AN ANALYSIS OF SELF CONSTRUCTS AND SELF VARIABLES

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Being a report of an investigation submitted as a partial requirement for the degree of Master of Arts in Psychology at The Australian National University 1965
CHAPTER 4

THE MEASUREMENT OF SELF VARIABLES
This chapter is designed to examine, by way of discussion and experiment, the bases of the theory verifying conclusions reported above. Each conclusion might be evaluated with reference to the experimental design involved, and some would be found wanting. An evaluation of the measuring instruments employed by these psychologists in search of evidence concerning self variables has more general implications, however, for the status of the self in psychology.

A wide range of such instruments is examined in a series of experiments. These experiments are designed to demonstrate the success with which predictions may be made about performances on these tests of self variables. A synthesis of a number of experiments reported above is repeated, but with the addition of some assessment of the formal characteristic of the measure used. An instrument designed to facilitate description of the self-concept is applied as a gauge of sex differences. The effects of the intervening variable of social desirability on one so-called measure of self-acceptance is examined, and a selection of such tests is intercorrelated.

Working with a preference for a phenomenological approach to self variables, the author attempts to find justification for the use of two test specifically. These are instruments which lay claim to measures of self-acceptance without delineating the self-concept which is held to be unique to each individual.
Problems of Validity and Reliability

Conventionally an evaluation of psychological measures is conducted in terms of the validity and reliability of the test scores. To define these terms the chief texts in the field are consulted:

Reliability coefficients are designed to provide estimates of the consistency or precision of measurements.... This two-fold purpose of reliability coefficients is reflected in the several methods which have been developed for estimating reliability. Methods which provide estimates based on a single sitting offer evidence as to the precision of the test itself: these include internal consistency estimates, such as those obtained by use of the split-half and Kuder-Richardson techniques when the test is given only once, as well as estimates based on immediate retesting, whether with the same form or an equivalent one. When a time interval of one or more days is introduced, so that day by day variability in the person taking the test is allowed to have an affect, we have evidence concerning the stability of the trait and of the examinee as well as of the test.

(Wesman, 1952, p.1)

The relevance of these constructs to measures of self-concept and self-feeling may be questioned to some extent. Firstly, the precision of a measurement, as defined by say the split-half technique, has little meaning beyond that of demonstrating that random halves of a test may be measuring the same variable. Equivalent form reliability is only appropriate if there happens to be an equivalent form of the test under consideration, an unusual circumstance. Thirdly, it has yet to be demonstrated that self-acceptance, for example, is a
variable of which stability may be expected, for if it is not then consistency of measurement may not be demanded. Is this is the case, it may be argued that such a variable is not accessible to, and indeed does not merit, measurement.

The concept of validity is most usefully discussed under the four headings provided by the A.P.A. committee listing technical recommendations for psychological tests:

a. Content validity is evaluated by showing how well the content of the test samples the class of situations or subject matter about which conclusions are to be drawn....

b. Predictive validity is evaluated by showing how well predictions made from the test are confirmed by evidence gathered at some subsequent time....

c. Concurrent validity is evaluated by showing how well test scores correspond to measures of concurrent criterion performance or status....

d. Construct validity is evaluated by investigating what psychological qualities a test measures, i.e. by demonstrating that certain explanatory constructs account to some degree for performance on the test. To examine construct validity requires both logical and empirical attack. Essentially, in studies of construct validity we are validating the theory underlying the test.


Content validity, then, would appear to approximate face validity, while predictive validity is irrelevant to the purpose of phenomenological self measures. Concurrent validity may lapse for want of a criterion for these tests. Construct validity of some of the measures in use may be taken as substantiated since it is true that many of the
hypotheses generated by the self theorists have been supported in experiments.

The concept of construct validity, as defined by the A.P.A., has been modified by Campbell (1960) who maintained that the concept is appropriate to a proportion of tests only, and encouraging confusion and reification. His modification, described as construct, trait or discriminant validity, involves suggestions for a series of experiments to be conducted with every test. The relationships between test scores and those from intelligence tests, being the best authenticated psychological measures we have, should be gauged, as should the influences of the variables of response style, social desirability and response acquiescence. Campbell made the important point that the validity coefficients for general psychological tests must be higher than those for self-ratings.

Several of the conclusions suggested above concerning self variables and validity were supported by Crowne and Stephens (1961), who emphatically maintained that criterion validation is a logical impossibility and that face validity for measures of self variables, relying as they do on introspections, should be accepted without question. They were particularly concerned with self-acceptance measures which they claim will be improved when self-acceptance is a clear
construct with its relationships with other variables defined, when representative items are used in tests (i.e. not an almost random selection of items the meaning of which to individual subjects is not known) and when the effects of social desirability on such measures is known.

**Intervening Variables in Self Measurement**

The variable of social desirability is one of some importance to psychologists at the present time. Edwards, who first formulated the concept, described it as a property of the test item such that it may be responded to in a culturally acceptable way (Edwards, 1957). Assuming the existence of social desirability, he has factor analysed test data and shown that interpretation is much clearer if his factor is controlled (Edwards & Horst, 1953). Several measures of his variable, however, seem to relate in different ways (Spilka, 1961). Messick (1960) analysing social desirability in the Edwards Personal Preference Schedule isolated nine factors, placing in doubt the unidimensionality of the social desirability variable. Relationships have been demonstrated between various measures named social desirability, however. Milgram and Helper (1961) suggested that self-ratings are modified when the social desirability of the items is rated by the subjects first, and Kenny (1956)
suggested that self-ideal discrepancies are influenced by social desirability. Estimates of the relationship of this variable to individual test scores are reported below.

Several other intervening variables significant in the measurement of self are similar to that of social desirability. For example, Mohsin (1955) examined the effects of ego defences in self-judgement by factor analysing a set of self-ratings from eighty-five subjects. The first factor he extracted was described as the tendency to be either extravagant or reticent in ratings, while the factor accounting for the second largest proportion of the variance is the tendency to overestimate on desirable and underestimate on undesirable self-ratings. So much for such variables within the individual: the question of the interaction between the subject and the stimuli remains. By way of answer Loehlin (1961) attempted to establish the similarity of meaning of six adjectival concepts used for self-ratings. He found that consistent individual differences in the meanings attributed to words by the subjects were as great as those differences in self-description.

Particularly critically examined are the measures used in experiments linking self-ideal congruence, self-acceptance and adjustment, such as those of Turner and Vanderlippe (1958). Characteristics of the self-ideal relationship
are not yet clear, although factor analysis does reveal sex differences (Guertin & Jourard, 1962). The relationship as established by present measures such as the Butler and Haigh Q-sort is not free of the effects of contaminating intervening variables such as the response acquiescence tendency and is not independent of measures of anxiety, notably the Taylor Manifest Anxiety Scale (Kinkler & Myers, 1963; Lipsitt, 1958). The logical justification for regarding the self-ideal score as a measure of self-acceptance is also questioned. Levy (1956) asked twenty-one subjects to sort for actual and ideal 100 self-referent and 100 home-referent items. He found that the correlation coefficient between the two sets of coefficients was +.70, indicating a certain amount of generality in perceived self-ideal discrepancies.

A Framework for the Evaluation of Measures

Of the measures devised to estimate change, acceptance, consistency, insight, importance and development of the self, those which may be described as purely self-description, such as the 'Who Are You' technique and the essay approach, are not so vulnerable to the criticisms outlined above. They are, however, very open to misuse in that it is difficult to devise objective scoring systems for such techniques. The scoring of the so-called self-regard measures is more
acceptable to psychologists, so that it is after the formal characteristics of the test are established that the problems of validity become apparent. Such tests differ widely in these characteristics, ranging through adjective check lists, the semantic differential technique, Q-sorts, attitude scales, personality inventory scales of self-acceptance, and abstract measures such as those of Shlien (1961) to estimates of non-phenomenal self-regard in response to techistogram presentations of the handwriting and voice of the subject. Wylie (1961) has listed eighty-three measures of self-regard which would fall into these categories, for 66% of which she claimed that there is no information of reliability in published sources and that for 88% of the tests there is no published information on construct validity for inferring the phenomenal self.

The problem of validation of measures of self-variables is a difficult one and one which is in many ways unique in the field of psychological test construction. The assumption of the existence of a self-concept with concomitant feelings cannot be made without question. In view of these considerations the author proposes to work within the following frame of reference. The individual is defined as consisting in an array of behaviours, including needs, values, motivations, and traits as well as his observable performance which he
regards as peculiar to himself, i.e. his own. He will have some evaluative attitude to this array which may be named self-regard, self-evaluation, self-esteem or self-acceptance. This broad description of the construct appears to be amenable to operational definition, the content of the measuring instrument being selected to some extent according to the theoretical framework in which the test constructor is working. In other words, as long as he has a good sample of items, he can simply ask the subject how he feels about himself in this context. Content validity, then, is important; indeed, face validity may be accepted as having some meaning. Construct validity is to be tested in terms of theoretical predictions borne out by the test scores, while the criterion for concurrent validity is still lacking unless it be found in the isolation of mathematically pure variables through factor analysis.

Validity, as conventionally defined, may not, in the final analysis, prove to be the most appropriate yardstick against which to set self-concept scores. The primary consideration of the usefulness of tests may be more appropriate at this stage of the development of psychological measurement. A measuring instrument must be shown to fulfill at least one of two requirements in order to be considered useful. Firstly, its scores may agree with those of another
test to indicate some common phenomenon being measured, thus contributing to a definition of that phenomenon. Secondly, the scores may successfully discriminate between populations of subjects. If the latter criterion is achieved, as for example if a test differentiates between those individuals likely to profit from a certain form of therapy and those who are less likely to do so, then although the nature of the variable or variables measured is not known the test is useful. Individual tests must be examined in detail, however, before acceptance on these criteria is acknowledged.

Examination of the empirical validation of self theories reveals the use of a large number of measurement techniques which consist simply in a number of items selected solely on their face validity to which the subject must respond in a variety of ways set down by the experimenter. These tests demonstrate few of the formal characteristics of a psychological test. Examples of such instruments are found in the experimental reports of McQuitty (1950), Zimmer (1954), Spivack (1956), Webb (1956), Child, Frank and Storm (1956) and Manis (1958). The first experiment reported by the author is, in essence, an attempt to employ similar techniques to those of these psychologists. The second experiment parallels those which, assuming the existence of a self-concept, have employed purely descriptive instruments and lack a precise
definition of the variable to be measured. The aim of this experiment is to contribute to the validity of the 'Who Are You?' technique by demonstrating sex differences in agreement with those previously reported.

The remaining experiments are designed to examine measures of the variable of self-acceptance. Campbell's (1960) suggestion of construct validity in the form of the effect of social desirability on scores is applied to the Index of Adjustment and Values. The reliability and validity of the Shlien Abstract Apparatus measure of self-acceptance is investigated in the fourth experiment. A sample of self-acceptance measures are then intercorrelated, two Index of Adjustment and Values scores being employed as marker variables to aid in the interpretation of results. Repetition of a relationship established from analysis of this data is finally attempted in an investigation of the structure of the Ideo-Q-Sort self-acceptance score.

These experiments are concerned with definition of the phenomena being measured. In other words, the first method of establishing the usefulness of a measure is employed. If these experiments are not successful in achieving this aim, the method of discrimination will be applied.
Experiment I

This experiment was conducted in two parts: the first investigating the reliability of the test devised and the second examining its validity and the performance of the test items in relation to those of similar tests reported in the literature.

Aim

The reliability of a set of items selected on the basis of face validity for a measure of self-concepts in the area of social compatibility may be expected to attain certain standards both in terms of split-half reliability and more detailed item analysis. The aim of this experiment was to establish such reliabilities for the rating scale which was as arbitrarily devised as some of those reported above. It consisted of twenty-four statements directed at both aspects of social compatibility, the extent of the subject's acceptance of others (for example, X ..... criticizes his schoolmates) and others' acceptance of him (for example, X ..... is fun to be with). Subjects were asked to respond on a five-point scale according to the frequency with which each statement is true of X (in this case the self, but it could be the ideal or some other person) ranging from always to never. See Figure 4 of the Appendix for a copy of the test with scoring key. Undesirable items of the test were
scored in reverse, the final test score being the sum of all ratings. Test-retest reliability was not examined as it was considered to be an inappropriate concept to apply to this measure.

Hypotheses

Null hypotheses tested were as follows:

a. as to split-half reliability, that there is no significant correlation coefficient between total scores of random halves of the test of the self-concept of social compatibility.

b. as to item analysis, that there is no significant relationship between scores on each item and total scores on the test of social compatibility.

Method

The subjects for this analysis were 23 anonymous females, by occupation nurses, with a mean age of 17.8 years and an age range of 17 to 20 years. They were given the test form as described with instructions to fill it in appropriately substituting 'I' for 'X' making a self-rating scale. There was no time limit. Data was collected for the first hypothesis \( H_0a \) by selecting odd and even items to form the two halves of the test. Since the items were randomly ordered on the test form, this procedure amounted to random distribution. It was necessary to dichotomise the data for individual
items in order to test \( H_0b \). For Items 1 to 20 the division lay between ratings 3 and 4, so that the responses of always, often and sometimes were distinguished from those of rarely and never, with appropriate reversals for negative items. Items 21 to 24 were examined in their natural trichotomy against a trichotomy of total scores.

Analysis of Data

Such manipulation of data was necessitated by the methods of analysis employed. Pearson's product-moment correlation coefficient might have been employed for the split-half reliability measure if the assumptions of straight line regression between the variables and homoscedasticity could be made for the data (Guilford, 1956). The distribution of the scores was such that the assumptions could not be made and the size of the sample was inadequate; therefore Spearman's rho was employed as a substitute and tested for significance. The Spearman - Brown correction formula gauged the reliability of the total test. The biserial coefficient of correlation was employed for item analysis of items 1 to 20, since the population distribution of scores was in all probability normal and the sample scores were readily dichotomized (Guilford, 1956). The significance of these coefficients was computed by a t-ratio. \( \chi^2 \) was computed to estimate the relationship between items 21 to 24 and total test scores to form coefficients of contingency (Guilford, 1956).
The results of the experiment may be summarized to state that, with a rho value of +.559 significant at the .01 level (Siegel, 1956, Table P), the corrected split-half reliability coefficient of the test was +.719. To continue this form of analysis, of the relationships of the twenty-four items with the total test scores only those of items 2, 5, 7, 8, 12, 14, and 20 were significant. See Figure 5 of the Appendix for a summary of results.

Discussion

H₀ a was refuted, but the resulting reliability coefficient was below the standard usually demanded (+.900). Of the twenty-four hypotheses subsumed under H₀ b only one third were refuted. Assuming that the test was measuring a unidimensional variable, it appears that two thirds of the items could be disposed of since they do not contribute to measurement of the variable under consideration.

Aim

The second part of this experiment was concerned to demonstrate that this variable which the test measured was similar to that measured by other instruments such as that used by McKenna, Hoffstaetter and O'Connor (1956). The self-concept, the ideal self and the non-phenomenal self-concept were measured. The aim was to compare such measures, drawn from a selected area of behaviour, social compatibility, and
examine their interrelationships as well as their individual relationships with what objective evidence of behaviour in that area was available. Friedman (1955) examined these three concepts by a Q-sort of eighty items, basing his measure of the non-phenomenal self on the hero assumption of projective tests. Since Lindzey and Kalnins (1958) have established that heroes of Thematic Apperception Test stories are often identified as being very similar to the self, a similar measure was employed here.

Hypotheses

Null hypotheses examined were:

a. That there is no significant correlation coefficient between self and ideal scores on a rating scale of social compatibility.

b. That there is no significant correlation coefficient between self and fantasy hero scores on this rating scale.

c. That there is no significant correlation coefficient between self and rating by friend scores on this rating scale.

d. That there is no significant correlation coefficient between self-rating scores and sociometric scores.

e. That there is no significant correlation coefficient between ideal and fantasy hero scores on the scale of social compatibility.
f. That there is no significant correlation coefficient between ideal and rating by friend scores on this scale.

g. That there is no significant correlation coefficient between ideal rating scores and sociometric scores.

h. That there is no significant correlation coefficient between fantasy hero scores and rating by friend scores on the rating scale.

i. That there is no significant correlation coefficient between fantasy hero rating scores and sociometric scores.

j. That there is no significant correlation coefficient between rating by friend scores on the test and sociometric scores.

**Method**

The subjects for the experiment were 32 boys in the age range 13 to 14 years, with a mean age of 13.6 years. They formed a class for two terms of the school year prior to the time of testing, and so might be taken as the members of a group who can make sociometric choices and ratings of friends on the scale of social compatibility based on a reasonable amount of experience of interaction.

The experiment was conducted in two sessions. During the first session subjects were asked to rate themselves on
a five point scale for a series of statements relating to social compatibility, i.e. 'I' was substituted for 'X' in the test of social compatibility (see Figure 4 of the Appendix). They were then shown projections of four pictures consecutively, A1, B1 and B3 from the Symmonds Picture-Story Test and BG 10 from the Object Relations Technique (see Appendix, Figures 6, 7, 8, and 9) and asked to write a story for each of them. There was a time limit of five minutes for the showing of each picture and the writing of the story. Next, each subject responded to a sociometric test devised according to the principles laid down by Northway (1953) and later elaborated (Oeser, ed. 1960), requiring the choice of five boys in the class that they would like to have sit next to them. Finally, they rated the boy they would each like to be, either imaginary or a specific boy if they preferred, for the series of statements, i.e. 'my ideal' was substituted for 'X' in the test of social compatibility. During the second experimental session each subject rated a friend on the test. Each of these friends had been chosen by the subject in the sociometric test, and it was possible to collect reciprocal ratings for 20 mutual pairs out of the total 32 subjects. As a last task each boy chose the hero from one of his four stories which seemed to be most like himself and rated him on the social compatibility items, i.e.
'he' was substituted for 'X' on the test form. These procedures provided the scores which were related in the hypotheses, comprising sums of ratings for self, ideal, non-phenomenal self and friend and a sociometric score of the total number of choices received by each subject.

Self-rating scores showed a moderate range for this sample ($\bar{X} = 78.8$, $S = 9.3$), slightly larger than that for the sample of nurses ($\bar{X} = 79.1$, $S = 7.2$).

**Analysis of Data**

Since the distribution of sample scores on each variable was somewhat skewed, Spearman's rho was applied as a measure of association. The resulting coefficients and their levels of significance are shown in Table 3.

<table>
<thead>
<tr>
<th>H0</th>
<th>Measures Related</th>
<th>Rho</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Self - Ideal</td>
<td>+.405*</td>
</tr>
<tr>
<td>b.</td>
<td>Self - Fantasy hero</td>
<td>+.363*</td>
</tr>
<tr>
<td>c.</td>
<td>Self - Rating by Friend</td>
<td>+.388*</td>
</tr>
<tr>
<td>d.</td>
<td>Self - Sociometric score</td>
<td>+.349*</td>
</tr>
<tr>
<td>e.</td>
<td>Ideal - Fantasy hero</td>
<td>-.184</td>
</tr>
<tr>
<td>f.</td>
<td>Ideal - Rating by Friend</td>
<td>+.060</td>
</tr>
<tr>
<td>g.</td>
<td>Ideal - Sociometric score</td>
<td>+.218</td>
</tr>
<tr>
<td>h.</td>
<td>Fantasy hero - Rating by Friend</td>
<td>+.008</td>
</tr>
<tr>
<td>i.</td>
<td>Fantasy hero - Sociometric score</td>
<td>+.012</td>
</tr>
<tr>
<td>j.</td>
<td>Rating by Friend - Sociometric score</td>
<td>-.014</td>
</tr>
</tbody>
</table>

* Significant at the .05 level (Siegel, 1956, Table B)

Table 3. Values of Coefficients relating Self Measures.
Discussion

These results were in general as expected from study of the relevant literature. The significant relationship, moderate and positive, between self and ideal ratings (H\textsubscript{o}a) corresponds to the coefficient of +.55 which Bills (1958), for example, found between his two scores with similar face validity in the Index of Adjustment and Values. Rejection of the second hypothesis (H\textsubscript{ob}) is in line with the coefficient of +.375 which Friedman (1955) found representing the association between phenomenal and non-phenomenal self-concepts. Significant positive relationships between self-ratings and relatively objective rather than subjective measure of the same variable (H\textsubscript{oc} and H\textsubscript{od}) would also be predicted by theorists such as Rogers in a well adjusted group of subjects, information from the environment being well-integrated into the self-concept. Two-tailed tests of significance were used by the author in the belief that at the present time the psychologist has not established a sufficient basis of knowledge on which to predict direction and use a one-tailed test. However, had the latter been used, predictions of direction for the four significant coefficients would have been upheld. Neither is the lack of rejection of the other null hypotheses surprising, except in the case of the last (H\textsubscript{oj}) considering that both variables are related
to self-ratings. Although friend's concept of the social compatibility in terms of the test ratings and an objective measure of one aspect of this variable are not related, neither of these measures was necessarily made by the test in question which claimed validity as a measure of aspects of the self-concept only.

