be worth reading, a poem should say something that makes fairly clear sense to any intelligent person.

_____ 8. I often try to formulate general principles to account for things that I read about and think about.

_____ 9. I often enjoy learning some clear-cut concrete facts about people, historical events, or scientific matters.
10. I often feel a need to think things out very carefully before deciding what to do or how to react to something.

11. I often enjoy taking apart clocks and other mechanical things to see how they work.

12. I prefer not to spend much time dwelling on the past.

13. I have sometimes enjoyed taking apart plants or parts of plants to see how they were composed inside.

14. Often when I have to choose between doing two different things, I try very hard to decide which is really more important in the overall scheme of things.

15. I often try to understand the moods and feelings of other people I am with.

16. It is very important to me to feel that what I am doing is very worthwhile or meaningful.

17. I dislike having to spend much time planning things out in advance.

18. I like to play with ideas that other people consider strange or improper.

19. I have sometimes had vivid visual images that have held my fascination for some time as I sat or lay still with my eyes closed.

20. Right now, if I try, I can imagine the aroma of a broiled steak and experience it so intensely that it seems almost real.

21. I have often enjoyed simply sitting and imagining the sound of music when there was actually no music being played.

22. I sometimes get annoyed by people who like to talk about very abstract theoretical matters.

23. I have sometimes had a very strong impression that a certain thing has happened even though there seems to be no way I could really know.
24. Sometimes I seem to be able to receive thoughts from certain people I know well when they are not with me.

25. I have been so madly in love with another person that I have found it difficult to think of anything else for days at a time.

26. Occasionally I have experienced a state in which it seemed hard to tell just where the boundary line was between me and my surroundings.

27. I try to keep all my thoughts directed along realistic lines and avoid flights of fancy.

28. At times in my life I have spent a lot of time wondering why I experience myself as this person in this body and not as someone else.

29. I often feel an intense excitement when I see certain colors or color combinations.

30. I sometimes get a great deal of enjoyment from listening to recordings of unusual sound or sound effects.

31. I often have a strong feeling, which I cannot quite explain, that the situation I am in is one I have been in before.

32. I find some kinds of puzzles--mechanical, mathematical, etc.--very boring.

33. When reading a story or watching a play or movie, I sometimes get so wrapped up in the actions or problems of a character that I almost forget where I am.

34. Sometimes when watching the movements of an athlete or a dancer, I feel a certain straining or movement, as if I were performing the action myself.

35. Sometimes when I am listening to music, I feel a strong wave of excitement that seems to affect my whole body.

36. Sometimes when I am reading poetry or looking at a work of art, I feel a strong wave of excitement that seems to affect my whole body.
37. I sometimes feel annoyed by people who get very emotional about different things.

38. I have sometimes experienced a very powerful feeling of movement when looking at certain paintings or pieces of sculpture.

39. I have sometimes had the feeling that my own life and the world around me were completely meaningless.

40. When I come to a conclusion, I always have a good idea of how I have arrived at it and what facts it is based on.

41. For a period of time when I was a child, I pretended to play and do things with an imaginary companion.

42. I often have dreams about people I have never seen before.

43. I sometimes daydream about being in strange and distant places.

44. I prefer not to waste my time daydreaming.

45. I have sometimes imagined myself as some kind of animal.

46. I have sometimes imagined myself as a member of the opposite sex.

47. In my daydreams I imagine myself performing all sorts of actions that I would never really carry out.

48. Fairly often I dream in color.

49. Fairly often when I am dreaming, I know I'm dreaming and feel that I have some control over my dream.

50. I sometimes daydream about having some special power or about being able to do remarkable things that I cannot really do.

51. At times I have solved problems or created something (such as music or poetry) in my dreams.

52. I seldom have dreams at night.
53. Most of my dreams seem to be meaningless.

54. I often think of various people I know as resembling certain animals.

55. I often see things--like faces, animals, etc.--in cloud formations.

56. I sometimes think of trees as expressing certain feelings, attitudes, or movements.

57. Certain sounds seem to give impressions like those of colors, so that I can almost see colors when I hear these sounds.

58. In some kinds of sounds--such as the wind, the noise of machinery, etc.--I often imagine I hear voices.

59. I can directly recall things that happened before I was five years old (not just from what people have told me since then).

60. I often start thinking silly or comical thoughts in situations where I am supposed to be serious.

61. At times the solution to a problem has occurred to me in a dream.

62. It is possible that there are species on other planets which are far more highly evolved than human beings.

63. It is possible that the mind can leave the body and experience things at a great distance from the body.

64. It is definitely impossible for one person to read another person's mind.

65. I prefer people who are constant and predictable to those who are very changeable.

66. The idea that any of the flying saucers people have sighted come from outer space is pretty silly. They can all be explained in other ways.

67. Children should read stories about real things, not stories about fantastic things like fairies, dragons, and giants.
68. At times I have felt a strong urge to do something shocking in a public gathering.