The conclusions drawn from this experiment are not encouraging. The split-half reliability of the social compatibility rating scale is not satisfactory. The unidimensionality of the construct measured is in doubt since only one third of the test items correlated significantly with the total score. A very much larger pool of items is needed in order to select appropriate items more rigorously. But according to what criterion should they be selected? It has been suggested that face validity is sufficient for a test of self-description, but face validity for what variable? It is true that the test has been described as devised to estimate the self-concept in the area of social compatibility, but against what criterion has it been shown that such a variable exists let alone that it was measured by the test under consideration? In circuitous ways suggestions have been made that the test is a valid measure of such a variable, but it has proved difficult to apply any of the conventional measures of validity. In sum, this rating scale for social
compatibility is probably no more and no less useless as a measure of self variable than are many of the tests reported by Wylie (1961). Examination of better authenticated tests is suggested.

Some Instruments for Description of the Self-Concept

Certainly there are a large number of tests of self variables which may be examined, although few of them may be said to be well authenticated. Attempts to provide instruments through which the self-concept may be described have proved particularly difficult as even face validity is not easily established for such a purely phenomenal variable.

Some such descriptive instruments do not aim at even the phenomenal self-concept. Beloff and Beloff (1959) devised a measure of unconscious self-evaluation using a stereoscope. The subject was presented with three double faces in a stereoscope; the first comprising two randomly selected strangers, the second two strangers whose photographs the subject had previously rated as being equal to himself in attractiveness although his own photograph was not shown to him, and the third comprising his own picture and that of another stranger whom he had previously rated as being equal to himself in attractiveness. Data from the test was eliminated if the subject commented on recognition of himself, but this procedure does not entirely control the variable of
conscious evaluation. This places in doubt the authors' conclusion that the demonstration that subjects prefer the self composite picture supports the theory of favourableness of unconscious judgements. Further doubt has been cast on such a conclusion by the work of Taft (1965).

Some general psychological tests, often of the projective variety, have been adapted to provide self-concept descriptions. A case in point is the work with the Draw a Person Test, based on the finding that such drawn figures tend to resemble the actual self (Kamaro, 1960). Bodwin and Bruck (1960) defined the self-concept in terms of self-confidence, freedom to express appropriate feelings, liking for oneself, satisfaction with attainments and feelings of personal appreciation by others. These aspects were represented in the modified test scoring by drawing characteristics such as reinforcement, erasures, sketchy lines, transparency, incompleteness and opposite sex identifications. Validation of the new scoring scheme was based on correlation with the results of psychiatric interviews.

Newstrand's Eavesdropping Question (1958) is also regarded as a projective technique. She asked her subjects 'if you were eavesdropping on a conversation about yourself, what would you most like to hear said about you? ... And what would disturb you the most to hear?', and found that the
responses could be grouped into two main categories. These were the responses of one group of people who primarily seek love and acceptance, and another group who are mainly guided by a wish for power. Within these headings finer categorization was possible. The main advantage of this instrument is that it is quick to administer and easily incorporated in an interview, and is probably helpful in determining the self-image and in ascertaining the main drives of the subject. The formal properties of the instrument as a psychological test have not been examined.

Other methods of stimulating responses by asking questions have been used more consistently. Boernstein (1954) asked his subjects to paint a verbal self-portrait. A number of psychologists employ the question 'Who Am I?' to which twenty answers are required. Kuhn and McPartland (1954) examined the importance of religious responses to the question from 288 students. More recently Kuhn (1960) examined the data from 1185 subjects ranging from 7 to 25 years. He noted differences in response categories according to professional training. Older subjects gave more responses in the categories of group membership, age, sex and educational attainment, and more females gave sex and kinship responses than males. Grossack (1960) presented mental patient norms for response categories. Responses do not, however,
differentiate between college students with superior, average or failing grades (Gustav, 1962). There is a consistent relationship between response to the 'Who Am I?' question and 'What is X...?', where 'X' is a social group to which the subject belongs, in that those subjects describing themselves in terms of directly understandable social and classificatory attributes describe their groups in the same way. According to the reporter of this finding (Garretson, 1962), these results support the assumption that the self is the core concept in the individual's organization of his environment. Research with the test so far is still concerned with the establishment of norms.

Apparently almost identical with this test is one formulated by Bugental and Zelen (1950), in which the question asked is 'Who Are You?' and only three responses are requested. An experiment devised to check some of the claims of this technique, one concerned purely with self-description, is reported.

**Experiment II**

Administration of the W.A.Y. is not a demanding task. It is by its scoring scheme that the test must stand, so that the determination of categories for scoring is the most formidable task which faces the psychologist who wishes to use the test. Face validity of responses must be accepted
when the instructions call simply for self-description, but the responses must be summarised into some useful form.

In their first report of the technique Bugental and Zelen (1950) tentatively suggested eleven categories for content analysis: name, personal pronoun, socio-scientific responses tending to deny the uniqueness of the subject, sex, age, occupation, family status, social status, neutral-geographic, neutral-nationality, and affective toning. Mason (1954), interested in the effects of age on responses, used a similar set of categories except for the necessary addition of longevity, and the useful categories of group membership and unit and the division of affect into positive and negative tonings. Bugental and Cunning (1955) added a duplicate or repetition category, while the contributions of Tolor (1957) included a concept of uniqueness and a category for incomplete responses. Information on the characteristics of these categories has been reported in terms of response percentages, representing frequency of usage. The category of name has been constantly used especially by younger subjects who also mention their sex, and are less likely to describe themselves in terms of the personal pronoun and occupation and use less affective toning than older subjects (Bugental & Zelen, 1950). Sex differences have been demonstrated for the categories of family and age with females
preferring these two categories, and for that of group membership where the males predominate (Bugental & Gunning, 1955). Both of these studies testified to the stability of the categories and the criteria used in their selection. Pathological discriminations are also made, and are reported in another context.

For this experiment one consideration, then, was to establish a set of categories for the scoring of responses. The author adopted the suggestions of the writers quoted with some modifications. The complete list of categories with definitions is available in the Appendix (Figure 10). The chief modification of the system lay in making a distinction between content categories, those categories describing the affect of the statement and the categories set for inadequate responses which were incomplete or repetitious. Of the content categories social relations, personality characteristics and physical characteristics were included on the intuitive grounds that these are areas likely to be of importance to the subject and were obvious omissions from the other systems. A religious category was suggested by the work of Kuhn and McPartland (1954) with the 'Who Am I?' question, and the category for comments on the immediate situation was the result of experiences of the author with subjects who are asked open rather than closed questions in
a pencil and paper test. Affect was divided for four types of responses since this area, again from experience with different tests, appeared as one which might act as a good differentiator.

Aim and Hypotheses

Of the differentiations made by other experimenters those between the sexes are of particular interest. The aim of this experiment was to demonstrate sex differences within responses to the W.A.Y. Null hypotheses tested were identical for each of the sixteen content categories, four affect categories and two performance categories for scoring responses to the W.A.Y.; namely, that there is no significant difference in the proportion of male and female subjects using each W.A.Y. category.

Method

The subjects involved were 15 male and 15 female students randomly selected from psychology classes, having a mean age of 18.2 years and an age range of 15 to 25 years. They were presented with a sheet of paper headed by the question 'Who Are You?' with spaces for seven answers. The decision to request seven responses was based on the assumption that a compromise between the very small response range of the W.A.Y. and the very large one of the W.A.I. was preferable. This decision had its disadvantages in that comparison of results
with reports of W.A.Y. results was rendered impossible except by a tedious and doubtful method involving the use of proportions. When the test was completed, to the satisfaction of the subject as there was no time limit, a frequency count was taken of the number of subjects for each category who gave at least one response that fell into that category. This again was a departure from common use which was necessary in order to test a hypothesis of sex differences to which the frequency of response of any one individual is irrelevant. To include such scores would be misleading. The stability of the scoring categories used in this experiment was demonstrated by the rank order correlation coefficient run between categorizations made by two independent judges over all the categories (rho = +.864  \( p = <.01 \)).

**Analysis of Data**

To facilitate the analysis of data, a 2 X 2 contingency table was drawn up for each category. The number of subjects giving responses in that category and the number not giving that response were plotted against the sex dichotomy. With such discrete data derived from measures of variables with suspect sampling distributions, a nonparametric test was indicated. In view of the independence and the small size of the samples, the Fisher Exact Test was selected to examine the hypotheses of differences in proportion. A one-tailed
standard was applied, and with a probability level set at .05 for only two categories was the null hypothesis rejected. Both of these were affect categories: more women than men scoring in the positive and ambivalent affect categories.

Discussion

So it appears that more women than men allow positive and mixed feelings to enter into their self-descriptions. It is interesting that no other sex differentiations were demonstrated in this experiment, and that those found by Bugental and Gunning (1955) were not substantiated. In so far as such differences can be predicted, and in so far as two experiments are expected to support the same hypotheses despite differences in data collection, the first step in determining the validity of the W.A.Y. by establishing scoring categories was a shaky one. Again a round-about method of estimating validity was used because selection of a criterion measure for self-description was impossible. It has been suggested above that before a test like the W.A.Y. may be used the existence of a self-concept must be assumed. The alternative assumption that the individual experiences some feeling towards his behaviour involves fewer concessions and suggests an examination of measures of self-acceptance.
Measures of Self Acceptance

Of the studies reported to demonstrate concomitants of self-acceptance many have involved the Q-sort measure. As evolved by Stephenson (1953; 1961), the measure is based on the statistical technique of running correlations between responses of one individual, rather than correlations over persons or time. Block (1961) examined the Q-sort method and stressed as one of its advantages that it is convenient for observer evaluations because the language used is consistent. He was also concerned with the advisability of requiring a forced distribution of items. Evaluation of a specific measure is more profitable, however, and the Butler and Haigh Q-sort (1954) is selected as the most widely used. The procedure for this method is as follows. The subject is given a set of one hundred self-referent items, for example 'I am disturbed, ... tolerant ... or impulsive' and asked to sort them according to several sets of instructions involving the self as seen today, the person he would most like to be, and, in some cases, the ordinary person. For each phase the items are sorted into nine piles of a certain size so that a quasi-normal distribution results, but it is important to note that Wylie (1961) has objected to this procedure on the grounds that most subjects prefer a U-shaped distribution. The test may also be criticized on
the basis of its item sampling since there is no way of knowing how representative the statements are of the population of self-characteristics of each individual subject.

Wylie (1961) has been particularly concerned with the reliability and validity of the Butler and Haigh Q-sort. She pointed out, in reference to the consistency of the measure, that the self-ideal correlation does differentiate between subjects, that a test-retest calculation of rho from 16 control subjects gave a reliability value of .78 although there is no way of knowing what contributions individual self and ideal sorts make to this coefficient, and that there is some information on the stability of group mean self-ideal correlations across time. By way of validity for the test as an index of self-esteem she reported four sets of results which lend support to such validity: correlations with other self concept measures although not the common ones, demonstrated differences between client and control subjects, significant increases in self-ideal correlations between pretherapy and posttherapy sorts and support of predictions made from theories of self congruence and adjustment. The criticism common to many of these tests may be made of this Q-sort: that there is no clear definition of the construct to be measured.

Vernon (1964) suggested another weakness of Q-sorts, that is that they encourage an artificial introspective
attitude. He supported the use of the semantic differential technique as proposed by Osgood, Suci and Tannenbaum (1957) and as examined by Madden (1961) for a more indirect approach. A wide variety of concepts may be examined, including self and ideal, by rating on a series of bipolar adjectival scales. Smith (1960) employed this technique in a factor analytic study of the self-concept using seventy bipolar adjectives. From his analysis he derived five major dimensions of the self-concept. These aspects would be determined to some extent by the selection of adjectival scales which the experimenter made.

Adjectives, as test stimuli, are popular among devisers of measures of self-acceptance. That devised by Buss and Gerjuoy (1957) was composed of a number of groups of adjectives each of which is relevant to various personality dimensions. These dimensions include verbal and physical hostility, anxiety, sociability, dominance and self-esteem. Adjectives within the groups were scaled for intensity and abnormality by psychologists and weights were assigned to each word. The intensity weights are employed in self-acceptance scoring, for which the scale is filled out for self and ideal. The discrepancy score is the algebraic difference between the weights of the adjectives checked on the two administrations. The validity and reliability of this
score as a measure of self-acceptance remains to be demonstrated.

The Adjective Check List (Gough, 1960) is a similar but better authenticated technique. It comprises some 300 adjectives of which the subject checks those which he feels are self-descriptive. Two scores have been obtained by Crowne, Stephens and Kelly (1961): self-acceptance and self-criticality. These scores are expressed as the ratio of favourable or unfavourable adjectives checked to the total number of adjectives checked. An impressive array of evidence for the reliability and validity of such scores was reported in the manual (Gough & Heilbrun, 1965). Test-retest correlations over the total twenty-four scales over a ten week period range from +.46 to +.90, and over a six months period from +.31 to +.75. Relationships of test scores to response acquiescence and social desirability measures, as suggested by Campbell (1960), were examined in the study reported by Heilbrun (1958). Acquiescence was controlled for by allowing for frequencies of responses according to sexes. Significant correlation coefficients were drawn between the scales and an Edwards social desirability measure, but the authors pointed out, with some justification, that such correlations are to be expected and, unless very high, do not necessarily preclude good validity for the test as a measure of a certain variable.
The major concern with validity here is with that of the A.C.I. when used in self and ideal-self studies. A phi coefficient calculated between the two check lists serves as an index of correspondence, and for a sample of adult males this score ranges from +.01 to +.85, with a mean of +.50 and a standard deviation of +.21. Adjectives checked significantly more frequently by groups of high and low scoring subjects are detected and indicate that those with high coefficients see themselves in a generally healthy and positive way while those scoring poorly use more negative adjectives such as confused, hostile, slow and arrogant.

Browfain (1952) has developed an index of self-evaluation which he has referred to as the stability of the self-concept. On each of twenty-five items the subject rates himself four times: for his most favourable realistic self-concept, his most unfavourable realistic self-concept, his realistic private self-concept and his most accurate estimate of himself as he believes others see him. The stability score is obtained by subtracting positive from negative self-concept ratings and summing across all items regardless of sign. This score has a split-half reliability of +.93, while it is related to some Rorschach sign of self-acceptance (Lafon, 1954). Cowen (1956a) found that if the negative self-concept ratings are made alone they differ from those
made for the positive self-concept, reflecting some doubt on
the meaning of the scores. He found no sex differences
under either conditions.

Other measures of self-regard, such as those of Phillips
(1951) and Berger (1952) used in studies reported above, are
employed by self psychologists. For few, however, have
attempts been made to examine their formal characteristics.
Wylie (1961) pointed out these inadequacies with gusto,
although she did allow the omnibus questionnaire of Berger
some slight evidence of reliability and validity as a measure
of self-acceptance while the similar scale of Phillips were
correlated to the extent of +.73 with it. Such measures are
indeed in their infancy. Of all the instruments reviewed
by Wylie as measures of self variables, it is probably only
the Bills Index of Adjustment and Values which may lay
claims to being established as a test of some psychological
respectability.

Experiment III

Use of the I.A.V. was first reported by Bills, Vance
and McLean in 1951. A test manual has been published subse-
quently (Bills, 1958). The test form (see Figure II of the
Appendix) contains a list of 49 trait words for each of which
the subject is required to answer three questions in terms
of five point rating scales. The questions are how often
are you this sort of person (Column I), how do you feel about being this way (Column II), and how much of the time would you like this trait to be characteristic of you (Column III)? Two self-regard measures are derived from this process, Column II giving a direct estimate of self-satisfaction and the discrepancy score of self-ideal (III - I, or D) being regarded as a measure of self-acceptance. The test as it stands is filled in for self-description although there is provision for responding on behalf of a generalized other which is rarely used.

Evidence for the reliability of the self-rating test has been provided in the manual, as shown in Table 4.

<table>
<thead>
<tr>
<th>Reliabilities</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split-half</td>
<td>+.53</td>
<td>+.86</td>
<td>+.77</td>
<td>+.88</td>
</tr>
<tr>
<td>Test-retest (6 weeks)</td>
<td>+.90</td>
<td>+.83</td>
<td>+.92</td>
<td>+.87</td>
</tr>
</tbody>
</table>

Table 4. Reliability values as reported for the I.A.V. (Bills, 1958).

Although the test-retest results show a surprising degree of stability over the six week period, the split-half reliabilities do not meet the usual required standard of +.90. Whether such a standard of internal consistency should be required through items which are selected to sample as many aspects of the self-concept as possible is questionable, so
that it may be that these values are acceptable under the circumstances. Intercorrelations of the scores also reflect the structure of the test. Bills based these estimates on a sample of 300 subjects (see Table 5).

<table>
<thead>
<tr>
<th></th>
<th>II</th>
<th>III</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>+.90</td>
<td>+.55</td>
<td>-.83</td>
</tr>
<tr>
<td>II</td>
<td>+.34</td>
<td>-</td>
<td>-.67</td>
</tr>
<tr>
<td>III</td>
<td></td>
<td></td>
<td>-.15</td>
</tr>
</tbody>
</table>

Table 5. Intercorrelations of I.A.V. Scales (Bills, 1958).

On the content validity of the I.A.V. the only comment must be a description of how the trait words were selected. A sample of 124 words were drawn from the Allport and Odbert study (1936) and 49 of these were chosen on the basis of the finding that variations in ratings for these trait names were no greater than the average for two groups of subjects. So much is clear, but on what basis the original 124 words were selected as representing different aspects of the self-concept and having meaning for each subject is not clear.

Concurrent validity is, of course, suspect, in that the only criteria available are the tests already examined and found wanting. However the findings of Omwake (1954), Cowen (1956) and Crowne, Stephens and Kelly (1961) are worth reporting (see Table 6). The Index of Adjustment and Values,
<table>
<thead>
<tr>
<th>I.A.V.</th>
<th>G-sort (Butler &amp; Haigh)</th>
<th>Buss &amp; Gerjuoy Adjectives</th>
<th>Adjective Check List (Gough)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
<td>Males</td>
</tr>
<tr>
<td>II</td>
<td>-0.35*</td>
<td>-0.58*</td>
<td>-0.35*</td>
</tr>
<tr>
<td>D</td>
<td>-0.37*</td>
<td>-0.65*</td>
<td>+0.32</td>
</tr>
</tbody>
</table>

(After Crowne, Stephens & Kelly, 1961)

<table>
<thead>
<tr>
<th>I.A.V.</th>
<th>Brownfain Inventory</th>
<th>C.P.I.</th>
<th>Phillips S.A.I.</th>
<th>Berger S-acc Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SC</td>
<td>SC</td>
<td>SSC</td>
<td>Sa</td>
</tr>
<tr>
<td>II</td>
<td>+0.43*</td>
<td>+0.44*</td>
<td>-0.06</td>
<td>+0.23</td>
</tr>
<tr>
<td>D</td>
<td>-0.43*</td>
<td>-0.62*</td>
<td>+0.07</td>
<td>-0.08</td>
</tr>
</tbody>
</table>

(After Omwake, 1954, and Cowen, 1956b)

+ Significant at .05 level.  * Significant at .01 level.

Table 6. Evidence of the Relationships of the Index of Adjustment and Values with other Similar Tests.
actually scales II and D, has been compared with the Butler and Haigh Q-sort, the Buss and Gerjuoy weighted adjective scores, the Gough Adjective Check List, the Brownfain Inventory, the Phillips and Berger attitude scales and the Self-acceptance scale of the California Personality Inventory, the last-named being examined in Experiment V reported below. Although in some cases the relationships demonstrated were significant, none of them were large. It would appear that none of the tests devised with aims similar to those of the I.A.V. are measuring an identical variable although there is some small degree of agreement between test scores. Concurrent validity of the Index of Adjustment and Values must yet be given a verdict of not proven.

Comparison of I.A.V. scores was also made with interpretations from the Rorschach Inkblot Test. Bills (1953a; 1954) found that Rorschach signs of depression, such as the number of W response, the ratio W:M, the P+ and the percentage of responses made to the last three blots, differentiate high and low D scorers in the predicted direction. These reports may be regarded as evidence of the construct validity of the test.

A variety of experiments have supplied similar evidence. Roberts (1952), by measuring reaction time of free associations to I.A.V. words and comparing these in the light of the size
of the ideal–self discrepancy for each word, established that such ratings on the I.A.V. are indicies of emotionality. Bills (1953b) showed that changes in trait ratings are accompanied by changes in the emotionality connected with the traits, and in 1954 reported that a correlation between judges ratings of self-acceptance based on interviews correlated highly with the self-satisfaction (II) score. In his manual (1958) he claimed that a group of students with high scores on II are distinguished from those with low scores in having higher group status, being more responsible, more efficient intellectually and more dominant and participating in more social events. They also have fewer psychosomatic complaints, fewer contacts with counsellors, a higher general psychological adjustment, better preparation for college work and higher scores in achievement tests.

A useful definition of the test scores is gained from the factor analysis which Mitchell (1962) carried out with scores on Column I. The self-concept, in terms of factors, consists in freedom from anxiety, motivation for intellectual achievement, offensive social conduct, social poise and self-confidence, warm-hearted attitude to others, impersonal efficiency and dependability. Mitchell drew attention to the parallel between three of these factors and three of Callell's factors, factors A and C (maturity and sociability) on the 16PF and the Introversion–Extraversion factors.

The relationship of social desirability measures to Index of Adjustment and Values scores has received some
attention. Cowen and Tougas (1959) found almost perfect correlation coefficients between self and ideal ratings and their measure of social desirability. Bills (1959), however, criticized their procedure severely on the grounds that the experimenters employed mean scores in their statistical analysis thereby ignoring the variability of the raters. Spilka (1961) designed his experiment more skilfully, but his measures of social desirability were more open to doubt. These were three in number and consisted of the Edwards item intercorrelation measure, the Edwards Social Desirability Scale and each subject’s estimate of how the perfect person would fill in the I.A.V. rating scales. The resulting intercorrelations are recorded in Table 7.

<table>
<thead>
<tr>
<th></th>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edwards Item r</td>
<td>+.901</td>
<td>+.971</td>
<td>+.570</td>
</tr>
<tr>
<td>Edwards S.D. Scale</td>
<td>+.364</td>
<td>-.095</td>
<td>+.266</td>
</tr>
<tr>
<td>Perfect Person</td>
<td>+.409</td>
<td>+.460</td>
<td>+.081</td>
</tr>
</tbody>
</table>

Table 7. Relationships of I.A.V. measures with Social Desirability Estimates (Spilka, 1961).

Aim

The effect of social desirability on the I.A.V. appears to be considerable, although there is much room for improvement on existing experimental design before definite conclusions about this effect can be drawn. The present experiment
was concerned with the I.A.V. because it is a relatively well validated measure of self-acceptance, and consequently another attempt to isolate the social desirability effects was made. Two changes in design were indicated. Firstly, statistical analysis was selected to test the relationship more effectively, so that a partial correlation was run between individual scores on the relevant variables. Secondly, yet another test of social desirability was employed. The Marlowe - Crowne Social Desirability Scale (Crowne and Marlowe, 1960) is included as Figure 12 of the Appendix. These test authors took a different view of social desirability from that of Edwards (1957), in considering it to be a characteristic within the responding subject rather than the test item. It was defined as the need of the subject to respond in culturally sanctioned ways, a definition which resulted in an independent test with face validity being the sole validity. Such validity must suffice in the lack of a criterion measure, this problem being common to all measures of social desirability. Crowne and Marlowe (1960) reported a significant relationship of +.35 with the Edwards Social Desirability Scale and an internal consistency reliability measure of +.88 and a test-retest reliability of +.89 for their scale.
Hypotheses

The purpose of the experiment was to examine the relationship of social desirability of responses to self and ideal ratings on the Index of Adjustment and Values, since these make up the discrepancy measure of self-acceptance. The null hypotheses tested comprised:

a. that there is no significant correlation coefficient between self and ideal ratios on the I.A.V. (I and III).

b. that there is no significant correlation coefficient between self ratings and social desirability scores on the Marlowe - Crowne Social Desirability Scale.

c. that there is no significant correlation coefficient between ideal ratings and such social desirability scores.

A fourth hypothesis predicted a correlation between self and ideal ratings after the variable was partialled out, but a null hypothesis could not be tested because of the nature of the statistical technique which was necessarily used.

Method

Forty-eight male and female students of a class in psychology completed the self-rating of the Index of Adjustment and Values (Figure II). This administration was immediately followed by administration of the Marlowe - Crowne Social Desirability Scale. Since the experiment was designed to validate the I.A.V. it was advisable to establish the
relationship of the experimental sample of scores with the sample on which the norms which Bills provides are based. Table 8 demonstrates the two sample distributions and their relationship.

<p>| | | | |</p>
<table>
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<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>X</td>
<td>S</td>
</tr>
<tr>
<td>Self (I)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Experiment III</td>
<td>156.81</td>
<td>26.66</td>
</tr>
<tr>
<td></td>
<td>Bills (1958)</td>
<td>185.79</td>
<td>19.23</td>
</tr>
<tr>
<td>Ideal (III)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Experiment III</td>
<td>208.00</td>
<td>19.79</td>
</tr>
<tr>
<td></td>
<td>Bills (1958)</td>
<td>222.31</td>
<td>16.86</td>
</tr>
</tbody>
</table>

Table 8. A Comparison of the Two Samples of I.A.V. Scores.

The experimental sample differed from the normative sample on both variables in showing lower mean scores and a larger variation of scores within the sample. Such differences might have been predicted from the nationality differences of the samples. The critical ratio values comparing the means of the Australian experimental sample and the American norms, however, indicated that the null hypothesis suggesting that both samples were drawn from the same population might not be rejected. On this basis it was possible to generalize conclusions drawn as to the effects of social desirability on the I.A.V. variables from the experimental sample to other samples of scores.
Analysis of Data

In the analysis of the data, acceptance of the assumptions of distribution form underlying the use of parametric techniques was impossible. An estimate of a correlation coefficient was required by hypotheses, and this had to be amenable to generalization to a partial correlation coefficient. The non-parametric correlation measure which best fulfills these requirements is Kendall's tau (Kendall, 1948), which, like Spearman's rho which may not be so generalized, is about 91% as efficient in the testing of hypotheses as the most powerful parametric correlation, Pearson's r (Hotelling & Pabst, 1936). The resulting coefficients were examined for significance by computing a Z score (Siegel, 1956, p. 221); but as the sampling distribution of the Kendall partial rank correlation is not as yet known no test of significance of $\tau_{xy.z}$ was applied (Siegel, 1956, p. 228).

<table>
<thead>
<tr>
<th>Variables</th>
<th>$\tau$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self - Ideal (I - III)</td>
<td>+.384*</td>
</tr>
<tr>
<td>Self - Social Desirability</td>
<td>+.302*</td>
</tr>
<tr>
<td>Ideal - Social Desirability</td>
<td>+.159</td>
</tr>
<tr>
<td>Self - Ideal. S.D.</td>
<td>+.363</td>
</tr>
</tbody>
</table>

* Significant at .05 level.

Table 2. Relationships of Scores on the Index of Adjustment and Values and the Marlowe - Crowne Social Desirability Scale.
A significant correlation between the two scores making up the I.A.V. self-acceptance score was demonstrated; in other words, self and ideal ratings are related, if only slightly. The problem then posed concerned the extent to which this relationship was spuriously inflated by the relationship which each variable may have with social desirability. In analysis of this experimental data a significant relationship was demonstrated between self ratings and the social desirability variable but not between that variable and ideal ratings. The coefficient representing the correlation between self and ideal ratings when the third variable was partialled out, differed minimally from the original self-ideal correlation; so that it may be said that social desirability as measured by the Marlowe - Crowne Social Desirability Scale does not influence the relationship between Columns I and III of the I.A.V., although support for this null hypothesis was not available from statistical significance testing. As was expected from this conclusion the relationship between the social desirability measure and the discrepancy measure of self-acceptance (III - I) was not significant, analysis yielding a coefficient of only -.231.

Discussion

The conclusion that the tendency of the subject to respond in a culturally acceptable manner is related to his
self rating does not in any way invalidate these self rating measures. This author would suggest, rather, that the lack of relationship between social desirability and ideal ratings demonstrated in this experiment, in agreement with some of the findings of Spilka (1961) and disagreement with those of Cowen and Tougas (1959), casts some doubt on the validity of the Index of Adjustment and Values in that the very construct of ideal self especially as defined by the psycho-analysts implies the influence of social and cultural norms. To this extent the construct validity of Bills' test is in question. One aspect of the I.A.V. which contributes to this inadequacy as a test of any self variable may be the item content involved. In view of this suggestion, while the obvious values of the I.A.V. as a test of self-acceptance are kept in mind a somewhat different measure of self-acceptance is examined.

Experiment IV

The view of this author that it may prove impossible to identify or describe the self-concept of a number of individuals using the same measuring instrument is outlined at the beginning of this chapter. Following from this statement is the suggestion that even though such description is impossible at this stage of the development of psychology, it may be possible to isolate a measure of self-acceptance
now even though the self to which the feelings of acceptance are directed is not isolated for measurement. Such an approach allows for the uniqueness of the individual and his self-concept as stressed by writers such as G.W. Allport, and provides a more appropriate test for the self theory of Carl Rogers than the tests structured with no reference to the phenomenal field of the individual subject which he and his co-workers use most frequently. Content validity is seen as being one of the most appropriate forms of validity for a measure of any self variable, so that test stimuli should be as unstructured as possible since:

Behaviour is caused, and the psychological cause of behaviour is a certain perception or a way of perceiving. The client is the only one who has the potentiality of knowing fully the dynamics of his perceptions and his behaviour.

(Rogers, 1951, p. 221).

The test constructor, according to this argument is not qualified to define the item content of a measure of self-acceptance.

The Chicago Counseling Centre has designed one measure which meets these content requirements in the form of an abstract measure described by Shlien (1961b). This test is referred to below as the Abstract Apparatus or A.A. It should be noted that Shlien has devised this measure, not to fulfil these requirements, but to test the hypothesis that there is
an abstract, internal self-ideal relationship which exists within each person's self-consciousness.

The apparatus of the A.A. consists of two transparent curved circles of plexiglass which can be moved by the subject so that they are back to back \( r = -1.00 \), or completely overlapping \( r = +1.00 \), or at any intermediate position. (See Figure 13 of the Appendix). The subject moves the two circles representing his self and ideal-self until he is satisfied by their overlap. On the back of the stand, hidden from his view, are pointers, one attached to each circle arm so that they indicate the angle of separation between the circles. The self-acceptance score which Shlien employs is the cosine of the angle between the two vectors which is represented as a correlation coefficient. The actual instructions given to the subject in the present experiment were as follows:

Now I want you to think of this circle as yourself. (Point appropriately). And this one as what you would like to be (pause), a sort of ideal self.

Do you know what I mean? (If the answer is 'no', repeat the theme of the instructions).

(move circles on axis).

I want you to arrange these so that they overlap as they do in you. (This instruction is given after the identity of the two circles is clearly established by repetition and reflection).

The instructions which Shlien has used were presumably similar, although he did not report them verbatim.
He did, however, give some information as to the reliability and validity of the test (Shlien, 1961b). To estimate the stability of a measure taken at this level of abstraction a parallel forms reliability design was used. The resulting coefficient of correlation between the cosine score of the A.A. and a score similarly derived later from an apparatus consisting of two overlapping squares of frosted plexiglass was +.81, indicating as much stability with such unstructured test content as has been demonstrated with tester-specified test items. Shlien also reported estimates of one aspect of the validity of the A.A. using the Butler and Haigh Q-sort as a concurrent criterion measure of self-acceptance. In two small samples the validity coefficients within this design were +.39 and +.42 respectively. This description of the formal characteristics of the test is all that can be gleaned from publications to date, although there are two incomplete research projects relevant to this test which are at present being carried out in the United States (Shlien, personal communication, 1965). Since the test appeared to have some construct validity by virtue of its unstructured content so that the subject may formulate his own phenomenal concepts, as well as its freedom from item ambiguities as demonstrated by Loehlin (1961) and its acceptance of the generality of self-ideal discrepancies as
demonstrated by Levy (1956), the conducting of an experiment designed to establish more information about the formal characteristics of the Abstract Apparatus as a measure of self-acceptance was indicated.

Aim

The only A.A. measure which Shlien used as the measure of a self variable was the cosine of the angle of overlap of the self and ideal circles. The performances and comments of groups of subjects using the test apparatus suggested to the present author that another measure might throw some light on the attitudes to himself which the subject holds. This measure was based upon the observation that since the subject consistently identifies one circle as self and the other as ideal-self according to instructions, it would be possible to gauge from his final setting of the instrument whether he adjusts self to meet ideal or ideal towards self. In other words, since each subject is presented with the apparatus in a standard position direction of setting may prove to be a significant clue to self-attitudes. Such a measure would not be useful unless some stability is demonstrated, so that this experimental design involved the examination of test-retest reliability for the two measures of the A.A. Where stability of the variable or consistency of measurement was established, some estimate of the validity of the measure was made.
Hypotheses

It follows that for the first part of the experiment null hypotheses were identical for the two variables of direction of setting and cosine of overlap, and varied only in the different time intervals selected. Three time intervals were included in the experimental design: an interval of 20 minutes filled by general chatter, an interval of 90 minutes during which the I.A.V. was administered and an interval of 28 days. The resulting null hypotheses were:

a. that there is no significant correlation coefficient between two measures of the A.A. taken with a 20 minute interval.

b. that there is no significant correlation coefficient between two measures of the A.A. taken with a 90 minute interval.

c. that there is no significant correlation coefficient between two measures of the A.A. taken with an interval of 28 days.

If these hypotheses were rejected for direction of setting or cosine of overlap then hypotheses could be formulated about the concurrent validity of the measure, using material from the Index of Adjustment and Values and the Marlowe - Crowne Social Desirability Scale.

Method

The subjects for this experiment were those who took part in Experiment III, that is forty-eight male and female
students of a psychology class in personality testing. The materials used are described in detail above, and the administrative procedure was as defined in the hypotheses immediately below. In the actual experimental situation from which the data was drawn, the A.A. was administered to each subject individually after which the subjects chatted with the remainder of their class for 20 minutes when the A.A. was readministered. The I.A.V. was then filled out and scored by the subjects and followed by another individual administration of the A.A. The M-CS.D.S. was administered and scored. Four weeks later, when the class was assembled at the usual time, Abstract Apparatus measures were taken for the last time.

Analysis of Data

Methods selected for analysis of data differed according to the scaling of the measures under consideration. For the measure of direction of setting the two distributions correlated were dichotomised around a real gap, having a point distribution of only two categories. The phi coefficient is designed for use in such situations and was applied accordingly. Null hypotheses were tested through the relationship of phi to chi square (Guilford, 1956, p.313). Kendall's tau was employed with its Z test to examine the null hypotheses concerning the angle of overlap (Kendall, 1948). In this
case the variables were measured on continuous metric scales, but the regressions were not linear so that a non-parametric method was used. The results of analysis are shown in Table 10.

<table>
<thead>
<tr>
<th>Measures</th>
<th>Retest Interval</th>
<th>Statistics</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>phi</td>
<td>chi²</td>
</tr>
<tr>
<td>AA₁: AA₂</td>
<td>20 minutes</td>
<td>+.258</td>
<td>1.85</td>
</tr>
<tr>
<td>AA₂: AA₃</td>
<td>90 minutes (IAV)</td>
<td>+.583*</td>
<td>6.80</td>
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<tr>
<td>AA₁: AA₄</td>
<td>28 days</td>
<td>+.195</td>
<td>1.33</td>
</tr>
<tr>
<td>AA₁: AA₂</td>
<td>20 minutes</td>
<td>+.493*</td>
<td>3.68</td>
</tr>
<tr>
<td>AA₂: AA₃</td>
<td>90 minutes (IAV)</td>
<td>+.637*</td>
<td>4.93</td>
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<td>AA₁: AA₄</td>
<td>23 days</td>
<td>+.463*</td>
<td>3.48</td>
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<td></td>
<td></td>
<td>tau</td>
<td>Z</td>
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</tbody>
</table>

* Significant at .01 level.

Table 10. Test - Retest Reliability Estimates of Two Measures by the Abstract Apparatus.

Discussion and Further Hypotheses Testing

Only one coefficient was significant for the measure of direction of setting, and that was one taken over an interval filled by administration of the I.A.V. which might have spuriously raised the test-retest coefficient. The conclusion to be drawn from such analysis is that the direction of setting measure is not sufficiently consistent to make attempts
to isolate what such scores represent worthwhile. This measure, then, was discarded. On the other hand, all three null hypotheses as applied to Shlien's measure of the cosine of the angle of overlap between the circles were rejected. Some test users would argue that to establish the significance of a test-retest reliability coefficient is not enough, but that a certain standard of correlation, such as +.90, should be achieved (Anastasi, 1961). Conversely, it should also be kept in mind there is little evidence to support the assumption that self variables, such as self-acceptance, are so stable within any one individual that a test may be expected to give such a highly consistent measure. The coefficients for this measure suggest some spurious effect due to the administration of the I.A.V., but the 28 day test-retest coefficient indicates a surprisingly high degree of stability in the self-acceptance variable. Shlien claimed the A.A. as an instrument measuring self-acceptance so that further comparison with a marker measure of self-acceptance was indicated.

In this experiment both I.A.V. self-acceptance measures, Column II and III-I, were employed as concurrent criteria of validity since, although the validity of these measures is still in doubt, they were the best-documented measures available. Some description of the construct validity of the
test was gained by comparing scores from the Abstract Apparatus with an estimate of the influence of the social desirability variable, defined as scores from the Marlowe - Crowne Social Desirability Scale. The procedure through which the data was derived was that followed in the first part of Experiment IV, and analysis was conducted again by Kendall's tau because of non-linearity of regression in the data. The A.A. scores were those derived from the first administration of the test, and their relationships demonstrated with the criterion variables are recorded in Table 11. These relationships were examined in the following null hypotheses:

a. that there is no significant correlation coefficient between A.A. overlap scores and the discrepancy (III-I) scores of the I.A.V.

b. that there is no significant correlation coefficient between A.A. overlap scores and Column II scores of the I.A.V.

c. that there is no significant correlation coefficient between A.A. overlap scores and scores on the Marlowe - Crowne Social Desirability Scale.

The coefficients indicated that the Shlien measure from the A.A. is not an estimate of the discrepancy between self and ideal-self in terms of Bills' adjectives nor of the subject's liking or disliking of his state as described in
No coefficient is significant at .05 level.

Table 11. Concurrent and Construct Validity Estimates of the Overlap Measure of the Abstract Apparatus.

<table>
<thead>
<tr>
<th>Measures</th>
<th>tau</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.A. - III-I</td>
<td>-.216</td>
<td>0.66</td>
</tr>
<tr>
<td>A.A. - II</td>
<td>+.250</td>
<td>0.78</td>
</tr>
<tr>
<td>A.A. - M-C S.D.S.</td>
<td>+.062</td>
<td>0.19</td>
</tr>
</tbody>
</table>

This way. Had the coefficients proved to be significant the relationships demonstrated would all have been positive. This is true for the A.A. relationship with the discrepancy score with the Index of Adjustment and Values in that high cosines of angles of overlap of the circles and small discrepancies between self and ideal ratings on the adjectives both indicate a high degree of self-acceptance. Neither was the A.A. score related to the present measure of social desirability. If that measure can be accepted as valid this result supported the null hypothesis \( H_0 \) that an abstract measure, in contrast to some instruments in which more concrete items are provided, is less susceptible to the influence of the social desirability variable.