69. At times I have felt a momentary pleasure at seeing someone else get hurt or embarrassed.

70. Sometimes I have felt a strange thrill at the thought of being forcibly controlled or even hurt by someone else.

71. At times when I have been sick or needed help, I have enjoyed having someone else take care of me.

72. I often feel a strong need to be completely alone.

73. At times I feel a painful sense of loneliness and want very much to share an experience with someone else.

74. At least once in my life I have thought about committing suicide.

75. Although I wouldn't actually do it, I can imagine myself killing another human being.

76. I have sometimes imagined performing sexual acts that many people consider unnatural.

77. I have sometimes felt a strong physical attraction to certain other members of my own sex.

78. People are intolerable who take "sacred" things in a light and humorous way.

79. I would like to get beyond the world of logic and reason and experience something new and different.

80. I like to indulge in emotions and sensations with the feeling of just "letting go."

81. I would enjoy a contest in a carnival in which I had to break a pile of dishes.

82. I enjoy "wild" parties.

83. I find myself uncomfortable in the presence of unconventional or "peculiar" people.
84. Sometimes I have had the impression that the walls or the ceiling were moving and changing size or shape, even though I knew this was impossible.

85. I think that our most intense experiences can be communicated in words to others.

86. Eventually everything will be explained by the laws of science.

87. It is often better to act upon one's feelings than upon a logically reasoned plan.

88. I usually prefer to do things in tried ways rather than new and different ways.

89. I have had experiences which inspired me to write a poem or a story, or make up a humorous tale, or paint a picture.

90. I am often bored when left alone.

91. I avoid "putting people on" or doing things just to see the reactions of others.

92. Sometimes I imagine what it would be like if the world were different, e.g., if there were no laws, if we could read each other's minds, etc.

93. While lying in bed or reclining in a chair I sometimes find myself perceiving faces, objects, etc., in the shadows of the light or the design of the ceiling, etc.

94. At times I see unusual relations between things.

95. Poetry has little effect on me.

96. I am quick to see "double meanings" in things people are saying or in what I am reading.

97. I usually try to understand my dreams.

98. Solutions to problems or ideas for new projects come to me "out of the blue."
99. When solving a problem I am inclined to consider all possibilities even though some are unrealistic or absurd.

100. Sometimes I wander off into my own thoughts while doing a routine task so that I actually forget that I am doing the task, and then find, a few minutes later, that I have completed it without even being aware of what I was doing.

101. At times I have carried on real conversations with another person while I was asleep (e.g., with someone who walked into my room).

102. At times I have focused on something so hard that I went into a kind of benumbed state of consciousness, or at other times into a state of extraordinary calm and serenity.

103. I can look at an object—a leaf, a stone, a flower—for a long time, continuing to discover different things about it.

104. At times I have actively stared at something familiar and had it become very strange before my eyes.

105. I have had the experience of doing some task in the middle of the night (e.g., jotting down a note, answering a phone call) with no memory the next morning of having done so.

106. I have never had a strange or weird experience.

107. I have had the experience of being caught up by music or dancing, becoming so enraptured by it, and having it live and express itself through me so that I seemed to cease to be.

108. There have been times when I have been completely immersed in nature or in art and had a feeling of awe sweep over me so that I felt as if my whole state of consciousness were somehow temporarily altered.

109. I have experienced moments of inspiration and creativity, when artistic expression, ideas, or the solutions to problems I had struggled with came to me with a special intensity and clarity.

110. I would like to try parachute jumping.
111. At amusement parks I usually avoid roller-coasters, ferris wheels and similar "thrill" rides.

112. I have been so strongly in love with someone that I somehow felt that my own self was fading and I was at one with the beloved person.

113. It is possible that we had a previous existence of which we have no memory.

114. It is possible that our sense organs (i.e., eyes, ears, etc.) do not bring us our most important information.
Test One

Directions

Here is a list of attitudes or opinions. The items are printed in pairs because they concern the same topic, but they are not necessarily opposites.

Please circle all the statements that you presently agree with. Do not circle statements which you perhaps once agreed with but now disagree with.
1. There is something sacred about the marital relationship and anyone who enters into it should regard it as a lifetime contract.
2. People would be happier if marriage and divorce laws were relaxed so that we could enter into marriage freely on a trial basis and abandon it if it did not work out well.

1. No one should be allowed to commit suicide, since human life is too valuable to justify the destruction of any life, even one's own.
2. Some people have problems for which suicide is the only way out. Such people are justified in taking their own lives.

1. There are some feelings and reactions that we should keep to ourselves in order to avoid hurting or offending other people.
2. Life would be better if people could freely express all their feelings and reactions.

1. In time of war, every young man who is physically able should be required to serve in the armed forces, even if he claims that such service would conflict with his moral or religious principles.
2. If a man feels that serving in the armed forces conflicts with his moral or religious principles, he should not be required to serve, even in time of war.

1. It is essential in a democratic society that all citizens have an equal opportunity to run for office.
2. The highest form of democracy would be one in which the qualifications for running for office insured that only the most intelligent and educated men would be eligible.

1. Everyone is responsible for what he is as well as what he does.
2. Many people could be described as victims of heredity and environment beyond their control and are therefore not responsible for what they are and what they do.

1. My individual influence may be small, but I can still have a definite influence on important political events by voting, writing letters, and participating in organizations.
2. There is really nothing I can do as an individual that will affect major political events.

1. It would be good if scientists could gain enough knowledge to control the future biological evolution of the human species.
2. Man should not attempt to interfere with and control human evolution.
1. Wars are inevitable, in spite of efforts to prevent them.
2. Peace is not easy to attain, but it is possible to eliminate war.