Experiment IV consisted, in essence, of an attempt to provide some evidence for the validity and reliability of measures of self variables taken from a test in which the item content allows for the unique phenomenal field of each
subject tested. The Shlien Abstract Apparatus was the test selected for examination, and two scores derived from it, direction of setting and cosine of angle of overlap, were employed. Direction of setting did not appear to be a reliable measure, therefore it was discarded. The cosine measure was considered to be sufficiently stable to warrant further investigation, so that the question demanding an answer was of what is the constant cosine score of the A.A. an index. No significant relationship with the I.A.V. self-acceptance measures was found although Shlien claimed it as a self-acceptance estimator, correlating with scores from the Butler and Haigh Q-Sort. As suggested by Campbell (1960) the relationship between the cosine measure and social desirability was examined and provided no significant coefficient. Interpretation of this lack of relationship, and indeed use of the test, must wait until positive relationships of the A.A. with other personality and self variables are established.

Experiment V

Aim

In this search for an acceptable measure of a self variable the 'all the eggs in one basket' approach has not proved to be satisfactory. The social compatibility self-rating scale devised by the author is not a useful instrument
and does not lend itself to modification. W.A.V. content categories do not demonstrate any sex differences which one would expect to observe. A.A. scores do not correlate with those from I.A.V. scales. Apart from the initial limitation of its item content, the I.A.V. does, however, show correlations with other measures of self-acceptance and its self-acceptance (D) measure is not influenced by social desirability. It is suggested that self-acceptance may be amenable to measurement even while the self-concept on which it is based is not. The step following from these conclusions is one of selecting a number of measures of self-acceptance and intercorrelating them, employing as marker variables the two self-acceptance scales of the I.A.V. to aid in interpretation. This step was taken in Experiment V.

Selection of the self-acceptance measures to be compared was guided in part by results from the research reported above. For example excluded from selection on the grounds that the relationships of their scales with the two I.A.V. variables were already known were the Butler and Haigh Q-Sort, the use of the Buss and Guerjoy adjectives, the Gough Adjective Check List, the Brownfain Inventory, the Phillips Self-Acceptance Inventory and the Berger Self-Acceptance Scale. The I.A.V. scales II and D, then, were employed as marker variables.
The Index of Adjustment and Values is contained in Figure II of the Appendix, and evidence of its validity has been outlined above. (See especially Table 6 of intercorrelations of the I.A.V. with the other tests). Of the two measures of self-acceptance, II represents the way the subject feels about the manner in which he has described himself in relation to the adjectives and D is the discrepancy score between the totals of self and ideal ratings. High scores for II indicate high self-acceptance within the subject, but high scores for D indicate low self-acceptance.

The measures discussed to date have borne little relationship to the self theories examined in Chapter 2, with the exception of those from the instruments of the client-centred theorists. Cattell is one theorist whose work is discussed in some detail, so it was considered appropriate to include some of his factor measures in this study. His broad definition of the self-sentiment is quoted above. Five related measures were examined here, four being scales of the Motivation Analysis Test (Cattell & Horn, 1964). In Cattell's treatment of motivation 'the self-sentiment, by our dynamic lattice theory, is the most distal of all structures in the subsidiation sequence, i.e., the most developed and most remote from the ergic goals' (Cattell, 1957, p.731). It is, however, subservient to the super-ego. Attitudes covered
by the self-sentiment include:

a. social reputation (I want ... a good career, a good family, a good reputation)

b. control and understanding of the self (I want ... not to go mad, to know me better, to keep impulses under control).

The self-sentiment is briefly described within the context of motivation as 'the level of concern about the self-concept, social repute and the more remote rewards (Cattell & Horn, 1964, p.3). Four sets of items comprise the M.A.T. from groupings of which the four measures are assessed. (These sets of items comprise the first section of the omnibus questionnaire of Figure 14 of the Appendix; Uses, Estimates, Word Association and Information). The first measure (USS) is derived from the Uses and Estimates subtests and is an unintegrated self-sentiment indicating the level of unconscious concern about the self-concept. High scores suggest strong unconscious motivation. The second measure (CSS) is provided by the Word Association and Information Subtests and is an indication of the extent of conscious motivation connected with the self-concept. High scores suggest high conscious interest. MSS is a measure of the total motivation involved, much motivation being shown by high scores. The fourth measure is the conflict score (CSS) which yields a high score to indicate a high degree of conflict in the dynamic area of the self-concept. All these four measures are statistically
related by the nature of the techniques used to derive them from the data collected.

An independent measure of a self-variable devised by Cattell was also employed in this study. This is Factor U.I. (Q) 18 or the $Q_3$ scale from the Sixteen Personality Factor Questionnaire (Cattell & Eber, 1957). The items contributing to this score were extracted from Form A of the 16PF and comprise the second section of the omnibus questionnaire which is Figure 14 of the Appendix. The norms applied for scoring were those supplied in the Australian Tabular Supplement of the 16PF (1963) from men and women doing Arts and Sciences at the University of Western Australia (Tables 5 and 6). This variable is fully described in Chapter 2, high scores on it indicating high self-sentiment formation, sometimes described as controlled exacting will-power (Cattell & Eber, 1957). In brief, $Q_3$ represents the strength of the dynamic investment and aspiration level achieved in the self-sentiment, and is related to measures of consideration for others, persistence, foresight, conscientiousness, leadership qualities, mechanical success and lack of accident proneness. It is the highest loaded factor in Cattell's second order factor of general anxiety. He hypothesises that $Q_3$ measures the extent to which the person is able to achieve the self-sentiment behaviour which society prescribes (1957).
The construct validity of this aspect of the 16PF was generally demonstrated by Karson and Pool (1961), but the more interesting validation study in the context of this experiment is that of Smith (1958) who compared six measures of self-concept discrepancy and instability with $Q_3$ and found only one of the six relationships to be significant. Nine more relationships were tested in this experiment.

Another questionnaire measure of the self-acceptance variable is the Sa scale of the California Psychological Inventory (Gough, 1956) as used in studies reported in Chapter 3 such as that of Aller (1962). The keyed items of this scale are also found in the omnibus questionnaire which is Figure 14 of the Appendix. Gough (1956) claimed that the scale assesses factors such as sense of personal worth, self-acceptance and the capacity for independent thinking and acting. High scores are gained by subjects who are intelligent, outspoken, cool, versatile, witty, aggressive, self-centred and have more self-confidence. Those with low scores are methodical, conservative, dependable, conventional, easy-going, quiet, self-abasing, passive in action and narrow in interests. The main method of validation of the C.P.I. to date has been factor analysis. The factors isolated by Mitchell (1960) agree in the main with those extracted by Crites, Bechtoldt, Goodstein and Neilbrun (1961), and he
found that the C.P.I. and the 16PF, each taken in their entirety, have high loadings on a number of common factors (Mitchell, 1961). Of these factors the Sa scale, specifically, showed loadings of -.17 on the factor of Adjustment by Social Conformity, +.77 on Social Poise or Extraversion, +.08 on Super-Ego Strength and +.05 on the Capacity for Independent Thought and Action. The Sa scale correlates significantly with Column II of the I.A.V. (see Table 4). This relationship was retested in this experimental design.

Since it was necessary to reject the Abstract Apparatus score (Shlien, 1961b) as a measure of self-acceptance in spite of the advantage of its unstructured item content, another attempt to establish what the A.A. is measuring was made. The A.A. was included in this experimental design in which a variety of self-acceptance measures were applied, including the I.A.V. marker variables with which it does not correlate. The measure is the cosine of the angle which represents the overlap of the two circles of the apparatus as seen in Figure 13 of the Appendix. The higher the score, the greater the correspondence between self and ideal circles and, presumably, the greater the self-acceptance within the individual.

The last-mentioned of the ten measures employed is another abstract measure devised by Shlien (1961b). This is
a Q-sort, a type of self-acceptance measure not examined by the author in earlier experiments. However, items are not supplied for this sort, neither is any particular form of distribution of sort required. The subject is asked to make up a set of twenty-five statements about himself, and these are ranked for self and ideal. (Administration instructions for the Ideo-Q-Sort are found in Figure 15 of the Appendix). The Ideo-Q-Sort score (I-Q) is the rank correlation coefficient (Kendall's tau is appropriate, and therefore used) between self and ideal rankings or sorts. The reliability of the instrument is not known. Shlien (1961b) reported some attempts to establish its validity, but he did not provide information about the reliability of the statistics involved. Despite this omission the correlation coefficients of the I-Q with the Butler and Haigh Q-Sort of +0.58 and with the discrepancy score of the I.A.V. (D) of +0.56 indicate a definite relationship between the variables. His two abstract measures, the A.A. and the I-Q, have a rank correlation of +0.67. This I-Q measure of correspondence between self-concept and concept of ideal-self yields a high score when the correspondence is great.

Hypotheses

These ten measures described above are those which were intercorrelated in this experiment. The aim was exploratory,
the plan being to analyse and interpret the resulting correlation matrix and to extract factors from the matrix if appropriate. In calculating the coefficients some 45 null hypotheses were tested. These concerned the intercorrelations between these measures:

a. Index of Adjustment and Values, Column II (II)
b. Index of Adjustment and Values, Discrepancy Score (D)
c. Motivation Analysis Test, Unintegrated Self-Sentiment (USS)
d. Motivation Analysis Test, Integrated Self-Sentiment (ISS)
e. Motivation Analysis Test, Total Motivation within Self-Sentiment (MSS)
f. Motivation Analysis Test, Total Conflict within Self-Sentiment (CSS)
g. Sixteen Personality Factor Questionnaire, U.1.18 (Q3)
h. California Psychological Inventory, Self-Acceptance Scale (Sa)
i. Shlien's Abstract Apparatus (A.A.)
j. Shlien's Ideo-Q-Sort (I-Q).

Method

The procedure of the experiment involved the administration of these measures to the subjects who were 40 males and females aged between 16 and 25 years. The age distribution was somewhat positively skewed. During the administration the subjects were permitted to remain anonymous, and were assured of this anonymity although it should be pointed out
that in several cases all the tests were administered individually so that some relationship between tester and testee was inevitable. The subject was first presented with the omnibus questionnaire (Figure 14 of the Appendix), and when this was completed the I.A.V. was administered. This performance in some cases took up to two hours, during which the subject may have gained a way of describing his self-concept which was not uniquely his own. The learning of such a style was not, however, apparent in the two abstract measures then administered. The A.A. was individually administered and then the subject was given the 25 blank cards to be filled in and ranked as quickly or as slowly as he liked. During this last stage the subjects occasionally needed some non-specific prompting and encouragement.

**Analysis of Data**

From the collection of data it was apparent that the relationships between at least some variables were not amenable to analysis by means of the Pearson-Product Moment Correlation Coefficient because of curved regression lines in the plottings of the relationships and the lack of homoscedasticity inherent in them (Guilford, 1956). Spearman's rho was used as an approximation of Pearson's r as the conversion cannot be used with this fairly small sample. A formula for a statistic with the same form of distribution as Student's t
(Siegel, 1956) was used to gauge the significance of the coefficients. Table 12 presents the resulting correlation matrix.

Discussion

Interpretation of the matrix was attempted at several levels, the most superficial question to be answered being whether relationships reported in the literature were supported in this experiment. The answer was not encouraging: not one of the intercorrelations tested was represented by a significant coefficient in this matrix. Bills (1958) reported a significant correlation between the two I.A.V. variables which this coefficient did not bear out. The relationship between Q3 and the M.A.T. variables found by Cattell (1957) was not supported, neither was his correlation between II and Sa (1958) borne out. The findings of Shlien (1961b) concerning the I-Q were contradicted by the small non-significant correlations in the matrix between I-Q and D and I-Q and A.A. The lack of relationship between the two abstract measures was particularly surprising, although it is possible that this wider selection of subjects would better reflect the true relationship than that tested by Shlien.

At another level the question which was asked was what variables did intercorrelate significantly, and in the light of these coefficients was factor analysis appropriate? Within
<table>
<thead>
<tr>
<th></th>
<th>I.A.V.</th>
<th></th>
<th>M.A.T.</th>
<th></th>
<th>16PF</th>
<th></th>
<th>Sklire Tests</th>
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<tr>
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<td></td>
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<tr>
<td></td>
<td>.</td>
<td>- .249</td>
<td>+ .197</td>
<td>- .025</td>
<td>+ .162</td>
<td>+ .161</td>
<td>+ .377*</td>
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<tr>
<td><strong>D</strong></td>
<td></td>
<td></td>
<td>+ .130</td>
<td>+ .115</td>
<td>+ .134</td>
<td>+ .195</td>
<td>- .162</td>
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<tr>
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<td></td>
<td></td>
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<td>+ .385*</td>
<td>+ .416*</td>
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<td>+ .587*</td>
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<td>Sa</td>
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</tr>
</tbody>
</table>

* Significant at .05 level.  
** Significant at .01 level.

Table 12. Matrix of Intercorrelations of Ten Self-Acceptance Measures.
this experiment factor analysis was not considered appropriate because of the small size of the sample involved. Yet clusters of significant intercorrelations in the matrix were apparent. The first of these was that of the six coefficients between the four M.A.T. variables. These were inter-related statistically through the scoring methods used, so that these correlations have no psychological meaning. The only other cluster is of more interest. The three variables significantly inter-related were II, Q3 and I-Q, two of the coefficients proving to be quite small while the third, between the Cattell measure and the Shlien pencil and paper measure, showed a substantial relationship. Correlations with the marker variable, I.A.V. II, suggested the possibility of correlations with other tests to which II has been related in Table 6. None of these refutations of the three null hypotheses would have been specifically predicted from examination of the relevant literature, although they would have been predicted from the general notion that tests which are presented with verbally similar aims and rationales may measure similar variables.

Factor analysis was not an indicated method of analysis in this case because of the paucity of significant coefficients, only 9 out of 45 and some of those artificially produced, and those coefficients which were significant were generally too
small for useful factor extraction. Closer examination of the meaningful correlation cluster was more appropriate. How the individual likes being the way he describes himself is in part measuring the same variable as a correlation between ranks of self-initiated items describing self and ideal. Both of these measure in part the variable represented in Cattell’s self factor derived from questionnaire material. In other words, some coherence was demonstrated in the area of psychological research in the measurement of self variables since the three authors of the tests, Bills, Cattell and Shlien, work within extremely different frames of theoretical reference. Some measures, in contrast, showed no significant relationships with other measures. These were the D score of the I.A.V., and the Sa scale of the C.P.I., while the M.A.T. measures showed no correlations outside that test.

None of the nine measures correlated with the Abstract Apparatus measure provided a significant coefficient. This test then, despite its good content validity in comprising individual items which stem from the frame of reference of the subject rather than that of the test constructor, has still no demonstrable concurrent validity as a measure of self-acceptance. This experiment demonstrated, however, that a test with similar advantages, the Ideo-Q-Sort, does correlate significantly with a well-authenticated measure of something
at least resembling self-acceptance in that it does measure to some extent the same variable as a number of so-called tests of self-acceptance. For support of this description see the record of intercorrelations of II with other measures in Table 6. This conclusion is drawn somewhat tentatively. The most useful suggestion this experiment provided in relation to the phenomenal I-Q lies in the relationship between it and Q\textsubscript{3}. This relationship lies open to more extensive examination.

**Experiment VI**

**Aim**

Because of the impressive research which has been reported concerning the variables measured by the 16 Personality Factor Questionnaire (for example, Cattell, 1957), this test might provide a useful means of assessing what the Ideo-Q-Sort measures. A relationship is reported above between I-Q and Q\textsubscript{3} from the 16PF which requires affirmation. Cattell has suggested that since he maintains that the self-sentiment is subservient to the super-ego within the dynamic lattice some relationship between I-Q scores and those on scale G of the 16PF may be predicted (Cattell, personal communication, 1965). It follows that the aim of this sixth experiment was to establish the extent of the relationships which the Ideo-Q-Sort has with the Q\textsubscript{3} and G scales of the 16PF, U.1.(Q) 18 and U.1.(Q) 7.
From a survey of the relevant research Cattell (1957) described the G measure as one of the extent of super-ego strength or amount of rigid internal standards which the individual holds. He hypothesised that G corresponds with the psychoanalytic super-ego, and depicts the regard to moral standards and the tendency to drive the ego and restrain the id. Several psychoanalytically-oriented writers, such as Jacobson (1954) and Hartmann (1959), have postulated a relationship between the self and the super-ego. The individual with a high G score sees himself as able to concentrate, a guardian of manners, persevering, and cautious. He also demonstrates good organizational powers in thinking. G correlates significantly with leadership qualities and with lack of accident proneness, characteristics which it shares with Q3.

The relationship between I-Q and Q3 was re-examined because it was possible to introduce modifications of the experimental design which would provide a more reliable test of the relationship. In the design of Experiment V Q3 was represented by a sub-section in the omnibus questionnaire administered which comprised the items from Form A of the 16PF. The number of items was naturally small, so that in this experiment items from both Forms A and B making up the G and Q3 scales were employed, thereby increasing the
reliability of the measures. These forty items were randomly ordered to make up the questionnaire administered in this situation. (See Figure 16 of the Appendix).

**Hypotheses**

The null hypotheses tested were:

a. That there is no significant correlation coefficient between coefficients of the Ideo-Q-Sort and scores on the Q3 scale of the 16PF.

b. That there is no significant correlation coefficient between coefficients of the Ideo-Q-Sort and scores on the G scale of the 16PF.

c. That there is no significant correlation coefficient between scores on the Q3 and G scales of the 16PF.

**Method**

The subjects for this experiment, who remained anonymous throughout, were 60 second year psychology students with a mean age of 23 years and 5 months and an age range of 17 to 45 years. Twenty-five blank cards were presented to them and they were given the instructions orally in the form in which they are presented in Figure 15 of the Appendix. When the rankings were complete the Q3 and G questionnaire (Figure 16) was filled in. Since Cattell (1957) predicted low G scores for academics and students, the collected data was examined to assess the representativeness of the sample. Comparison
with test norms can be made with the 16PF scales only, since
norms were not available for the Ideo-Q-Sort. The mean $Q_3$
score for this sample was 5.00, a value which fell within
the mean range specified in the 16PF manual (Cattell & Eber,
1957). In contrast the mean sample $G$ score was only 3.83,
at least one standard deviation below the mean of the norma-
tive data. Because of the structure of the sten scores
employed the sample standard deviations were not compared,
howeversample scores on each scale did range from 1 to 10,
the total sten score range. It appears that the sample was
representative of the population of $Q_3$ scores, but that in
regard to the measure of $G$ interpretations and conclusions
drawn from the data might be appropriate to the student
population only.

Analysis of Data

The null hypotheses concerning the interrelationships
of the scores were tested by means of Spearman's rho and its
related $t$ score was employed for the reasons stated in
Experiment V. The resulting coefficients appear in Table 13.

<table>
<thead>
<tr>
<th></th>
<th>$Q_3$</th>
<th>$G$</th>
</tr>
</thead>
<tbody>
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<td>+.025</td>
</tr>
<tr>
<td>$G$</td>
<td>+.105</td>
<td></td>
</tr>
</tbody>
</table>

No coefficient is significant at .05 level.

Table 13. Intercorrelations of two 16PF
Measures and the Ideo-Q-Sort.
Discussion

None of the three null hypotheses was rejected. The significant correlation between the two 16PF measures reported by Cattell (1957) was not supported, perhaps because of sample differences in the two experiments. The relationships between the self-sentiment and the super-ego apparently does not hold for students. Neither was there a significant relationship between I-Q and $Q_3$ as found in Experiment V. The test of the null hypothesis in this case was more reliable, so the conclusion is drawn that $Q_3$ and the I-Q are not measures of any common variables. Finally, despite the predictions of Cattell, Jacobson and Hartmann, 16PF G scores and Ideo-Q-Sort scores were not related in this student sample.

The meaning of the measure yielded by the Ideo-Q-Sort was clarified by this experiment. In the interests of validation of this promising but as yet undefined measure of a self variable, the reader is referred to the criteria of usefulness of psychological tests outlined at the beginning of this chapter. It has proved exceedingly difficult to show that the scores of the Ideo-Q-Sort agree with those of another test to indicate some common phenomenon being measured and contributing to a definition of that phenomenon. The second alternative remains; that is, the scores must successfully discriminate
between populations of subjects.

**Conclusions: Contradictory demonstrations and unconfirmed hypotheses**

Analyses of data from experiments designed to demonstrate, the success with which predictions may be made about performances on tests of self variables suggest that little is known about these tests. It was expected that from the thorough survey of the literature hypotheses would be formed which were easily verified. This proved not to be the case. A measure designed to parallel the ad hoc rating scales currently in use failed to fulfill the formal requirements of a psychological test. No sex differences were found in the content of responses to questions demanding a description of the self-concept. The variable of social desirability was not related to ideal self ratings. Tests claiming to be measures of one variable intercorrelated minimally. Definition of the variable measured by two phenomenologically oriented tests was not successful. This last result is particularly disappointing because these tests do fulfill the criterion of avoiding performance in a field entirely structured by the experimenter, enabling the individual to consider his self-concept in terms meaningful to himself.

It is suggested that if it is not known what a test measures, the test may still be useful if it discriminates
successfully. The most needed discriminations lie in the area of abnormal psychology in which the Ideo-Q-Sort is to be applied. This application entails an examination of the status of the self construct and the measurement of self variables in abnormal psychology. The inadequacies of the conclusions drawn about self variables reported in Chapter 3 due to lack of knowledge of the meaning of the measures involved are now apparent. The conclusions of the clinical psychologist remain to be examined.
CHAPTER 5

THE SELF IN ABNORMAL PSYCHOLOGY
The material concerning self variables which is examined in this chapter is chiefly of interest to those psychologists working as counsellors, therapists or diagnosticians, and who are concerned with states of the individual which are abnormal either physiologically or psychologically. Since abnormality of the self and self-perceptions is the content to be treated in this chapter, it may be regarded as in some ways an addendum to the preceding discussion of the self in general psychology. Material is relegated to it primarily on the basis of the stated pathological conditions of the subjects about whom conclusions are drawn. It is unfortunately true that such samples of subjects often introduce inadequately controlled intervening variables into the experimental design. Psychiatric diagnoses may be a misleading basis for classification, and sample sizes are often too small because of the relative size of the parent population available. Situational variables such as institutionalization, diet and incidental treatments make isolation of specific determinants difficult (Kline, 1958). Within all these limitations evidence of self pathology is examined to reflect the status of self variables in abnormal psychology.

In his earlier attempts to formulate a self theory of personality organization Carl Rogers (1947) defined the well-adjusted individual as one who is able to accept all his
perceptions, including those about his self, into his personality organization. Such an approach to the construct of adjustment suggests that it is not an all-or-nothing process but one which occurs in varying degrees according to the individual, his environment and his perception of his environment. Perceptions of the self, then, should differ not only between the grossly abnormal groups of subjects discussed above and the so-called normal groups, but between the so-called normal individuals whose levels of adjustment are subject to considerable fluctuation. With this approach as a guide, the author defines the abnormal psychology within which self variables are examined as including physically abnormal states as well as mentally abnormal states, common states of malfunction such as old age and the recognized psychiatric disorders which until recently have been described as functional rather than organic in origin. Against a background of such knowledge of self variables in abnormal psychology as has been established the validity of the Ideo-Q-Sort as a diagnostic tool is tested. The extensive literature demonstrating changes in self variables during counselling and psychotherapy is reviewed and the therapist himself comes under scrutiny. The Ideo-Q-Sort is finally examined as a measure of change.
Abnormal Physical States

Abnormal physical states may be experimentally induced or be the result of an uncontrollable factor such as disease. Of the latter type the earliest psychological manifestation may be mental retardation due to genetically or pre-natally determined structural abnormalities within the individual. The content of the self-concept of the mentally retarded child is certainly of interest to his teachers and parents who wish to gauge the limits of his abilities just as he, himself, does (Nelson, 1963); the problem being how to build up a positive self-concept in such a child who is receiving so little favourable feedback. The child with cerebral palsy, the result of physical trauma early in life involving very poor motor co-ordination and often mental retardation, has been shown to differ from other children in his self-concept (Bice, 1954). His body-image alters frequently. He shows that he feels different from his peers and in some way guilty, and he appreciates the attention-getting nature of his disabilities.

Self-attitudes in adults, also, tend to alter with changes in the physical state of the individual due to disease or disorder. Litman (1962) using an acceptable sample of subjects (100) but inadequately validated tests, claimed to show that the self-concept is related to the rehabilitation
response of the orthopaedically disabled. Diller and Riklan (1957) reported a study dealing with a group of patients suffering from Parkinson's Disease, a deterioration of the nervous system manifest in movement inhibition and tremor. On the basis of this movement inhibition Diller and Riklan divided their subjects into two groups of high and low \( M \) determinant users on the Rorschach Test. They found that the high \( M \) group verbalized more negative self-statements in structured interview situations than did the low \( M \) group. Such results suggest that phenomenal changes in physical status are related to self-attitudes or that change in body-image results in change in self-concept.

To examine more closely the relationship between the physical and the mental, the old mind-body problem, in relation to the construct of self, an investigation of the effects of physical changes not perceived by the individual must be made. From the theories of Dillon (1946) who believed the self to be dominated by the endocrine gland system and Kappers (1953) who centred the sense of self in the thalamus, it would follow that alterations in the structure of the nervous system or the system of ductless glands would result in changes in self-attitudes. This conclusion is supported only in part by relevant empirical studies. The most ambitious of these is that reported by Robinson and Freeman (1954), who
examined 51 patients successfully treated by pre-frontal lobotomy according to the criteria of present occupational adjustment and tests of so-called social intelligence such as the Porteus Mazes Test. Seventeen control subjects were selected for similar diagnoses, age and length of illness, but they had improved without the aid of psychosurgery. The measures on which the two groups were compared showed a respectable degree of inter-judge reliability, and differences were significant in the predicted direction. In other words, patients after surgery showed a small self-regarding span, a measure of the time the individual can spend contemplating himself in an interview based on the concept of the continuity of the self built up by William James. They also showed less self-concern than the non-surgical patients, and the amount of difference after surgery was reported to be a function of the amount of frontal lobe disconnected.

Robinson and Freeman, then, give some support to the theory of a physical basis for the self and self-attitudes, but other experiments involving artificial induction of abnormal physical states do not yield such encouraging results. Cranston, Zubin and Landis (1952) found that the administration of small amounts of stimulants and depressants resulted in no change in self-ratings. Neither these ratings of subjective states nor motor co-ordination tests were affected
by \( \frac{1}{2} \) grain of phenobarbital or 25 milligrams of thonzylamine. Although 5 milligrams of dexedrine were found to affect the test performances of the subjects there were still no changes in self-ratings. More recently Markwell (1965) attempted to isolate changes in the self-concept during hypnosis. Using the Adjective Check List he demonstrated that self-attitudes do change in the trance state, individuals becoming either more self-accepting or more self-critical. This conclusion should be interpreted with due respect for the power of suggestion which the experimenter wields while the subject is in a trance and after.

Natural changes in physiological states occur during the ageing process in which a certain amount of physical deterioration is expected. Amongst other psychological aspects of ageing, Greenleigh (1955) has discussed self-concept change. One facet of the self-concept of an individual of any age group is the age level at which he places himself. When Tuckman and Lorge (1954) asked 1032 subjects to so classify themselves, all subjects under 30 years responded that they were young while only one under 60 years replied with 'old'. Of a number of residents of a home for elderly people, 70 to 96 years, those with greater sociometric scores were more decisive in their age classifications than those with lower scores, although there was no such differentiation
on the basis of actual classification as young or old (Davis, 1962).

A report is reviewed above of a study of identity through mirror recognition in the young child (Dixon, 1957). At the age of about seven months the infant appears to link the image with the self. Pollak, Karp, Kahn, and Goldfarb (1962) examined the response patterns to mirror reflections in some six hundred subjects aged over 65 years. Self-derogatory responses were found to be more prevalent in women than in men and in institutionalized rather than in non-resident subjects. Self-derogation was not related to age or mental status. Bloom (1961) supported this conclusion by the use of an adjective check list in which the number of positive adjectives checked is taken as a measure of the self-acceptance of the individual while the number of negative items checked indicates the degree of self-rejection. He demonstrated, too, a curvilinear relationship between chronological age and self-rating of perceived age.

Mason (1954) attempted to examine the relationships of age, living conditions, economic status and self-judgements. Of the three groups of subjects studied, aged, indigent, institutionalized subjects viewed their self worth more negatively than aged, independent, middle-class subjects who in turn had more negative attitudes than a group of young, low
status adults. Mason administered the 'Who Are You?' test to these groups, and of the eleven scoring categories set up for responses six differentiated significantly between the three groups. These response categories were name, family, occupation, positive affect, negative affect and longevity.

Self variables and physical state variables, then, appear to be related to some extent, the physical basis of the self remaining hypothetical at present.

**Psychiatric Diagnoses**

Standard psychiatric nomenclature (A.P.A., 1952), based as it is on outmoded theories of etiology and biased assessments of symptoms, is now of doubtful validity or usefulness to psychiatrist and clinical psychologists who tend to use terms like 'schizophrenic' and 'psychopath' as a convenient form of shorthand. The use of such terms no longer indicates that a certain form of treatment might be more successful than another, nor even that the patient is exhibiting a certain standard set of symptoms. While reliability is reasonably satisfactory for global categories such as psychoses, neuroses and personality disorders, interrater agreement is very poor in differentiating subtypes within these categories (Kreitman, 1961). McNair and Lorr (1965) pointed out that these diagnostic categories have not even been set up according to the same criteria, since 'some diagnoses are labels
for symptoms, some describe predominant behaviour patterns, and others are names of hypothetical defence mechanisms'. (1965, p.33). Their answer to this inadequacy was to set up a statistical typing procedure based on the interpersonal factor - score profiles of several samples of patients. An earlier solution, suggested by Creelman in 1949, was based on the assumption that some distortion of self-concept is fundamental to any mental disorder. This suggestion bore little fruit until recently, when Foulds, addressing a symposium on Personality Variables in Psychiatric Classification (1964), suggested as one criterion of maladjustment the loss of awareness of self as agent. Semeonoff (1962) concluded that self-descriptions do give identifiable response patterns which indicate favourable and unfavourable personality adjustments although they do not discriminate well between accepted and rejected therapy clients. An examination of the material available about self variables in the maladjusted as defined in the current typology is indicated.

Self Variables and Undifferentiated Psychiatric Disorders

Several relevant experimental designs have involved groups of subjects who are described vaguely as being 'emotionally disturbed' or 'psychiatric patients'. Such studies are reviewed first in order to give a general picture of self variables associated with mental abnormalities. Some of this
work is carried out with children. A one year follow-up of the self-concepts of a group of institutionalized child psychiatric patients showed that changes in the function of the self tended to be associated with changes in other functions, with changes in the content of the self-processes and with changes in overt behaviour (Rosengren, 1961).

Reference is made above to the measurement of feelings of identity through mirror recognition in children and in elderly subjects. Faure (1956) followed the same procedure with a group of adult mental patients. Responses fell into three categories showing that the subjects believed themselves to be spellbound in the image (actually a photograph), they believed that the image was alive and a separate identity or they saw the image as only one part of their body. There was a tendency to disavow the image and exalt it as a manifestation of the self-image. These subjects would appear to be somewhat grossly disturbed, especially in contrast to those studied by Zuckerman and Monashkin (1957) who were also described as adult mental patients. These authors attempted to relate self-acceptance, measured by the discrepancy between self and ideal ratings on adjective scales, to scores on assorted M.M.P.I. scales. Although these subjects might have been as disturbed as the mirror recognition subjects according to the respective descriptions, it is unlikely since most of
the relationships found replicated those demonstrated in college students. Interpretation of such conclusions, however, is made unnecessarily difficult when the population tested is unspecified.

Such difficulties occur in the interpretation of the results of the administration of the 'Who Are You?' technique by Tolor (1957). Scores differentiated between three groups of subjects: neuropsychiatric patients, general medical patients and orthopaedic control subjects. Tolor reported significant differences between the two first named groups which were not found between the second and third groups and drew general conclusions about the self-perceptions of neuropsychiatric patients. The differences were demonstrated for the scoring categories of name, group-membership and uniqueness. These conclusions are highly suspect, however, since the first group is actually made up of patients who may be classified as suffering from organic disorders, psychoses, character disorders and neuroses, the second of medical patients with many with psychosomatic disorders and neurotic physical symptoms, and the third group of orthopaedic patients, who were accident victims. Accident proneness is related to neuroticism (Cattell, 1957), so that the characteristics in which the three groups differ are somewhat difficult to isolate.
Farnham-Diggory (1964) examined self-evaluations in suicidal and non-suicidal psychotic males. Self-evaluation was found to be low in suicidals; but, interestingly, the real discrimination was between overt and covert suicidals, those individuals who made open suicide attempts giving higher self-evaluations than those who made covert attempts. These results suggest a differentiation between the self-concepts of extraverted, hysterical personalities and those of the more withdrawn schizophrenic and depressive types.

The extent of the patient's interaction with his environment does determine to some extent the nature of his self-concept. Achenbach and Zigler (1963) found that subjects with high social competence, as defined by education, intelligence, occupation, employment history and marital status show a high self-ideal discrepancy. Semantic differential techniques, when applied to patients and staff, showed that self-concepts were related to the perceived demand of different roles, in that subjects with greater ego organisation gave self-descriptions reflecting the capacity to meet the demands they perceived to be made on them in their various social roles. (Talbot, Miller & White, 1961). Manasse (1965) found that social setting affected the Q-sort self-regard of schizophrenics in that hospitalized patients had higher self-regard than day patients. He suggested that this effect is due to the
higher standards enforced by the world outside the hospital.

The Self in Schizophrenia

The self-concepts of schizophrenics have received some considerable attention from psychologists. The definition of schizophrenia given by English and English (1958) suggests that some abnormalities of self-conceptualization are to be expected: 'a group of psychotic reactions characterised by fundamental disturbances in reality relationships, by a conceptual world determined excessively by feeling, and by marked affective, intellectual, and overt behavioural disturbances' (1958, p.478). Arieti, in his definitive Handbook (1959), subscribed to this suggestion when he discussed three aspects of self within the context of diagnosis of schizophrenia: the body-image, self-identity and self-esteem. Earlier, McKinney (1951) had found schizophrenics interesting because they provide easy access to data from which to study subject-object relationships. Employing the self construct of G.H. Mead, he examined the self-process in terms of the language, thought and emotional incongruity of the patient. Along similar lines, Racamier (1963) postulated as characteristic of schizophrenia a lack of personation or inadequate maintenance of identity by which continuity between different levels of ego-functioning is established.
The relationship of unconscious and conscious self-evaluations have proved to be of interest in normal subjects (Huntley, 1940a; 1940b). Epstein (1955) followed the experimental procedure of Huntley to compare two groups of subjects described as schizophrenic and normal respectively. The subjects were matched on the variables of age, sex, veteran status, institutionalization and education, and they were asked to give direct ratings of their own voices, handwriting, names and selves and 'unconscious' ratings of disguised writing and voices. Normals tended to dislike their writings, but rated significantly more favourably their voices, names and selves. To a significant degree, schizophrenics liked their handwritings, names and voices but not themselves. Their self-ratings tended to fall to one extreme or the other, so that their rating variance was significantly larger than that of the controls although there was no difference in central tendency. Although some differences are apparent from the experimental analysis, they do not justify any conclusion that schizophrenia is characterized by low self-regard, be it conscious or unconscious.

Acceptance of self, as discrepancy between self and ideal scores, likewise does not differentiate significantly between schizophrenics and normals. Zuckerman, Baer and Monashkin (1956) compared a number of mental patients, half
of which were diagnosed as schizophrenics, with a group of normal control subjects on measures of self-acceptance, acceptance of parents and acceptance of other people. For the total sample of patients acceptance of father and acceptance of others were significantly related to the adjustment ratings made by the attendant psychiatrists. Differences in acceptance scores were as expected with schizophrenics showing the least acceptance except for acceptance of self. However, there were no significant differences between schizophrenics and non-schizophrenics on any measure. Kamano (1961) found that schizophrenics showing high self-acceptance recalled fewer unfavourable items from personal evaluations and a larger discrepancy between level of performance and level of aspiration.

Of the sub-types of schizophrenic diagnosis, the paranoid type is the most common and is distinguished by the highly elaborate and systematized delusions through which the patient expresses his resentment, hostility and aggression. A reflection of these personality traits of the paranoid schizophrenic was found with the help of the Berger Self-Acceptance Scale on which these patients demonstrate unrealistic self-enhancement as a defense against the loss of genuine positive affect (Havener & Izard, 1962). However, Ibelle (1961) provided support for the conclusion based upon data from
general schizophrenics by his finding that there is no significant difference between mean correlation coefficients of self and ideal Q-sorts for paranoid schizophrenics and normals. Conversely, A.H. Rogers (1958) reported an experiment in which a significant difference between self-acceptance scores of paranoid schizophrenics and a control group made up of nursing aides was demonstrated. Self-acceptance, in this case, was measured by an apparatus similar to Shlien's Abstract Apparatus and yielding a similar abstract rather than concrete estimate. It consisted of two four inch red and blue squares of glass, the red sliding behind the blue on a metric scale. Rogers interpreted his successful differentiation not in terms of an actual difference in self-acceptance but as support of a hypothesis suggesting that schizophrenics would show more defensiveness than normals. This interpretation is based on the assumptions that such a measure gives a more direct estimate of self-acceptance which is thus more open to defensive distortion and that there is no real difference in extent of self-acceptance of paranoid schizophrenic patients and individuals not showing any evidence of psychiatric disorder. It would appear that, although schizophrenia may be characterized in some way by the self-concept, it is not consistently related to low self-acceptance.
There is yet more contradictory evidence bearing on this problem to be found in the experimental designs which involve comparison of a number of psychiatric disorders and maladjustments. It would appear from the studies reported in Chapter 3 that self-acceptance or self-ideal discrepancy is positively related to adjustment in the psychiatrically normal individual. Expectations from this finding suggest that this relationship should hold through the psychiatric disorders as well, forming the prediction that disorders which appear to be most maladjustive such as psychoses would involve lower self-acceptance or more self-rejection than neuroses which are relatively adjustive disorders. Yet schizophrenic self-acceptance does not differ significantly from that of the individual not requiring treatment, so a comparison must be made of the self-acceptance scores of a variety of patients receiving treatment.

The Self in the Neuroses

Chase (1957) found a tendency for self-ideal and self-average other Q-sort correlations to be smallest among psychotics, with neurotic scores next in size and the largest being among character disorders. Non-psychiatric patients showed significantly higher correlations than any other group. Differences were really in the self-sort, since the other two sorts were similar for all groups. On the other hand, the
work of Hillson and Worchell (1957) supported the more common conclusion. They found that neurotic subjects rated themselves significantly more unfavourably on the Phillips Self-Activity Inventory than did normal or schizophrenic subjects, while the subjects of the latter two groups made closely similar self scores. Schizophrenics and normals, then, may be similar in their self-concepts, while neurotics possess a much lower self-evaluation. Such an hypothesis is credible in terms of the known characteristics of neurotic disorders, especially when this category is broken down into the subtypes of anxiety states, hysteria, obsessive-compulsive reactions and neuroses with somatic symptoms. Monro (1962) asked a number of patients whose illnesses were of these types to rate themselves on some thirty-two traits. Factor analysis of correlations between scores on these self-attitude traits resulted in two major factors being isolated: uncritical acceptance of self-undervaluations and rejection of undervaluation. Undervaluation is the dominant theme in agreement with the finding of Hillson and Worchell (1957), although it should be remembered that neurotics tend to devaluate phenomena other than the self. This tendency was demonstrated by Wallen (1945) when he asked subjects to name those foods from a list of twenty common ones which they disliked to the point of refusal to eat them. While only
11% of normal subjects named two or more foods, 62% of neurotics responded in this way, suggesting that neurotics dislike things generally.

One adjustment which may be of sufficient magnitude to require psychiatric assistance is that of the individual who stutters. Since organic causation is the exception rather than the rule in such problems, the stuttering individual is often regarded as a neurotic making yet another self-defeating adjustment in order to cope with the interpersonal relationships of life. Rieber (1963) has reviewed the literature relating stuttering and the self-concept which in the main supports the conclusion arrived at by Fiedler and Wepman (1951). These authors asked their stutterers to complete a forced distribution of Q-sort of 76 descriptive items reflecting Henry Murray's theory of personality structure. Since stuttering is held to be a socially handicapping disorder, it was thought that it would cause the stutterer to have a self-concept which differed from that of the non-stutterer. Intercorrelations among the data, however, revealed no characteristic differences.