1. People should be careful to dress appropriately; that is, they should follow conventional dress norms appropriate to their age, sex, and occupation.
2. If anyone wishes to wear an unusual costume or wear his hair in a manner that others consider outlandish, he should feel free to do so.

1. All events follow natural laws; therefore, we could predict everything that happens if we had enough information.
2. Many things that happen are just accidents that do not follow natural laws.

1. There is a God who knows and understands me and with whom I can speak.
2. God is an idea or principle, not a being with human characteristics.

1. It is all right to be sexually attracted to persons other than your spouse.
2. If a husband or wife is sexually attracted to those other than his or her spouse, it is an indication that there is something wrong with the marriage.

1. I know myself well.
2. I don't know myself well at all.

1. Money invested in the space race can be applied more advantageously to other problems.
2. It is important to continue investing money in the space race. We should not reduce our expenditures in this area in order to apply money to other problems.

1. It is better to not get too emotionally involved in things.
2. The only way to lead a meaningful life is to become emotionally involved in ideals, causes, and other people.

1. The happy person tends always to be poised, courteous, and emotionally controlled.
2. The happy person tends to say what he thinks and feels even if it is not courteous to do so, and he freely expresses emotions rather than controls them.
1. People who are really mature are always able to get along smoothly with other people.
2. The mature person is not always able to get along smoothly with others.

1. Most of the things that happen in life are pretty pointless and meaningless.
2. There seems to be a basic meaning underlying my life.

1. Most of the important things that happen to me are beyond my control.
2. For the most part, I am the master of my fate and can pretty well direct my life the way I want to.

1. The future looks very bright and promising.
2. The future looks dark and dreary.

1. The greatest accomplishments and satisfactions come only to those who approach life very seriously.
2. Life is really a bit of a joke. It does not pay to take anything seriously.

1. We can never really know anything with complete certainty.
2. There are some basic truths that people should accept as absolute and have no doubt about.

1. Since everyone's behavior is a product of biological and social forces that he cannot control, we should not evaluate any act in terms of guilt or blame.
2. Everyone should assume responsibility for his own actions and should be held to blame if his actions harm other people.

1. It does not do much good to get very involved in social causes.
2. The most valuable thing an individual can do is to lead a life dedicated to humanitarian ideals.

1. It is almost always best to make your own decisions and do things on your own instead of depending on other people.
2. People should not try to be too independent. The most important things are accomplished through the cooperative efforts of two or more people.
1. Religious beliefs are largely delusional, and people can live more sanely without them.
2. Faith in a supreme being is an essential foundation for a mature outlook on life.

1. Most people are basically narrow-minded and selfish.
2. Most people respond with genuine sympathy when they see others in real trouble.

1. To live a meaningful life, you should spend most of your time working hard and preparing for future accomplishment.
2. It is important to let yourself go fairly often and enjoy fully the pleasure of the moment.

1. I think that sometime in my life I have experienced most of the emotions possible for man to experience.
2. The possible emotions that man can experience are almost limitless and therefore I have felt only a small number of the many.

1. The safety and protection of my family or loved ones comes before any duty or obligation I may have to society or my country.
2. There are times when my duty to society or my country would be more important than the safety and protection of those I love.

1. Laws and law enforcement should always be directed to protect the innocent.
2. The laws and courts in this country are so concerned about protecting the right of the innocent that the guilty get away too easily.

1. In order to solve world problems, mankind needs to become more logical and rational.
2. It is not logic or rationality that people need but an emotional experience of love and compassion for one another.

1. When I become old, living will still seem as worthwhile to me as it does now.
2. When I become old, living will not seem as worthwhile to me as it does now.

1. If I were tortured, I am sure I could be made to do or say anything.
2. No amount of torture, no matter how painful or horrible, could make me violate some of my beliefs and values.
1. Any seeming differences in behavior between the races is only due to cultural and social reasons.
2. There are probably some very specific differences in behavior between the races which can only be explained by racial inheritance or traits.

1. Most women who are raped probably instigated their attacker in some way.
2. Most women who are raped are the victims of cruel senseless men and are themselves in no way responsible for what these men do.

1. A man can overcome his background of cultural or economic deprivation if he really wants to.
2. Some people are so culturally, educationally, and economically deprived from childhood on that no amount of self-determination can overcome the initial handicaps.

1. Homosexual behavior could not be as sexually satisfying as a mature heterosexual relationship.
2. Homosexual behavior could be as sexually satisfying as heterosexual behavior.

1. There are not and never were witches and warlocks with supernatural powers.
2. There may indeed be witches and warlocks which deal in magic or the supernatural.

1. Censorship of films, TV, magazines, etc., is an infringement upon freedom of speech and print and therefore should not be tolerated in any form.
2. Some censorship of communication media is necessary to maintain a level of decency and prevent lying to the public.

1. Labor unions prevent the worker from exercising his own initiative to handle his own affairs and rise in proportion to his skill, ability, and personal initiative.
2. In today's complex industrial society, labor unions are needed to protect the workers from powerful management forces which do not naturally respect one man's rights, may overlook his ability, and do not always reward personal initiative.
1. The computer can never replace man; for it is only a tool or extension of man and cannot have the human qualities of creativity, originality, or imagination.

2. The time is not far away when computers will be made that can entirely replace or duplicate every function of human thinking and therefore replace man himself as the creator and discoverer.

1. Many hippies, or people who act like them, are mixed up and insecure people.

2. Hippies, or people who act like them, seem to be freer and more at peace with themselves than others.

1. The House Committee on Unamerican Activities is a prejudiced, backward, and dangerous institution which should be abolished.

2. The House Committee on Unamerican Activities serves a valuable function of informing the Congress of subversive or potentially subversive factors in America and therefore it should be maintained.

1. When a woman marries and has children she should stay home and be a fulltime housewife and mother.

2. There is nothing wrong with a woman having a career even though she is married and has children.

1. Death should be avoided and postponed. In fact, it would be good if modern medicine could extend the life span to 200 years.

2. At a certain time in life, it is natural to look forward to death as a welcome relief from the struggle of life. Man should not interfere with the natural process of dying by extending man's normal life span.

1. It is better to pause and think things out clearly and rationally before acting.

2. Sometimes it is better to act spontaneously without pausing to reason and decide.

1. Western society is the highest achievement of mankind.

2. Other cultures may have more to offer than Western society.

1. Homosexuals are mixed up, immature, unstable, maladjusted people.

2. Homosexuals can be mature, stable, well-adjusted people.

1. When they have learned enough, human beings will eventually possess a complete, or almost complete, understanding of the universe.

2. Human beings have a limited capacity for understanding, and there are some things they will never be able to understand.
1. It is senseless to risk human life by sending men in spaceships to the moon and other planets if we can get as much scientific information by just sending instruments.
2. Sending men to the moon or to Mars would be a worthwhile human achievement even if we did not gain any new scientific information by doing it.

1. I am a fairly mature person.
2. In many ways I am still rather immature.
Directions

Here is a list of attitudes or opinions. This time, instead of circling only the ones you agree with right now, also circle any and all statements that you have ever agreed with even if only for a short time.

1. Circle all the statements you agree with right now.

2. And also circle all the statements that you have ever, at any time, agreed with even if you now disagree.
1. There is something sacred about the marital relationship and anyone who enters into it should regard it as a lifetime contract.

2. People would be happier if marriage and divorce laws were relaxed so that we could enter into marriage freely on a trial basis and abandon it if it did not work out well.

1. No one should be allowed to commit suicide, since human life is too valuable to justify the destruction of any life, even one's own.

2. Some people have problems for which suicide is the only way out. Such people are justified in taking their own lives.

1. There are some feelings and reactions that we should keep to ourselves in order to avoid hurting or offending other people.

2. Life would be better if people could freely express all their feelings and reactions.

1. In time of war, every young man who is physically able should be required to serve in the armed forces, even if he claims that such service would conflict with his moral or religious principles.

2. If a man feels that serving in the armed forces conflicts with his moral or religious principles, he should not be required to serve, even in time of war.

1. It is essential in a democratic society that all citizens have an equal opportunity to run for office.

2. The highest form of democracy would be one in which the qualifications for running for office insured that only the most intelligent and educated men would be eligible.

1. Everyone is responsible for what he is as well as what he does.

2. Many people could be described as victims of heredity and environment beyond their control and are therefore not responsible for what they are and what they do.

1. My individual influence may be small, but I can still have a definite influence on important political events by voting, writing letters, and participating in organizations.

2. There is really nothing I can do as an individual that will affect major political events.

1. It would be good if scientists could gain enough knowledge to control the future biological evolution of the human species.

2. Man should not attempt to interfere with and control human evolution.
1. Wars are inevitable, in spite of efforts to prevent them.
2. Peace is not easy to attain, but it is possible to eliminate war.

1. People should be careful to dress appropriately; that is, they should follow conventional dress norms appropriate to their age, sex, and occupation.
2. If anyone wishes to wear an unusual costume or wear his hair in a manner that others consider outlandish, he should feel free to do so.

1. All events follow natural laws; therefore, we could predict everything that happens if we had enough information.
2. Many things that happen are just accidents that do not follow natural laws.

1. There is a God who knows and understands me and with whom I can speak.
2. God is an idea or principle, not a being with human characteristics.

1. It is all right to be sexually attracted to persons other than your spouse.
2. If a husband or wife is sexually attracted to those other than his or her spouse, it is an indication that there is something wrong with the marriage.

1. I know myself well.
2. I don't know myself well at all.

1. Money invested in the space race can be applied more advantageously to other problems.
2. It is important to continue investing money in the space race. We should not reduce our expenditures in this area in order to apply money to other problems.

1. It is better to not get too emotionally involved in things.
2. The only way to lead a meaningful life is to become emotionally involved in ideals, causes, and other people.

1. The happy person tends always to be poised, courteous, and emotionally controlled.
2. The happy person tends to say what he thinks and feels even if it is not courteous to do so, and he freely expresses emotions rather than controls them.
1. People who are really mature are always able to get along smoothly with other people.
2. The mature person is not always able to get along smoothly with others.

1. Most of the things that happen in life are pretty pointless and meaningless.
2. There seems to be a basic meaning underlying my life.

1. Most of the important things that happen to me are beyond my control.
2. For the most part, I am the master of my fate and can pretty well direct my life the way I want to.

1. The future looks very bright and promising.
2. The future looks dark and dreary.

1. The greatest accomplishments and satisfactions come only to those who approach life very seriously.
2. Life is really a bit of a joke. It does not pay to take anything seriously.