Other writers, particularly those concerned with the treatment of stuttering, have concluded that self-attitudes are significant. Shearer (1961) postulated that dissociation often occurs while the individual is stuttering because if
it did not a negative self-image would be received from observers. He defined the therapy of these patients as at the moment consisting of attempts to help them reconcile the horrible stuttering self with the good self by watching themselves speak and recognizing their speech in tape-recordings. Administration of the Who Are You? questionnaire led to the use of such theory and techniques in therapy. Zelen, Sheehan and Bugental (1954) found that of their eleven scoring categories, only two received significantly more responses from normal subjects than from stutterers. Those categories were age and sex. The stutterers, who were undergoing group therapy, made more positively toned statements about themselves; and of this experimental group those for whom therapy was successful made fewer negative statements and mentioned social status more often than the unsuccessful patients. From these findings the authors concluded that 'a fundamental goal in the treatment of stuttering is the alteration of the stutterer's attitudes and perception of himself' (1954, p.170).

Another disorder with significant interpersonal connotations which is often treated as a neurosis is alcoholism. It is difficult to settle on criteria which enable the description of one person as an alcoholic while another is referred to as merely a heavy drinker. One such description
of an alcoholic addict is that of an individual who is making an inadequate adjustment to life, be it psychotic, neurotic or antisocial in form, which is immediately due to drinking too much too often. Obviously other factors contribute more significantly to the basic problem, but the drinking habits are the most superficial of the difficulties and therefore the first to be tackled. Since this behaviour too results in a social problem, differentiation by the self-concept is again predicted. Connor (1962) has reported a thorough investigation of the self-concept of alcoholics, defining these subjects within the frame of reference outlined above. He administered to 347 male alcoholics a list of the Gough adjectives. The resulting data enabled him to identify adjectives which were checked by the alcoholics alone, by the control group alone and those which had some overlap. Non-alcoholics checked some 27 adjectives which were not checked by alcoholics indicating some differences in self-concepts. An index of self-acceptance, consisting of the ratio of the number of favourable adjectives checked to the total number of adjectives checked, was lower for alcoholics than non-alcoholics and almost as low as that for a neurotic group. Connor concluded that self-descriptions of alcoholics indicate a generalised lack of organization and integration of the self.
The Self in Delinquency

Another readily distinguished group of individuals are those who offend against the agreed codes of society, that is the law-breakers. Certainly to claim that everyone who offends in this way is abnormal would be inaccurate, but many of those who are convicted do exhibit certain characteristic modes of behaviour which may be related to distinctive self-concepts. The majority of adult offenders are classified as inadequate personalities or psychopaths, while the juvenile offender, the delinquent, is characterized by 'immaturity, egocentricity and inability to establish emotional relationships with others' (Hinsie & Campbell, 1962, p. 183).

Since delinquency is a pressing social problem in most Western cultures great efforts have been made to isolate all the aspects of the phenomenon and the self-image of the individual has been no exception. Even the body-image, the physical 'me', has been described as a distinguishing and contributive characteristic. Kaufman and Heims (1958) have postulated that delinquent mechanisms are related to an underlying depression which is manifested in a distorted body-image. As to the attitudes to self of the delinquent, the early work of Carl Rogers and his co-workers is suggestive. In their study of delinquents they took ratings of family atmosphere, education, neighbourhood influences, social
experiences, health and heredity as well as a rating of the degree of self-understanding, and the last-named was found to be the best predictor of delinquency two to three years later (Rogers, Kell & McNeil, 1948).

Trent (1957; 1959) examined in some detail the relationship between self-concepts and social empathy in delinquents, the latter being an ability by diagnostic criteria they lack. He asked a group of boys undergoing reformatory training to predict the sociometric scores of themselves and others in the group and found that accuracy improved with length of cottage stay (1957). This experiment also revealed that perception of own status was related to actual sociometric status, while perception of others was not. The delinquent group was superior to a high school group in perceiving others' status, but inferior in perceiving their own. Later, Trent (1959) attempted to relate the variables of sociometric status, length of institutionalization, accuracy of perception of own and others' status and anxiety as measured by the Children's Manifest Anxiety Scale in the delinquent group. The only significant relationship found was again between perception of own status and actual sociometric status. Strodtbeck, Short and Kolegar (1962) found that sociometric pairs tended to have similar self-descriptions when they gave a delinquent and a control group a paired comparison
adjective list. The two patterns of self-description which distinguished the two groups as expected were cool, aggressive, mean and tough versus the clean, helpful, loyal scout type.

So successful have some of these investigations been in establishing self-concept structure as significant in delinquency, that there have been several reports published which refer to the self-concept as an insulator against delinquency (Reckless, Dinitz & Murray, 1956; Reckless, Dinitz & Kay, 1957; Lively, Dinitz & Reckless, 1962). The authors have concluded that the non-delinquent boy is characterized by the self-concept of 'a good boy', who is law-abiding, has strict values and conforming to the expectations of parents and teachers. The most successful insulation against future delinquency appeared to be a favourable self-image or self-acceptance.

Although the term is not recognized as describing a standard psychiatric category because the underlying behaviour patterns are not clearly understood, psychopathic is the description applied to a significant proportion of persistent adult offenders. Amongst his other attributed characteristics the psychopath is unreliable, untruthful, insincere, egocentric, shameless, lacking in insight, emotionally unresponsive and exhibiting poorly motivated antisocial behaviour. In sum, he shows a lack of integration of the affective
components of personality. Worcel and Hillson (1958) conducted an experiment very similar to that with neurotics with these subjects but found greater rather than less self-acceptance as measured by the Phillips Self-Activity Inventory. On the other hand, Foulds, Caine and Creasy (1960), using a self-criticism score derived from the M.M.P.I., found that psychopaths criticized themselves more than normal control group subjects but less than neurotics. Foulds (1960) summarized these findings and concluded that psychopathic criminals do show that high degree of self-acceptance which might be expected from their characteristic behaviour.

These studies have concerned male offenders but women, who for some reason are described as delinquent, have come under scrutiny. Cassell and Clayton (1961), for example, administered a test of social insight to a group of women in a correctional institution requiring responses for actual, ideal and would-be self. Only the actual and ideal scores showed significant correlations, and as about half the scores paralleled typical norms interpretation of results is inconclusive. More fruitful is the work of Epstein (1962) who examined the self-images of a number of female adolescents and contrasted them with normal adolescent girls. Significant differences were found, delinquents having a more
negativistic view of themselves and their future goals, and showing less group identification.

Evidence concerning the relationship between self-concept structure and psychopathology or maladjustment is not, then, easily interpreted. Some relationship is suggested but self-images characterizing specific disorders have not been isolated. In the light of this conclusion, further validation of the Ideo-Q-Sort is best attempted as a demonstration of differentiation by the test scores of the psychiatric patient group from the non-patient group, rather than discrimination of specific but inadequately described disorders.

Experiment VII

Aim

The Ideo-Q-Sort, the instructions for which are found in Figure 15 of the Appendix, was devised by Shlien (1961b) as a measure of self-acceptance. It has proved difficult, however, to provide validation for this measure in that it does not correlate significantly with other measures of attitudes to self such as the D score of the I.A.V., the C.P.I. Sa scale, and a variety of self-sentiment measures devised by Cattell. (See experiments V and VI). A significant coefficient is demonstrated between I-Q and Column II scores of the I.A.V., which in turn correlates highly with
interviewers' ratings of self-acceptance and with seven out of ten other so-called measures of self-acceptance (Table 4). Yet since the demonstrated correlation is low there is still much variance to be accounted for and information as to the meaning of II is inadequate for definition of the variable or variables measured by I-Q. Although this definition is not secured, the test may still be useful if it discriminates successfully between populations of subjects. Discrimination is much needed in the area of psychiatric disorders, to aid diagnosis, prognosis and treatment; but in the light of the inadequacies of the diagnostic categories outlined above it appears more reasonable to explore I-Q scores in generally maladjusted and so-called normal groups. The aim of this experiment is to demonstrate successful discrimination by the Ideo-Q-Sort between hospitalized psychiatric patients and a control group of supposedly normal subjects, regardless of the identity of the phenomenon being measured.

Hypotheses

The null hypothesis tested states that there is no significant difference in either central tendency or dispersion of scores on the Ideo-Q-Sort for an experimental group of psychiatric patients and a group of normal controls.

Method

The selection of subjects and procedure of the experiment was guided by known relationships with measures of self
variables which suggested that some variables should be carefully controlled while others might be ignored. Self-acceptance is known to be related to adjustment, from the work of Perry (1961) for example, and to its concomitants, acceptance of others and defensiveness. These were some of the variables which probably differentiated between the experimental and control groups and so were the variables which were systematically manipulated. Some sex differences in self measurement are apparent (Martire & Hornberger, 1957; Rongved, 1961; Experiment II), so that subjects of both groups were matched for sex in order to control for spurious differences in scores. Age differences, too, have been observed, at least on the W.A.Y. (Mason, 1954), although there is no evidence to suggest that self-acceptance is a function of age. Control of the age factor was considered a useful precaution. The interaction of social class and self-acceptance is not significant (Hill, 1957), so that this variable was ignored when selecting the samples.

The two samples selected consisted of 30 subjects respectively. Precise matching of pairs of subjects was impracticable, so that matching was in terms of the distribution of the relevant variables through the groups. Both groups contained fifteen male and fifteen female subjects. The variable of age was controlled generally, in that with
similar distributions the range for the experimental pathological group was 19 to 55 years while that for the control group was 20 to 57 years. No attempt was made to control the variable of marital status since this might well be symptomatic of the maladjusted group. Of this experimental group ten subjects were single, ten married and ten separated or divorced, compared with seven single subjects and twenty-three married subjects in the control sample which was randomly selected from the general population.

Some comment should be made on the pathological characteristics of the experimental group. The symptoms of these patients led attendant psychiatrists to describe them as sociopaths, depressives, hypochondriacs, schizophrenics, inadequate personalities and so on. On admittance seventeen of the thirty subjects presented as alcoholics, although in several cases addiction was not really a problem. The primary diagnoses for the group, agreed upon by two psychiatrists, were seven alcoholics, fourteen patients with character or personality disorders and nine individuals in a psychotic state. This categorization may be a misleading way of describing individuals but does serve to give some suggestion of the dominant behaviour patterns. Each patient had been in residence at Kenmore Mental Hospital for between one and five months, where he or she was treated with tranquilizers,
occasional mild sedation, conditioning therapy for those with alcohol addiction problems and participation in a very large therapeutic community.

The procedure followed in the experiment was identical for both groups of subjects. Instructions and materials for the Ideo-Q-Sort were presented to three or four subjects at a time to allow for individual explanations and encouragement, the instructions being presented orally. The subjects were not permitted to discuss their responses as changes in self-concepts are known to reflect to some extent the opinions of others (Harvey, Kelley & Shapiro, 1956). Admittedly the effects of such interchange before the experiment could not be controlled, and it is possible that the hospitalised patients would have been stimulated to such interchange during therapy. The author, however, observed no relevant discussion among the patients in small group therapy sessions, and the promptings which the patients needed to complete their twenty-five statements indicated that they had not verbalized their self-concepts previously. One female member of the experimental group failed to complete the required number of items, while all the control group finished the test. Kendall's tau was run between the self and ideal sorts to yield the final correlation measure of the I-Q.
Analysis of Data

In order to test the null hypothesis preliminary description of the distribution of the two sets of scores must be given. For the I-Q scores of the experimental group the mean was +.091 with a standard deviation of +.39 in contrast to the mean of +.250 with a standard deviation of +.28 for the control group. Such results suggested an immediate test of the aspect of dispersion in the null hypothesis. An F test of the differences in standard deviations or a test of the significance of the ratio of the two variances (Guilford, 1956) was applied, and resulted in an F value of 1.99 which is significant at the .05 level (Guilford, 1956, Table F). In other words the null hypothesis of no difference in dispersion of scores was rejected.

This rejection raised problems for the analysis of the other aspect of the null hypothesis, that is the lack of difference in central tendency. Since there was no reason to suspect that the two population distributions of scores were not normal, and since the samples were small, a t test of the difference between correlated means would be appropriately employed here were it not for the demonstrated difference in variance showing that the two samples do not arise from the same population. Only some test which does not rely on an estimate of the population parameter, the
standard deviation was applicable. The Median test (Siegel, 1956) is an appropriate procedure for testing whether two independent groups differ in central tendencies and is calculated by a chi^2 formula which is corrected for continuity. In view of the evidence for the relationship between adjustment and self-acceptance examined above it was predicted that the median of the control group would be higher than that for the experimental group. The test of the null hypothesis of central tendency was thus one-tailed. The chi^2 value calculated from the data was 1.62, the probability level of which is only .10 (Siegel, 1956, Table c). The hypothesis of no significant difference in central tendency was not rejected.

Discussion

This experiment does not give rise to unqualified support for the validity of the Ideo-Q-Sort as a discriminator of a patient group. In fact the scores of patients and non-patients were no different except that there was a greater range of scores among the psychiatric patients. This conclusion suggests that the design which by-passed diagnostic sub-classifications as unreliable in so doing nullified the effects of differences in self-acceptance hypothesized in other studies. The size of the abnormal sample does not justify the comparison of such different groups within the sample. Neither is the author sufficiently satisfied with
the validity or reliability of the diagnostic sub-classification, widely used as they are. What does show promise of usefulness is a classification system based on the methods of treatment found to be appropriate. In methods of psychotherapy an estimate of the patient's attitude to himself is often helpful. Evidence concerning the structure of the self during psychotherapy is therefore examined, prior to a description of an experiment designed to evaluate the performance of the Ideo-Q-Sort as an estimate of changes in self-acceptance during a quasi-therapeutic experience.

_Counselling and Psychotherapy: Self changes as criteria of success_

The attitudes which the patient experiences towards himself have come to be regarded as of significance by the majority of psychologists and psychiatrists who attempt to help him. In a recent comparative study of systems of psychotherapy, Ford and Urban (1963) examined the theories and practices of ten schools of psychotherapy, of which seven, those of the ego-analysts, Adler, Rank, Rogers, the existentialists, Horney and Sullivan, gave prominent place to 'a particular set of thoughts which we will call self-evaluative thoughts' (1963, p.60). For such therapists the development of normal behaviour and personality organisation involves the premise that 'the responses a person learns to make to
his own behaviour become inter-related in patterns, and that these, in turn, become determinants of still further response patterns which come to be acquired' (1963, p.617). The learning situation provided by the unique relationship which a patient may have with therapists of any of these schools is an opportunity for him to form new response patterns, to explore new self-attitudes. This description of psychotherapy is appropriate too, to some extent, to the processes of guidance and counselling. The term counselling is used here to refer to a relationship through which one of the individuals involved is trying to solve his problems of adjustment, these problems usually not involving any degree of mental illness.

In such counselling, often conducted within the context of school or university, attitudes to self have been regarded as being of importance in both method and evaluation for some considerable time. Hobbs (1949), for example, defined guidance as 'the function of providing an individual with optimum opportunity to examine his self and his potentialities in relation to his world' (1949, p.72b). Taking a somewhat different attitude to his own role in counselling, Torrance (1954) pointed out the value of knowledge of the self-evaluations of students requiring counselling which would contribute to the validity of the advice given. O'Dea and
Zeran (1953), more interested in evaluating the efficiency of counselling and guidance, declared after an extensive review of the relevant literature that changes in the self-concept are amongst the most valuable of the evaluating measures.

Similar points of view have been taken up with enthusiasm. The validating evidence, however, is rather more sparse. Comparisons of scores on an interest test with self-estimates of interests before and after counselling demonstrated that students show less discrepancy after counselling (Singer & Stefene, 1954). More impressive is the study of Ewing (1954) who asked 39 college students undergoing counselling to give ratings for self, ideal, father, mother and counsellor on 100 trait names. Changes in ratings were found to be correlated with counsellors' estimates of improvement. Those students who were rated as the most improved changed the rating of the self in the direction of the ideal and of the rating of the counsellor.

It is within the psychotherapeutic framework of Carl Rogers that most use of the self-concept change as a measure of efficiency has been made. Rogers, himself, claims that during therapy measurable changes in attitudes towards the self and in self-perception occur, and that these changes are probably related to changes in psychological and physiological
tension, in personality structure and in social attitudes (Rogers, 1950). The first indication that therapy is a process of changing the concept of self was produced by Raimy (1948) who studied the therapeutic interviews of 14 successful and non-successful clients, classifying their responses as positive, negative, ambivalent, external references and questions. After demonstrating the reliability and validity of his method, he showed that the interviews of the successful cases as compared with those of the unsuccessful contained a greater decrease in the number of negative self-references and a greater increase in the number of positive ones. The original rough technique of analysis which Raimy used was soon refined to provide objective ratings of attitudes to self expressed during interviews (Bugental, 1952).

Similar methods were used by two workers who were concerned not with self-attitudes alone but with social attitudes during therapy. Sheerer (1949) analysed client's statements reflecting their acceptance of self and acceptance of others, and found them to be related and both susceptible to alteration through therapy. Stock (1949) examined interview statements from 10 cases, and found that in the early stages of therapy those clients who had negative feelings about themselves also had negative feelings about others.
Acceptance of self was related to acceptance of others. During therapy, as the feelings about the self changed positively so did those about others.

The discrepancy model of self-acceptance was first devised by Butler and Haigh (1954) and was used to assess the effects of therapy. The most popular form is the Butler and Haigh Q-Sort, otherwise known as the Chicago Q-Sort reflecting its development at the Chicago Counselling Center. Butler and Haigh predicted that client-centred counselling would result in a decrease in self-ideal discrepancies and that self-ideal discrepancies would be more clearly reduced in clients who had been judged to have improved. Both these hypotheses were upheld in the experimental group undergoing treatment but not in the control group. Rosalind Dymond Cartwright has used the Chicago Q-Sort in a number of studies (1957; 1961; 1962), establishing patterns of self-attitudes in students and general clients and reaffirming the presence of greater consistency of self-attitudes in clients after therapy.

She edited the publication in which much of the evidence for the efficiency of client-centred therapy was collected, *Psychotherapy and personality change* (1954), in which yet another experiment confirming the theory supported above is reported by her. Of the many studies reported in the book only a certain number involved self-concept measures. One of
these is that by Rudikoff who was able to confirm the relationship between self-acceptance and acceptance of others and the changes in these feelings during therapy. In another, Vargas found that with counsellor judgements as a criterion of successful therapy there was a positive correlation between this variable and increasing self-awareness, but not between it and the Q-sort adjustment score.

A more recent experiment in which the Chicago Q-Sort was employed was that of Satz and Baraff (1962), the results of which are especially interesting because the subjects selected were psychotics as distinct from all those involved in earlier experiments which are best described as neurotic. In addition the authors were not so emotionally involved with the form of therapy used as were the authors cited above. They selected two groups of subjects, each with eight members, one of which was treated with occupational therapy only for 13 weeks while the other experienced a variety of client-centred group therapy involving some degree of basic encounter (Rogers, unpublished manuscript). Hypotheses predicted firstly that large self-ideal discrepancies would be indicative of inadequate adjustment, and secondly that such discrepancies would decrease with group therapy. The first hypothesis was supported while the second was not, so that it would seem that self changes which result from therapy
do not occur in cases of gross maladjustment and loss of contact with the environment.

That client-centred therapists, working within a self theory framework, should find and bring about changes in the self-concept is not remarkable. The internal consistency of the theory is demonstrated, but the construct validity of the therapeutic method employed is still not beyond question. A more interesting application of the self-concept change evaluator lies in its use within a different theoretical framework. Many of the psychoanalytically oriented therapies could profitably be tested in this way, and indeed some psychoanalysts do acknowledge the significance of the self-processes in psychotherapy. Sterba, for example, admitted that 'our analyses of resistances, the explanations and interpretations that we give to our patients, our attempts to alter their mental attitudes through our personal action upon them - all these must necessarily start with the ego' (1934, p.117). Hollon and Zolik (1962) have applied the self-ideal discrepancy measure of self-acceptance to a psychoanalytic therapy situation. Eight volunteer subjects were compared with seven neurotics whose symptoms were recorded on the Mooney Problem Check List. Analysis of data indicated that the neurotic group who received psychoanalytically-oriented therapy experienced a significant decrease in symptoms and a significant increase in self-esteem.
The studies reported above in general agree that increase in self-acceptance is related to success in psycho-therapy, so that this variable is fast becoming the main criterion for successful therapy. This criterion is a doubtful one, however, because of the psychological measurement involved. The reliability of the tests used is inadequate. Neither is it known whether any of the tests yields a measure which may be defined as self-acceptance. This inadequacy would have little significance if it could be shown that these measures do differentiate between successful and unsuccessful therapies, but this is not clearly indicated by the studies reported above. Control factors are not clearly distinguished. For example, of the subjects examined by Cartwright (1961) the experimental group were poorly adjusted in the self to mother aspect in contrast to the control group who were poorly adjusted in the self to father relationship before therapy commenced and the experiment began. In other words, the groups were not matched. In another attempt to control intervening variables the same subjects were used with both experimental periods of therapy and control periods without therapy (Rudikoff, 1954). During the control period for these subjects their ideal ratings rose, suggesting unsuspected determining factors in operation. An experiment designed to assess changes in self-description in the absence
of therapy was devised by Taylor (1955), who obtained repeated Q-sort self-descriptions from his students. He found that replication of measures led to more positive and more consistent self-concepts, suggesting that self-concept changes are too readily achieved to be other than a dubious criterion for counselling success.