1. We can never really know anything with complete certainty.
2. There are some basic truths that people should accept as absolute and have no doubt about.

1. Since everyone's behavior is a product of biological and social forces that he cannot control, we should not evaluate any act in terms of guilt or blame.
2. Everyone should assume responsibility for his own actions and should be held to blame if his actions harm other people.

1. It does not do much good to get very involved in social causes.
2. The most valuable thing an individual can do is to lead a life dedicated to humanitarian ideals.

1. It is almost always best to make your own decisions and do things on your own instead of depending on other people.
2. People should not try to be too independent. The most important things are accomplished through the cooperative efforts of two or more people.
1. Religious beliefs are largely delusional, and people can live more sanely without them.

2. Faith in a supreme being is an essential foundation for a mature outlook on life.

1. Most people are basically narrow-minded and selfish.

2. Most people respond with genuine sympathy when they see others in real trouble.

1. To live a meaningful life, you should spend most of your time working hard and preparing for future accomplishment.

2. It is important to let yourself go fairly often and enjoy fully the pleasure of the moment.

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Instructions

This is a multiple choice test of general information. Each question has five choices. Please choose only one answer per question.

Mark your answer on the answer sheets provided. Please use the Number Two pencils which are being distributed.

1. A cuticle is
   1. a fingernail
   2. the skin around your fingernail
   3. an infection or sore on your fingernail
   4. a hang-nail
   5. a manicuring instrument

2. A 1-S Selective Service classification means
   1. ministerial deferment
   2. occupational deferment
   3. conscientious objector, non-combatant
   4. deferment of student to end of present academic year only
   5. student deferment for undergraduate students

3. Which one of the locations of the following universities is incorrect?
   1. Rutgers, New Jersey
   2. Yale, Connecticut
   4. Notre Dame, New Hampshire
   5. Vassar, West Virginia

4. Where are the Viet Nam peace talks being held?
   1. Paris
   2. Geneva
   3. Thailand
   4. Burma
   5. The UN

5. The most deadly of the Tucson desert dwellers is the
   1. diamond back rattler
   2. scorpion
   3. coral snake
   4. tarantula
   5. sidewinder snake
6. Dustin Hoffman was in the movie
   1. Closely Watched Trains
   2. Candy
   3. The Graduate
   4. Guess Who's Coming to Dinner
   5. I Love You, Alice B. Toklas

7. Who is currently Secretary of State?
   1. Robert Mayo
   2. Arthur F. Burns
   3. Earle Wheeler
   4. William Rogers
   5. Henry Kissinger

8. What was the former name of the John F. Kennedy Airport?
   1. Fenway
   2. Idlewild
   3. O'Hare
   4. LaGuardia
   5. Ebbets International

9. A jump cable is
   1. used in skiing
   2. used for re-charging a battery
   3. thrown around lumber to carry it down the mountain side
   4. used by the phone companies when climbing telephone poles to
      set up cables
   5. used in mountain climbing

10. The largest mining town in Arizona is
    1. Oak Creek
    2. Needles
    3. Douglas
    4. Bisbee
    5. Safford

11. About how far is it by the shortest or most direct route via automobile
    from Tucson to Phoenix?
    1. 65 miles
    2. 70 miles
    3. 80 miles
    4. 90 miles
    5. 100 miles
12. *Travels with Charlie* was written by:
   1. Hemingway
   2. Faulkner
   3. Steinbeck
   4. Buck
   5. Schultz

13. Your normal body temperature is
   1. 96.9
   2. 98.6
   3. 96.4
   4. 98.4
   5. 98.0

14. Which one of the following musical groups is not from England?
   1. Beatles
   2. Rolling Stones
   3. The Kinks
   4. The Cream
   5. Herman’s Hermits

15. Which one of the following is not a department store in Tucson?
   1. Korby’s
   2. Sears Roebuck & Co.
   3. Jacomes
   4. Marshall Field
   5. Steinfelds

16. Which of the following is not a brand name of a sewing machine?
   1. Singer
   2. Kenmore
   3. Necchi
   4. White
   5. Arnold

17. Which one of the following is not a brand name of a camera?
   1. Kodak
   2. Pentac
   3. Zeiss-Ikon
   4. Kontex
   5. Nikon
18. Which radio call letters are not those of a Tucson station?
1. KTKT
2. KHOS
3. KCEE
4. KEVT
5. KTKV

19. Which one of the following is not a Tucson apartment house?
1. Breezewood Terrace apartments
2. Charlton apartments
3. Colonial apartments
4. Copper House apartments
5. Spartan Arms apartments

20. Which of the following is not a Tucson art gallery?
1. Boyer gallery
2. De Grazia Gallery in the Sun
3. De Young art gallery
4. The Print Room in the Old Adobe Patio
5. Chuck Winters art gallery

21. Which one of the following hamburger places in Tucson advertises that you may "come as you are"?
1. Johnnies
2. Sandy's
3. McDonald's
4. The Ranch
5. Burger Chef

22. All aliens must report their address to the post office by
1. March 1
2. December 31
3. January 31
4. January 1

23. What is a chiropractor?
1. a podiatrist
2. an M.D.
3. one who manually adjusts the joints to cure diseases
4. one who studies the behavior and natural habitat of birds
5. an osteopath
24. If you ordered a piece of 2 x 4 lumber you would be ordering a board
1. 2 inches wide, 4 inches thick
2. 2 inches thick, 4 inches wide
3. 2 inches wide, 4 feet long
4. 2 inches wide, 4 inches long
5. 2 feet wide, 4 feet long

25. Which one of the following is not a Tucson hospital?
1. Palo Verde Hospital
2. St. Joseph's Hospital
3. St. John's Hospital
4. St. Mary's Hospital
5. Tucson General Hospital

26. If you phoned ahead for motel reservations, you would generally
expect the motel to reserve your room until about _____ unless
other arrangements were made.
1. 10:00 a.m. - noon
2. 12:00 - 2:00 p.m.
3. 3:00 - 6:00 p.m.
4. 7:00 - 9:00 p.m.
5. 10:00 - midnight

27. Baskin Robbins advertises that they make how many flavors of ice
cream?
1. 30
2. 31
3. 32
4. 33
5. 35

28. Dunkin Donuts' bakers pledge to make their doughnuts fresh every
1. 4 hours
2. 3 hours
3. 6 hours
4. 2 hours
5. 8 hours

29. Which one of the following is not a fraternal organization?
1. Loyal Order of Moose
2. Masonic Temple
3. Knights of Columbus
4. Elk's Club
5. Archers of Antioch
30. In order to have a florist wire flowers out of state you must
   1. Purchase at least one dollar worth of flowers and pay for the phone call.
   2. Purchase at least five dollars worth of flowers and pay for the phone call.
   3. Purchase at least $7.50 worth of flowers and pay for the phone call.
   4. Purchase at least ten dollars worth of flowers and pay for the phone call.
   5. Have an FDC floral credit card.

31. In Tucson, Dorson's sells:
   1. furniture
   2. baby clothes
   3. automobiles
   4. mobile homes (trailers)
   5. hardware

32. Who is the U. S. chief negotiator for the Viet Nam Peace talks?
   1. Edmund G. Brown
   2. Harold Stassen
   3. Henry Cabot Lodge
   4. Arthur Goldberg
   5. William Rogers

33. Who is the Pope of the Roman Catholic Church now?
   1. Pope John V
   2. Pope Paul VI
   3. Pope Pius XII
   4. Pope Clement VI
   5. Pope Frances II

34. Which one of the following is not a rock n' roll dance?
   1. Jobblewocky
   2. Boogaloo
   3. Funky-Broadway
   4. The Horse
   5. The Monkey

35. Where is Egypt?
   1. Asia Minor
   2. Africa
   3. N. E. of Turkey
   4. W. of Algeria
   5. S. E. Asia
36. The cut of meat called "sweetbreads" is really
1. stomach
2. brain
3. tripe
4. pancreas
5. thyroid gland

37. Euthanasia is better known as
1. eugenics
2. mercy killing
3. cross breeding
4. S. E. Asia
5. anesthesia

38. Who dug the Rio Grande?
1. Paul Bunyon
2. Wild Bill Hickok
3. George the Giant
4. Babe
5. Pecos Bill

39. An abrasive is used for
1. rubbing
2. coloring
3. heating
4. cooling
5. hardening

40. A yawl is
1. a sweet potato
2. a kind of turban
3. an old English bedwarming device
4. a boat
5. part of the control panel of a plane

41. The Korean War began in
1. 1945
2. 1953
3. 1950
4. 1948
5. 1939
42. A golden anniversary is the
   1. first
   2. tenth
   3. twenty-fifth
   4. fiftieth
   5. seventy-fifth

43. Sugar is a
   1. protein
   2. fat
   3. carbohydrate
   4. vitamin
   5. calorie

44. The planet which has rings around it is
   1. Pluto
   2. Mercury
   3. Mars
   4. Neptune
   5. Saturn

45. The Grand National race is run by
   1. cars
   2. men
   3. boats
   4. horses
   5. dogs

46. Hors d'oeuvres are
   1. platitudes
   2. appetizers
   3. epithets
   4. border skirmishers
   5. children

47. The Taj Mahal is a
   1. mountain
   2. statue
   3. pyramid
   4. mausoleum
   5. king
48. The Bastille was a
1. town
2. river
3. prison
4. castle
5. university

49. Rigor mortis means
1. insane
2. cold
3. strictness of law
4. stiffness of death
5. a rapid dance

50. Where would you find the timberline?
1. mountains
2. coast
3. tropics
4. desert
5. deep valleys

51. The Grand Canyon was created by
1. erosion
2. earthquake
3. drought
4. evaporation
5. lava flow

52. A calliope is a
1. fruit
2. musical instrument
3. flower
4. clown
5. large mammal

53. In bowling, a turkey is scoring how many consecutive strikes?
1. 1
2. 2
3. 3
4. 6
5. 12
54. Which of the following has an M.D. degree?
1. optician
2. optometrist
3. ophthalmologist
4. osteopath
5. orthopteron
APPENDIX B

G SCORE FOR THE EXPERIENCE INVENTORY

This section contains the key for obtaining the general a priori score for the Experience Inventory referred to in this study as "g."
Experience Inventory

To obtain the "g" a priori score of the Experience Inventory, credit one point for each answer in accordance with this key: (T = True, F = False).