The Self Concept of the Therapist

So much may be said of the self-concept of the patient in the therapeutic situation, but such conclusions ignore the existence of the other individual making up this intrinsically two-way relationship. Several considerations suggest that the self-concept of the therapist may fluctuate according to his experiencing. Not the least of these is the evidence that college students who experienced companionship with hospitalized mental patients showed a concurrent positive change in self acceptance (Holzberg, Gerwitz & Ebner, 1964). It is not suggested that the situation is strictly analogous with the therapeutic situation, but such movement of a self variable in one group suggests the possibility of movement in another. Some authors have expected to observe such movement in the therapist accompanying the movement in the patient. Frisch and Cranston (1956) administered to a patient and his therapist fourteen Q sorts tapping subjective and external viewpoints of self, ideal, the other and so on.
The QSorts were intercorrelated and the factors analyzed according to Thurstone's centroid method, the factors being rotated to orthogonal simple structure. The three resulting factors were named as social acceptance, struggle towards personal acceptance and hostility. The direction of change during therapy was from social acceptance to personal acceptance.

Of very real use would be an instrument which could predict the success of a therapist. It is possible that the self-concept is one characteristic of the individual which enables differentiation of therapists. In a test of this hypothesis Bandura (1956) compared the anxiety levels of psychotherapists, their self-insight and their psychotherapeutic competence as rated by supervisors. Intercorrelations of the three measures revealed a significant relationship between anxiety and competence only. Insight is not related to therapeutic competence, but there are other aspects of self-variables to be considered. Kates and Jordan (1955) directed their attention to an aspect which they described as the social stimulus self, the self which 'I' present to others. This derivative of the 'social me' of William James was compared with the actual self-image gained through introspection. Ten judges were able to match self-descriptions and social stimulus self descriptions of 14 clinical psychology
graduates at the .01 level of significance. An inverse relationship was found between the frequency with which subjects were correctly matched and their ranking as potential therapists. Apparently success as therapists is predicted for those subjects whose private self-images differ markedly from the social stimulus self which they present. This conclusion may lead to doubts about one of the conditions which Rogers and his co-workers list as being necessary for successful therapy, congruence. Of course the therapist's self attitudes in the actual therapeutic situation are yet to be isolated.

The Self in Basic Encounters

One major area of activity in which self-concept change may serve as a significant evaluator is that of the intensive interpersonal interactions within small groups which are becoming increasingly popular. Carl Rogers has referred to these groups as basic encounter groups, but they are also known as T-groups, workshops and so on. He has described them as having certain characteristics in common:

The group in almost every case is relatively unstructured, choosing its own goals and personal directions. The group experience, usually, though not always, includes some cognitive input, some content material which is presented to the group. In almost all instances the leader's responsibility is primarily the facilitation of the expression of both feelings and thoughts on the part of the group members. Both
in the leader and the group members there is some focus on the dynamics of the immediate personal interaction...

There are also certain practical hypotheses which tend to be held in common by all these groups. ... That in an intensive group experience the individual will gradually drop some of his defenses and facades; that he will relate more directly on a feeling basis (come into a basic encounter) with other members of the group; will come to understand himself and his relationship to others more accurately; that he will change in his personal attitudes and his behaviour; that he will subsequently relate more effectively to others in his every day life situation. (Rogers, unpublished manuscript).

If such are the expectations and experiences within these groups it is reasonable to predict that some changes in the self-concept will occur during, and to some extent after the conclusion of the process.

In the experiment of Bower and Tashnovian (1955) a 76-item Q-sort was made by 75 subjects starting a mental health workshop, 28 subjects of a university workshop in guidance and a university class of 34 students of research methods. The sort was repeated two weeks later. Subsequent analysis of data revealed that the mental health group showed the greatest change in the self-sort, while the self did not appear to change more than the ideal. The self and ideal sorts for the two workshop groups became significantly more congruent over the two week period. The Butler and Haigh Q-sort was employed as a measure of self variables in a similar experiment involving comparison of a group of N.D.E.A.
guidance institute members and a control group of science discussants (Winkler, Munger, Gust & Teigland, 1963). Conclusions drawn were in line with those from the earlier experiment. The experimental group showed more positive feeling to others and a greater gain in self-acceptance. The sorts of the individuals of both groups became more similar to those of the other members of the group over time.

Apart from his own basic encounter groups, the groups which most closely approximate the description given by Rogers are the sensitivity training groups or T-groups conducted at the National Training Laboratory. Burke and Bennis (1961) reported a study in changes of self feeling within this setting. They tested 84 members of T-groups with the Semantic Differential Technique at the middle of the first week and the end of the third week of their programme. A factor analysis of scores yielded three factors, accounting for 86% of the variance, which were defined as friendly evaluation, dominance potency and participation activity. Significant changes in time were found between actual and ideal self. Since such changes are observed in these groups, it seems possible that they occur in similar groups conducted in Australia. Here, then, is another opportunity to assess the validity of the Ideo-Q-Sort, this time as a measure of change in a self variable.
Experiment VIII

The Counselling and Therapy Workshop which has been run on client-centred principles at the University of New England for the last three years provided an excellent opportunity to gauge the efficacy of the Ideo-Q-Sort as a measure of changes in self attitudes in a basic encounter group. Individuals who attended the workshop in May, 1965, were selected as subjects for this experiment. The two groups in which they worked had the structure and aims described above as characteristic of a basic encounter group. Neither of the two leaders chose to participate in the experiment.

Aim and Hypotheses

If the Ideo-Q-Sort is to be used as a measure of change the first requirement of the measure is that it be reliable over time. The retest reliability of I-Q scores must be established, and it was convenient to use for this purpose the data collected from the control group selected to match the experimental group of basic encounter subjects. The first hypothesis which was tested was, therefore, one which postulated no significant correlation coefficient between I-Q scores of a group of control subjects and I-Q scores from the same subjects after an intervening period.

If the test scores demonstrated acceptable test-retest reliability, the difference in scores for the experimental
group over the intervening period might be accepted as actual estimates of change. If, on the other hand, no satisfactory reliability was demonstrated, the relationship between the two sets of scores of the experimental group was still of interest. The second hypothesis reads that there is no significant correlation coefficient between I-Q scores of the experimental group and I-Q scores after an intervening period.

Independent of these estimates of reliability was the comparison of the experimental and control groups with respect to changes in I-Q scores. Changes of scores may be classified as taking place in either a positive or negative direction, that is there may be greater or less congruence between self and ideal after certain experiences. The third hypothesis tested the significance of the difference in the proportion of the experimental and the control group which showed positive or negative changes on scores of the Ideo-Q-Sort.

Method

Selection of subjects for the control group to match the pre-determined experimental group involved the consideration of several independent variables. Because of information gleaned from the literature the variables of sex and age were grossly controlled as in Experiment VII. The experimental group comprised eleven men and seven women, while nine men
and six women made up the control group. The age range of the control group was 21 to 55 years as compared with the 27 to 49 year range of the experimental group. The occupational status of the experimental group was unusually uniform and highly selected by virtue of their attendance at the workshop, so that the control group was selected according to the same occupational criteria. Consequently this matched group contained only clinical psychologists, marriage guidance counsellors, student counsellors, social workers and academics interested in counselling and psychotherapy.

Some variables, then, were controlled in their effects. Others, the effects of which are known to be significant in the measure of self variables, could not be controlled because of their intrinsic part in the situation of basic encounter under examination. It is accepted that adjustment is related to acceptance of self or the self-ideal discrepancy, and it may be suspected that the very choice of participation in the workshop is indicative of degree of adjustment and that the control group might well differ in the degree of its psychological well-being. This variable could not be fully controlled except to the extent of obviously successful occupational adjustment in all the subjects. Acceptance of others and acceptance of self, too, are known to be positively related, and increase in acceptance
of others is one of the unwritten laws of these basic encounter groups. This variable is another part of the experimental situation which may have had its effect on the self-concept measures, as is the fact that a member of one of these groups is highly likely to receive some indications of how others see him possibly resulting in cognitive dissonance. These evaluations have been shown to have marked and lasting effects on the self-concept of the individual (Hicks, 1962; Haas & Maehr, 1965).

For the experimental group the Ideo-Q-Sort was administered to the groups of subjects, instructions being given orally, before the first group meeting and nine days later as the workshop drew to a close. Administration of the test to the control group was somewhat more difficult since these subjects were located throughout Australia. A letter was sent to each of these subjects explaining the purpose of the study and asking them to complete the test twice, each time making up a set of items and following the set instructions which were enclosed. Also enclosed were the two packs of cards and a stamped, addressed envelope. Several other conditions of administration were held constant for both experimental and control subjects. All subjects believed their responses to be anonymous, although in fact identification was possible. No subject studied his first response to the test before his
second performance after the standard nine day interval which was common to all. The I-Q score was derived by a Kendall's tau correlation coefficient run between each pair of sorts.

Analysis of Data

The first hypothesis involving the reliability of control group scores could not be analysed by use of the formula for Pearson's product moment correlation coefficient because the trend of the relationship between the two sets of scores was not rectilinear. Kendall's tau (1948) was applied and its significance examined by computation of a Z score (Siegel, 1956). Under these circumstances the test-retest reliability of the Ideo-Q-Sort as measured in the control group was +.210, a value which is not significant at the .05 level. The first null hypothesis was not rejected, and the reliability of the Ideo-Q-Sort may be considered not to differ from zero.

The second null hypothesis was analysed in like manner, yielding a tau of +.477. This value is significant at the .01 level, so that the null hypothesis of no relationship between the two sets of scores for the experimental group was rejected. Apparently any changes that did take place during the workshop were distributed throughout the individuals participating so that rank orders of magnitude of self-acceptance were maintained to some degree, while random changes occurred in the control group.
Finally the data must be analysed to confirm or deny the prediction of differences between changes in the two groups. Comparison of the direction of the change would seem more profitable than any analysis of change magnitude considering the lack of reliability of the I-Q scores. Since direction of change yielded a dichotomous measure of positive or negative a technique for analysing discrete data from two small independent samples was appropriate. The Fisher Exact Test (Siegel, 1956) was applied to the 2x2 contingency table of direction of change against type of subject group. The difference in the proportion of the experimental group whose I-Q scores increased and the similar proportion in the control group, while in the expected direction of more positive change in basic encounter members, was not significant at the .05 level.

Discussion

The conclusions necessarily drawn from this experiment are that although changes in self-acceptance were in all probability experienced by the members of the basic encounter groups at the University of New England they were not successfully detected by the Ideo-Q-Sort. It may be argued in defence of the test that several of the independent but uncontrolled variables basic to the design of the experiment may have contributed to this conclusion. At any rate results
reported from earlier experiments were not supported as to direction of change. However the inevitable conclusion which delivers the death blow to the Ideo-Q-Sort as a measure of a self variable is that the test may not be regarded as reliable. Not only does the test-retest coefficient fail to reach the accepted standard for reliability coefficients, but no significant relationship is demonstrated between the two sets of scores taken only nine days apart. It has been suggested that great consistency over time might not be expected of aspects of the self-concept and therefore not of test scores representing them. A test which does not provide a score which is reasonably consistent over a period of a mere nine days, however, is unlikely to prove useful to any psychologist.

Conclusions: More contradictory demonstrations and unconfirmed hypotheses

In this addendum in support of the main thesis of an inadequate level of functioning of self constructs and self variables, the Ideo-Q-Sort is examined more fully. As a discriminator between psychiatric patients and normals it fails, because although a significant difference in the ranges of the scores of the two samples was found there was no difference in central tendency. The test fails, too, as a measure of change, for which purpose its scores show
insufficient reliability. As in the area of general psychology, the self-measure employed under abnormal conditions did not fulfill the predictions gleaned from a review of the current literature.
CONCLUSIONS
This examination of the notion of self has been carried out with reference to both theoretical and empirical approaches of psychologists. These approaches are intrinsically clearly distinguished in this field of enquiry. The history of the notion was examined, giving some impression of the thoughts concerning the self expressed before present methods of study became available. Current theories of self, too, were explored. Then followed a report of what is known about the self in terms of relationships established experimentally between concomitant variables. Such relationships as predicted from the theories of the self gave support to the theories, but the measurements on which they were based were then called into question.

A summary of the findings reveals insufficient integration of research results and much technical inadequacy. The majority of the early writers were concerned with the individual defined as part of and belonging to himself, the self as subject alone or the self as both subject and object. In contrast, contemporary theorists have ignored the feeling of identity and the observer self, the majority forming constructs of the self-concept or self-sentiment type. This preference for the treatment of the object self exclusively is probably due to the demand for empirical verification of theories. Conceptually, at least, it is easier to devise
a test for the observed object. In practice, however, it is not easy to measure the object self. Some hypotheses evolved from theories current and antique, are supported by experiment under normal and abnormal conditions; but Wylie (1961) has shown up the technical faults and gross lack of information about the measures employed. A series of experiments were carried out and demonstrated the lack of success of predictions made from a thorough survey of the literature concerning the tests.

The most valuable step in establishing a useful notion of self in psychology would be to provide a valid measure of some self variable. Attempts were made to establish such a measure but they were unsuccessful. No concurrent criterion was established by agreement of test scores. The structure of a new phenomenological measure selected was not defined. Discrimination by the measure was inadequate, and its scores were not sufficiently consistent for use.

The validity of a construct or variable of self remains yet to be established.
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APPENDIX
## Contents

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Figure 2. Outlines of Sarcognomy.

Figure 3. A Chronological Outline of the Major Self Theorists (500 B.C. - 1935 A.D.)

B.C. 500 - 0  Plato  Aristotle
A.D. 1 - 500  Plotinus  St. Augustine

501 - 1000
1001 - 1500
1501 - 1600
1601 - 1700  Hobbes  Locke  Descartes

1701 - 1800  Hume  Berkeley  Condillac  Kant

1801 - 1900  Spurzeim  Maine de Biran  Hegel  Schopenhauer

Buchanan  J.S. Mill

Baldwin  James  -- Royce  (Freud)

1901 - 1935  McDougall  Calkins

Cogan et al  Husserl

Mead  Koffka
Figure 4

Items of the Social Compatibility Scale

<table>
<thead>
<tr>
<th>Number</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All of these statements may be true of X.... at some time. Decide whether each is true of him

- always 1 5 Scoring is
- often 2 4 carried out
- sometimes 3 3 according to the
code number or
- rarely 4 2 letter in
- never 5 1 brackets.

Then write one of these words in the space provided.

Example

X.... is _______ cheerful at school.

If X.... is sometimes cheerful at school write
the word sometimes in the space. If he is never cheerful
write

X.... is never _______ cheerful at school.

Use any of the five words listed above, but you must
use one of those words.

1. X.... _______ makes new friends easily. (B)
2. When he is looking for something to do, X.... _______
   invites the boys along. (B)
3. X.... _______ likes to be with his school friends. (B)
4. X.... _________ feels lonely. (A)
5. X.... _________ goes to visit friends. (B)
6. His schoolmates _________ criticize X.... . (A)
7. X.... is _________ easy to get on with. (B)
8. In the week-ends the fellows _________ like to be with X.... . (B)
9. During the holidays X.... _________ likes to be out with the boys. (B)
10. Friends _________ come to visit X.... . (B)
11. X.... is _________ fun to be with. (B)
12. When the boys are looking for something to do they_______ invite X.... along. (B)
13. X.... _________ likes the people he goes around with.(B)
14. X.... _________ criticizes his schoolmates. (A)
15. During recess X.... _________ talks a lot. (B)
16. X.... _________ enjoys working with the people he goes around with. (B)
17. After school X.... _________ plays round with the boys in his class. (B)
18. X.... _________ finds it hard to talk to strangers. (A)
19. X.... _________ likes to be by himself. (A)
20. His schoolmates _________ like to be with X.... . (B)
Figure 4. (cont.)

Each of these items contains three statements. Mark a cross in the box beside the one statement in each set which is most true of X....

21. a. Boys like X.... a lot. (3)
   b. Boys think X.... is alright. (2)
   c. Boys don't like X.... much. (1)

22. a. Girls like X.... a lot. (3)
   b. Girls think X.... is alright. (2)
   c. Girls don't like X.... much. (1)

23. a. X.... likes boys a lot. (3)
   b. X.... thinks boys are alright. (2)
   c. X.... doesn't like boys much. (1)

24. a. X.... likes girls a lot. (3)
   b. X.... thinks girls are alright. (2)
   c. X.... doesn't like girls much. (1)
Figure 5.
Analysis of Items of the Social Compatibility Scale

<table>
<thead>
<tr>
<th>Item</th>
<th>( r_b )</th>
<th>( t )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>+.435</td>
<td>1.500</td>
</tr>
<tr>
<td>2</td>
<td>+.555*</td>
<td>2.133</td>
</tr>
<tr>
<td>3</td>
<td>+.495</td>
<td>1.966</td>
</tr>
<tr>
<td>4</td>
<td>+.395</td>
<td>1.412</td>
</tr>
<tr>
<td>5</td>
<td>+.605*</td>
<td>2.443</td>
</tr>
<tr>
<td>6</td>
<td>+.453</td>
<td>1.688</td>
</tr>
<tr>
<td>7</td>
<td>+.529*</td>
<td>2.666</td>
</tr>
<tr>
<td>8</td>
<td>+.807+</td>
<td>3.720</td>
</tr>
<tr>
<td>9</td>
<td>+.360</td>
<td>1.355</td>
</tr>
<tr>
<td>10</td>
<td>+.496</td>
<td>1.966</td>
</tr>
<tr>
<td>11</td>
<td>+.408</td>
<td>1.566</td>
</tr>
<tr>
<td>12</td>
<td>+.583*</td>
<td>2.393</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>+.715+</td>
<td>3.074</td>
</tr>
<tr>
<td>15</td>
<td>-.184</td>
<td>0.165</td>
</tr>
<tr>
<td>16</td>
<td>+.298</td>
<td>1.000</td>
</tr>
<tr>
<td>17</td>
<td>+.278</td>
<td>1.032</td>
</tr>
<tr>
<td>18</td>
<td>+.528</td>
<td>1.727</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>+.387+</td>
<td>4.435</td>
</tr>
</tbody>
</table>

* signifies significance at the .05 level, while + signifies significance at the .01 level (after Guilford, 1956, Table D). None of the \( \chi^2 \) is significant at these levels (after Siegel, 1956, Table C), although the upper limit for the contingency coefficient is only .816.
Table 5. (cont.)

<table>
<thead>
<tr>
<th>Item</th>
<th>$\chi^2$</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>0.108</td>
<td>+.021</td>
</tr>
<tr>
<td>22</td>
<td>4.363</td>
<td>+.400</td>
</tr>
<tr>
<td>23</td>
<td>Not applicable.</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>4.013</td>
<td>+.395</td>
</tr>
</tbody>
</table>
SYMMONDS Picture Story Test. PI.