4. T 24. T 44. F 64. F 84. T 104. T
15. T 35. T 55. T 75. T 95. F
17. - 37. F 57. T 77. T 97. T
20. T 40. - 60. T 80. T 100. T
APPENDIX C

EXPERIENCE INVENTORY FACTORS

This section contains the items loaded by each factor which were used for factor scores in this study. Items used were those substantially loaded by each factor but not by others.
Experience Inventory

FACTOR 1  Aesthetic insensitivity vs. aesthetic sensitivity

Item Key

95  T  Poetry has little effect on me.

7  T  To be worth reading, a poem should say something that makes fairly clear sense to any intelligent person.

90  T  I am often bored when left alone.

2  T  I think any painting or sculpture should represent something recognizable.

36  F  Sometimes when I am reading poetry or looking at a work of art, I feel a strong wave of excitement that seems to affect my whole body.

108  F  There have been times when I have been completely immersed in nature or in art and had a feeling of awe sweep over me so that I felt as if my whole state of consciousness were somehow temporarily altered.

38  F  I have sometimes experienced a very powerful feeling of movement when looking at certain paintings or pieces of sculpture.

35  F  Sometimes when I am listening to music, I feel a strong wave of excitement that seems to affect my whole body.

89  F  I have had experiences which inspired me to write a poem or a story, or make up a humorous tale, or paint a picture.

103  F  I can look at an object—a leaf, a stone, a flower—for a long time, continuing to discover different things about it.
FACTOR 2  Unusual perceptions and associations

Item  Key

54  T  I often think of various people I know as resembling certain animals.

55  T  I often see things—like faces, animals, etc.—in cloud formations.

84  T  Sometimes I have had the impression that the walls or the ceiling were moving and changing size or shape, even though I knew that this was impossible.

93  T  While lying in bed or reclining in a chair I sometimes find myself perceiving faces, objects, etc., in the shadows of the light or the design of the ceiling, etc.

56  T  I sometimes think of trees as expressing certain feelings, attitudes, or movements.

45  T  I have sometimes imagined myself as some kind of animal.

42  T  I often have dreams about people I have never seen before.

30  T  I sometimes get a great deal of enjoyment from listening to recordings of unusual sound or sound effects.

57  T  Certain sounds seem to give impressions like those of colors, so that I can almost see colors when I hear these sounds.

58  T  In some kinds of sounds—such as the wind, the noise of machinery, etc.—I often imagine I hear voices.

59  T  I can directly recall things that happened before I was five years old (not just from what people have told me since then).

28  T  At times in my life I have spent a lot of time wondering why I experience myself as this person in this body and not as someone else.

29  T  I often feel an intense excitement when I see certain colors or color combinations.
FACTOR 2

Item Key

92  T  Sometimes I imagine what it would be like if the world were different, e.g., if there were no laws, if we could read each other's minds, etc.

19  T  I have sometimes had vivid visual images that have held my fascination for some time as I sat or lay still with my eyes closed.

26  T  Occasionally I have experienced a state in which it seemed hard to tell just where the boundary line was between me and my surroundings.

104  T  At times I have actively stared as something familiar and had it become very strange before my eyes.

94  T  At times I see unusual relations between things.

FACTOR 3  Openness to theoretical or hypothetical ideas

Item Key

6  T  I often enjoy playing with theories or abstract ideas.

99  T  When solving a problem I am inclined to consider all possibilities even though some are unrealistic or absurd.

8  T  I often try to formulate general principles to account for things that I read about and think about.

109  T  I have experienced moments of inspiration and creativity, when artistic expression, ideas, or the solutions to problems I had struggled with came to me with a special intensity and clarity.

18  T  I like to play with ideas that other people consider strange or improper.

1  T  Sometimes I get so absorbed in my thoughts that I fail to notice a lot of things going on around me.
FACTOR 3

Item Key

96  T  I am quick to see "double meanings" in things people are saying or in what I am reading.

22  F  I sometimes get annoyed by people who like to talk about very abstract theoretical matters.

83  F  I find myself uncomfortable in the presence of unconventional or "peculiar" people.

FACTOR 4  Constructive utilization of fantasy and dreams

Item Key

61  T  At times the solution to a problem has occurred to me in a dream.

51  T  At times I have solved problems or created something (such as music or poetry) in my dreams.

24  T  Sometimes I seem to be able to receive thoughts from certain people I know well when they are not with me.

98  T  Solutions to problems or ideas for new projects come to me "out of the blue."

49  T  Fairly often when I am dreaming, I know I'm dreaming and feel that I have some control over my dream.

23  T  I have sometimes had a very strong impression that a certain thing has happened even though there seems to be no way I could really know.

4  T  I often invent formulae or schemes to organize my ideas or help me remember something.

78  T  People are intolerable who take "sacred" things in a light and humorous way.
FACTOR 5  Openness to unconventional views of reality vs. adherence to mundane material reality

Item  Key

113  T  It is possible that we had a previous existence of which we have no memory.

114  T  It is possible that our sense organs (e.g., eyes, ears, etc.) do not bring us our most important information.

31  T  I often have a strong feeling, which I cannot quite explain, that the situation I am in is one I have been in before.

63  T  It is possible that the mind can leave the body and experience things at a great distance from the body.

66  F  The idea that any of the flying saucers people have sighted come from outer space is pretty silly. They can all be explained in other ways.

64  F  It is definitely impossible for one person to read another person's mind.

67  F  Children should read stories about real things, not stories about fantastic things like fairies, dragons, and giants.

106  F  I have never had a strange or weird experience.

FACTOR 6  Indulgence in fantasy vs. avoidance of fantasy

Item  Key

48  T  Fairly often I dream in color.

100  T  Sometimes I wander off into my own thoughts while doing a routine task so that I actually forget that I am doing the task, and then find, a few minutes later, that I have completed it without even being aware of what I was doing.

52  F  I seldom have dreams at night.

12  F  I prefer not to spend much time dwelling on the past.
FACTOR 6

Item Key

27 F I try to keep all my thoughts directed along realistic lines and avoid flights of fancy.

44 F I prefer not to waste my time daydreaming.

FACTOR 7 Deliberate and systematic thought

Item Key

5 T I often feel a need to gather a lot of clear-cut facts before I come to a conclusion about something.

10 T I often feel a need to think things out very carefully before deciding what to do or how to react to something.

14 T Often when I have to choose between doing two different things, I try very hard to decide which is really more important in the overall scheme of things.

9 T I often enjoy learning some clear-cut concrete facts about people, historical events, or scientific matters.

FACTOR 8 Unrealistic fantasy content

Item Key

50 T I sometimes daydream about having some special power or about being able to do remarkable things that I cannot really do.

47 T In my daydreams I imagine myself performing all sorts of actions that I would never really carry out.

43 T I sometimes daydream about being in strange and distant places.
FACTOR 8

Item Key

21  T  I have often enjoyed simply sitting still and imagining the sound of music when there was actually no music being played.

FACTOR 9  Preference for predictable consistency vs. excitement

Item Key

111  T  At amusement parks I usually avoid rollercoasters, ferris wheels, and similar "thrill" rides.

88  T  I usually prefer to do things in tried ways rather than new and different ways.

65  T  I prefer people who are constant and predictable to those who are very changeable.

110  F  I would like to try parachute jumping.

82  F  I enjoy "wild" parties.

FACTOR 10  Need for involvement

Item Key

25  T  I have been so madly in love with another person that I have found it difficult to think of anything else for days at a time.

112  T  I have been so strongly in love with someone that I somehow felt that my own self was fading and I was at one with the beloved person.

73  T  At times I feel a painful sense of loneliness and want very much to share an experience with someone else.
FACTOR 10

Item Key

102 T At times I have focused on something so hard that I went into a kind of benumbed state of consciousness, or at other times into a state of extraordinary calm or serenity.

79 T I would like to get beyond the world of logic and reason and experience something new and different.

46 T I have sometimes imagined myself as a member of the opposite sex.

80 T I like to indulge in emotions and sensations with the feeling of just "letting go."

41 T For a period of time when I was a child, I pretended to play and do things with an imaginary companion.

91 F I avoid "putting people on" or doing things just to see the reactions of others.

FACTOR 11 Ability to relax personal identity and control

Item Key

34 T Sometimes when watching the movements of an athlete or a dancer, I feel a certain straining or movement, as if I were performing the action myself.

81 T I would enjoy a contest in a carnival in which I had to break a pile of dishes.

33 T When reading a story or watching a play or movie, I sometimes get so wrapped up in the actions or problems of a character that I almost forget where I am.

71 T At times when I have been sick or needed help, I have enjoyed having someone else take care of me.

69 T At times I have felt a momentary pleasure at seeing someone else get hurt or embarrassed.
FACTOR 12  Experience of alienation

Item  Key

74 T  At least once in my life I have thought about committing suicide.

39 T  I have sometimes had the feeling that my own life and the world around me were completely meaningless.

70 T  Sometimes I have felt a strange thrill at the thought of being forcibly controlled or even hurt by someone else.

72 T  I often feel a strong need to be completely alone.

68 T  At times I have felt a strong urge to do something shocking in a public gathering.

77 T  I have sometimes felt a strong physical attraction to certain other members of my own sex.

FACTOR 13  Experience of unconventional impulses vs. motivational restraint

Item  Key

75 T  Although I wouldn't actually do it, I can imagine myself killing another human being.

11 T  I often enjoy taking apart clocks and other mechanical things to see how they work.

76 T  I have sometimes imagined performing sexual acts that many people consider unnatural.

37 T  I sometimes feel annoyed by people who get very emotional about different things.

16 F  It is very important to me to feel that what I am doing is very worthwhile or meaningful.
FACTOR 14  Relaxation of conscious control of thought and action.

Item Key

17  T  I dislike having to spend much time planning things out in advance.

62  T  It is possible that there are species on other planets which are far more highly evolved than human beings.

60  T  I often start thinking silly or comical thoughts in situations where I am supposed to be serious.

87  T  It is often better to act upon one's feelings than upon a logically reasoned plan.

85  T  I think that our most intense experiences can be communicated in words to others.

FACTOR 15  Passive enjoyment of imagery

Item Key

97  T  I usually try to understand my dreams.

53  T  Most of my dreams seem to be meaningless.

FACTOR 16  Scientific analysis and speculation

Item Key

20  T  Right now, if I try, I can imagine the aroma of a broiled steak and experience it so intensely that it seems almost real.

13  T  I have sometimes enjoyed taking apart plants or parts of plants to see how they were composed inside.

86  T  Eventually everything will be explained by the laws of science.

32  F  I find some kinds of puzzles—mechanical, mathematical, etc.—very boring.
REFERENCES


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