Figure 7.
<table>
<thead>
<tr>
<th>Category (Content)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The actual name of S is used as a response.</td>
</tr>
<tr>
<td>Sex</td>
<td>S responds with male or female, boy or girl.</td>
</tr>
<tr>
<td>Age</td>
<td>The actual age of S in years, or descriptively is recorded.</td>
</tr>
<tr>
<td>Occupation</td>
<td>S mentions his employment.</td>
</tr>
<tr>
<td>Family</td>
<td>Reference is made to the family of genesis or procreation.</td>
</tr>
<tr>
<td>Social Status</td>
<td>This category describes the standing of S in the community.</td>
</tr>
<tr>
<td>Social Relations</td>
<td>Interpersonal relationships in all areas of life are involved, with emphasis on communications.</td>
</tr>
<tr>
<td>Group membership</td>
<td>It is apparent that S sees himself as a member of a specific group.</td>
</tr>
<tr>
<td>Neutral</td>
<td>Identification is made by means of geography, location or nationality.</td>
</tr>
<tr>
<td>Uniqueness</td>
<td>This category entails recognition of the unique nature of the self as an individual.</td>
</tr>
<tr>
<td>Socio - Scientific</td>
<td>S makes a biological or sociological comment on the human species, thereby including self.</td>
</tr>
<tr>
<td>Physical</td>
<td>Characteristics of the physical self are identified.</td>
</tr>
<tr>
<td>Personality</td>
<td>Mental and emotional characteristics of the individual, references to his personality, are identified.</td>
</tr>
<tr>
<td>Category (Content)</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Values</td>
<td>Moral or political values are described.</td>
</tr>
<tr>
<td>Religious</td>
<td>S indicates some form of belief in a god.</td>
</tr>
<tr>
<td>Immediate</td>
<td>A reference is made to the immediate testing situation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category (Affect)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Affect</td>
<td>Approval of self-description is indicated in the choice of words and phrases, e.g. 'I am proud of being a Catholic'.</td>
</tr>
<tr>
<td>Neutral</td>
<td>No feeling tone is apparent.</td>
</tr>
<tr>
<td>Ambivalent</td>
<td>Both positive and negative feeling tones are present in reference to the same item.</td>
</tr>
<tr>
<td>Negative Affect</td>
<td>Disapproval of self-description is indicated in the choice of words and phrases, e.g. '... and I wish I were taller'.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category (Other)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repetition</td>
<td>A phrase of description appears more than once.</td>
</tr>
<tr>
<td>Incomplete</td>
<td>The seven responses required are not given.</td>
</tr>
</tbody>
</table>
Figure 11

The Index of Adjustment and Values
R.E. Bills, College of Education, University of Alabama.

DIRECTIONS
(Adult Form)

This device is a way of helping you to state some of your beliefs about yourself and other people. It tells nothing more than what you want it to say - there are no hidden scores or tricks. It will have value only if you are careful and do your best to give us an accurate description of yourself and other people as you see them.

On page of this booklet is a list of 49 trait words. You will be asked to answer three questions about yourself and three about other people for each of these traits. For yourself these questions are:
1. How often are you this sort of person, 2. How do you feel about being this way, and 3. How much of the time would you like this trait to be characteristic of you?

You will also answer these same questions about other people. In order to do this you will first think about other people like you, and then answer the questions as you think the average member of this group would answer it for himself.

Please complete the ratings for yourself before you make the ratings for other people. Be certain that you use the answer sheet marked SELF in the upper right hand corner.
for yourself and the one marked OTHERS when making the ratings for other people. Finally, please make the three ratings for each trait before going to the next.

On page is a list of 49 trait words and an example. Take each word separately and apply it to yourself (or to other people) by completing the following sentence:

I am (average person in my group is) a (an) _______ person.

The first word in the list is academic, so you would substitute this term in the above sentence. It would read:

'I am (He is) an academic person'.

Then decide how much of the time this statement is like you (him), that is, is typical or characteristic of you (him) as an individual, and rate yourself (him as he would himself) on a scale from one to five according to the following key:

1. Seldom, is this like me (him).
2. Occasionally, this is like me (him).
3. About half of the time, this is like me (him).
4. A good deal of the time, this is like me (him).
5. Most of the time, this is like me (him).

Select the number beside the phrase that tells how much of the time the statement is like you (him) and insert it in Column 1.

Example: Beside the term ACADeMIC, a number two is inserted
to indicate that, 'Occasionally, I am (he is) an academic person'.

Now go to Column II. Use one of the statements given below to tell how you feel (he feels) about yourself (himself) as described in Column I.

1. I (He) very much dislike(s) being as I am (he is) in this respect.
2. I (He) dislike(s) being as I am (he is) in this respect.
3. I (He) neither dislike(s) being as I am (he is) nor like(s) being as I am (he is) in this respect.
4. I (He) like(s) being as I am (he is) in this respect.
5. I (He) like(s) very much being as I am (he is) in this respect.

You will select the number beside the statement that tells how you (he) feel(s) about the way you are (he is) and insert the number in Column II.

Example: Beside the term ACADEMIC, number one is inserted to indicate that I (he) dislike(s) very much being as I am (he is) in respect to the term, academic. Note that being as I am (he is) always refers to the way you (he) described yourself (himself) in Column I.

Finally, go to Column III, using the same term, complete the following sentence:

I (He) would like to be a (an) __________ person.
Then decide how much of the time you (he) would like this trait to be characteristic of you (him) and rate yourself (him as he would himself) on the following five point scale:

1. Seldom, would I (he) like this to be me (him).

2. Occasionally, I (he) would like this to be me (him).

3. About half of the time, I (he) would like this to be me (him).

4. A good deal of the time, I (he) would like this to be me (him).

5. Most of the time, I (he) would like this to be me (him).

You will select the number beside the phrase that tells how much of the time you (he) would like to be this kind of person and insert the number in Column III.

Example: In Column III beside the term ACADEMIC, number five is inserted to indicate that most of the time, I (he) would like to be this kind of person.

Start with the word ACCEPTABLE and fill in Columns I, II, and III before going on to the next word. There is no time limit. Be honest with yourself so that your description will be a true measure of how you see yourself and other people.

Please fill in the blank with your name or number.
The test is scored in terms of the total of ratings for each column, each rating counting its face value except in the case
of those for the words numbered in red for which rating values are reversed, i.e. a rating of 5 means that one must be added to the score, for 4 add 2, and so on.
Figure 12.

Personal Reaction Inventory
(The Marlowe - Crowne Social Desirability Scale.)

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.

1. Before voting I thoroughly investigate the qualifications of all the candidates. [T X F]
2. I never hesitate to go out of my way to help someone in trouble. [T X F]
3. It is sometimes hard for me to go on with my work if I am not encouraged. [T F X]
4. I have never intensely disliked anyone. [T X F]
5. On occasion I have had doubts about my ability to succeed in life. [T F X]
6. I sometimes feel resentful when I don't get my way. [T F X]
7. I am always careful about my manner of dress. [T X F]
8. My table manners at home are as good as when I eat out in a restaurant. [T X F]
9. If I could get into a movie without paying and be sure I was not seen I would probably do it. [T X T]
10. On a few occasions, I have given up doing something because I thought too little of my ability. [T F X]
11. I like to gossip at times. [T F X]
12. There have been times when I felt like rebelling against people in authority even though I knew they were right. [T F X]
Figure 12. (cont.)

13. No matter who I'm talking to, I'm always a good listener.  
**KEY:** T X F

14. I can remember 'playing sick' to get out of something.  
**KEY:** T F X

15. There have been occasions when I took advantage of someone.  
**KEY:** T F X

16. I'm always willing to admit it when I make a mistake.  
**KEY:** T X F

17. I always try to practice what I preach  
**KEY:** T X F

18. I don't find it terribly difficult to get along with loud-mouthed, obnoxious people.  
**KEY:** T X F

19. I sometimes try to get even rather than forgive and forget.  
**KEY:** T F X

20. When I don't know something I don't mind at all admitting it.  
**KEY:** T X F

21. I am always courteous, even to people who are disagreeable.  
**KEY:** T X F

22. At times I have really insisted on having things my own way.  
**KEY:** T F X

23. There have been occasions when I felt like smashing things.  
**KEY:** T F X

24. I would never think of letting someone else be punished for my wrong doings.  
**KEY:** T X F

25. I never resent being asked to return a favour.  
**KEY:** T X F

26. I have never been irked when people expressed ideas very different from my own.  
**KEY:** T X F

27. I never make a long trip without checking the safety of my car.  
**KEY:** T X F

28. There have been times when I was quite jealous of the good fortune of others.  
**KEY:** T F X
Figure 12. (cont.)

29. I have almost never felt the urge to tell someone off.  
   KEY:  T X F

30. I am sometimes irritated by people who ask favours of me.  
    T    F X

31. I have never felt that I was punished without cause.  
    T X F

32. I sometimes think when people have a misfortune they only got what they deserved.  
    T    F X

33. I have never deliberately said something that hurt someone's feelings.  
    T X F
Figure 13. The Abstract Apparatus.
(The Motivation Analysis Test, Cattell & Horn, 1964)

This is not a test of intelligence or other abilities. It is to enable you to tell something about your thoughts and interests. It is to your advantage to answer as freely and frankly as you can.

There are several sections here and each begins with instructions and examples.

Subtest I (USES)

Instructions: In this test you are asked what seems to you to be the better use to make of a given amount of time, money, etc., under given circumstances. For example:

1. If someone has all the money he needed, he'd use it better by:
   
   Just enjoying himself
   
   X   Studying abroad

Place a cross in the square if you would prefer to study abroad. Work quickly and check in each case what seems to YOU the more attractive answer. Sometimes it might be hard to choose between the two answers, but always choose one (and only one).
1. If I could, I would spend more effort trying to:

X Master undesirable impulses.

Employ people profitably.

2. An interesting essay to write would be on:

Success in business.

X The best kind of citizen.

3. Young people should devote time to:

Doing well in educational courses.

X Understanding themselves better.

4. One advantage of knowing your boss better is that:

X You feel more secure in your job.

It improves chances of promotion.

5. If work were cut to a thirty-hour week, it would be good to spend the extra time:

Seeing old neighbourhood friends and relatives.

X Attending a course on emotional adjustment and poise.
6. To know more about one's parents' early life would help, by:

Teaching one what counts in a good home life.

X Revealing things about one's own mental growth.

7. If I got a raise I would spend money on:

X Taking a course in the psychology of personal development.

Improving my home and its neighbourhood.

8. Longer week-ends might permit a person to:

X Read more about how to get ahead in his work.

Spend more time with his family.

9. More newspaper articles should stress:

Self control in facing sexual distractions.

X Gaining happiness by being socially useful.

10. I would like to know more about myself in order to:

X Succeed in my job.

Correct my bad habits.

11. I should like to study psychology because it would:

X Provide me with a better understanding of myself.

Give me the tools for helping others.
12. Marriage counseling should help you toward:

X Providing for your spouse a home to be proud of.

Recognizing spiritual as well as physical aspects.

13. I enjoy do-it-yourself tasks because I like:

To keep busy and get work done.

X To improve my own house.

14. If I were going to see an old movie, I would rather see:

X 'The Snake Pit', a story of the life of a mentally-ill person.

A 'Biography of Dr Schweitzer', who has devoted his life to practical religion.

15. A man with time to ponder could well spend it thinking:

How one can learn to control unruly emotions.

X On ways of helping others.

16. One can point to many well-spent careers in:

Social service and religion.

X Business and politics.

17. If someone were giving me a book as a gift, I would prefer one on:

X The history of clothing styles.

The proper outlook on sex.
18. If I were to attend a lecture, I would like to hear a talk on:

- Famous romances in history.
- Making a success of one's marriage.

19. If I had time to spare in a library, I would rather:

- Spend some minutes with a modern book on social etiquette.
- Talk to a librarian of the opposite sex.

20. Talking with old friends is fun because one can:

- Discuss childhood love affairs.
- Recall the important things one's family stood for.

21. People join a local mental health movement to:

- Learn more about the prevention of mental illness.
- Work with their neighbours in a worthwhile activity.

22. An advantage of having a lot to do with people is that you:

- Get a chance to show leadership qualities.
- Learn mutual respect and trust.
23. A good magazine should have articles on:

X Happiness in marriage.

Current fashions of dress.

24. It would be more interesting to read a pamphlet on:

Remodeling the home to look modern.

X The prevention of mental disorder.

Subtest 2 (ESTIMATES)

Instructions: Each item in this test has four possible answers. You are to choose the answer that you think is best, and circle it. For example:

1. The library is the best place to study.

VERY TRUE false VERY FALSE

In an item like this, VERY TRUE means that in your experience there are very few exceptions and that you strongly agree;

TRUE means that it tends to be true more often than it is false and that you agree moderately;

FALSE means that you tend to disagree and that in your experience it is more often untrue;

VERY FALSE means that in your experience it is almost always untrue and that you disagree strongly.
In other questions you are asked to make your best estimate of a truly correct answer. For example:

2. 'Hot' war between the U.S.A. and Russia is likely to break out within the next ____ years?

1  5  20  never

No one knows the answer to a question like this, but everyone can make an estimate (and some estimates will be more accurate than others). If the estimate you would make is not among those listed, mark the answer that is closest.

The questions which follow either ask for a true or a false choice like the first above or for a quantity like the last.

---

1. How many girls allow a boy to kiss them on their first date?

3  2  1  10%  30%  60%  80%

2. In times of depression, seniority, more than reputation and merit, helps a man to keep his job.

3  2  1  VERY  false  true  VERY
FA:SE  TRUL

3. What per cent of married couples are considered by sociologists to be poorly matched physically?

3  2  1  15%  25%  60%  95%

4. A lot of attention to manners and 'etiquette' is based on stupid tradition and serves no purpose.

3  2  1  VERY  false  true  VERY
FA:SE  TRUL
5. The practice of rigid self-control serves no useful purpose as such.

<table>
<thead>
<tr>
<th>VERY TRUE</th>
<th>1 true</th>
<th>2 false</th>
<th>3 VERY FALSE</th>
</tr>
</thead>
</table>

6. What percentage of psychologists would vote that 'self-respect' is often used as an excuse for avoiding unpleasant tasks.

<table>
<thead>
<tr>
<th>3</th>
<th>2</th>
<th>1</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>5%</td>
<td>25%</td>
<td>50%</td>
<td></td>
</tr>
</tbody>
</table>

7. A happy marriage is necessary for a complete life.

<table>
<thead>
<tr>
<th>VERY FALSE</th>
<th>1 false</th>
<th>2 true</th>
<th>3 VERY TRUE</th>
</tr>
</thead>
</table>

8. Attention to the needs of parents and relatives, as in services, contributions to support, or gifts, is gladly made by what per cent of young adults?

| 30% | 50% | 70% | 90% |

9. Psychologists have discovered that the average man goes out of his way ___ times a day to perform acts that are concerned purely to maintain his self-respect.

<table>
<thead>
<tr>
<th>3</th>
<th>2</th>
<th>1</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>40</td>
<td>25</td>
<td>10</td>
</tr>
</tbody>
</table>

10. In the next ___ years, insanity will cease to be the dreaded disease that it is today.

| 40 | 25 | 10 | 5 |

11. True wisdom comes through self-knowledge, i.e., knowing oneself.

<table>
<thead>
<tr>
<th>VERY TRUE</th>
<th>3 true</th>
<th>2 false</th>
<th>1 VERY FALSE</th>
</tr>
</thead>
</table>
12. The chances of advancing in his job for a man with good technical skills are about ___ times as good as for a person without such knowledge.

1  2  3  4

13. Research on the causes of duelling reports that % of the duels fought were over matters of self-regard.

10%  20%  50%  70%

14. Diagnosis and treatment of states of the mind that might develop into insanities can now be provided for % of the population.

35%  60%  75%  95%

15. Self-knowledge (i.e. to know oneself) is a hopeless pursuit.

VERY TRUE  true  false  VERY FALSE

16. There is a real lack of educational opportunity nowadays in training oneself for a job.

3  2  1

VERY FALSE  false  true  VERY TRUE

Subtest 3 (WORD ASSOCIATION)

Instructions: Here are some groups:

birthday  X  policeman

1. PARTY

X  political

2. TRAFFIC

accident
Figure 14. (cont.)

You are to read first the 'key' word in big letters which has a number by it. Then decide which of the two 'association' words, above and below, it makes you think of. For example, after PARTY the word that springs to your mind might be 'birthday' or 'political'. To the person whose answers are checked above you will notice that 'political' went better with PARTY, and that on example 2, 'policeman' seemed naturally to go with TRAFFIC.

Check the first, most natural word that comes to you for each key word. Do not skip any items but move along fast, choosing the first of the two association words that comes to your mind.

1. SKILLED
   X manner
   job
   5. WISE
      X know self

2. SECURE
   X reputation
   employment
   6. RESERVES
      X self-knowledge
      family funds

3. SELF
   X command
   career
   7. WONDERFUL
      X kiss
      parents

4. IMPORTANT
   X virtue
   home
   8. GUIDANCE
      X self
      parental
<p>| | | | | | |</p>
<table>
<thead>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9.</td>
<td>GOOD</td>
<td>natured</td>
<td>country</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>MIND</td>
<td>citizen</td>
<td>peace of mind</td>
<td>at rest</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>HUNGRY</td>
<td>sound</td>
<td>self-respect</td>
<td>love</td>
<td>impulse</td>
</tr>
<tr>
<td>12.</td>
<td>MASTER</td>
<td>poor</td>
<td>will</td>
<td>emotions</td>
<td>shellfire</td>
</tr>
<tr>
<td>13.</td>
<td>COMMUNITY</td>
<td>respect</td>
<td>sentimental</td>
<td>dose</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>GOOD</td>
<td>chest</td>
<td></td>
<td>will</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>KNOW</td>
<td>repute</td>
<td>renown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>GOOD</td>
<td>habits</td>
<td>love vows</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>SAVE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>INJURE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>CONTROL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>STRONG</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>FEELING</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>HONOR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td>UNITED</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
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</tbody>
</table>

Figure 14. (cont.)
Instructions: This test is designed to measure the amount of information you have about various areas of knowledge. There are always four answers from which you are to choose one. For example:

1. How many days are there in February in a leap year?
   a. 28   b. 29   c. 30   d. 31

Circle the best answer.

Please make a choice on all questions. In every case there is a best answer or one that is more true than the others. Even if you don't know the correct answer make a guess.

Work quickly.

1. A stoic is:
   a. A person who seeks pleasure of a physical nature.
   b. The monetary unit of Ethiopia.
   X c. A person not affected by passions.
   d. A small haystack in a field.

2. Which of the following is the most frequent reason given for not wanting to stay on a particular job?
   a. Too much supervision.
   X b. Insufficient salary.
   c. Too much demand for accuracy.
   d. Being kept late by the boss.
3. Which of the following is a drug used to limit interest in the opposite sex?

   X a. Saltpeter.
   b. Sandalwood oil.
   c. Mercaptin.
   d. Benzoin.

4. Peace of Mind, by Liebman, deals with:

   X a. Self-realization.
   b. Tranquilizing drugs.
   c. Life insurance.
   d. The proper use of leisure.

5. Yoga is:

   a. A sour milk.
   X b. A mental discipline.
   c. A religion of the East.
   d. A sweetmeat.

6. The Community Chest (United Fund) supports:

   b. Tuberculosis drives.
   c. Red Cross here and abroad.
   X d. Local charities.

7. In which of the following places is polygamy (i.e., the practice of having more than one wife or husband) still acceptable?

   a. U.A.R.
b. Utah.
c. Ethiopia.
X d. Jordan

8. A woman should always precede the man except:
   a. Through the door, if there is a doorman.
   b. Down an aisle, if there is an usher.
   X c. In a restaurant, if there is no head waiter.
   d. Up a flight of stairs.

9. Which of the following has the highest reputation as a man of honesty and principle?
   a. Tallyrand.
   b. Charlie Chaplin.
   c. Theodore Roosevelt.
   X d. Woodrow Wilson.

10. Upon a person's being declared mentally ill, he may not:
    a. Choose his own doctor.
    b. Remain at home.
    X c. Get married.
    d. Get a hunting licence.

11. Which is the main difference of a psychiatrist from a psychologist?
    a. Dealing with mental defectives.
    X b. Having training in medicine.
    c. Studying unconscious as well as conscious behaviour.
    d. Treating neuroses as well as diagnosing them.
12. Which of the following is not a 'fringe benefit' (i.e., a reward in addition to wages)?
   a. Vacations with pay.
   X b. Union membership dues.
   c. Disability insurance.
   d. Dismissal compensation.

13. Which of the following is not an instance of slander?
   X a. Repeating a newspaper story about a person.
   b. Repeating a false story of harmful character that has been told you.
   c. Making statements about a person that will damage his reputation.
   d. Saying something derogatory (bad) about a person's property.

14. The most reliable sign of insanity is:
   X a. Repeatedly seeing things that aren't there.
   b. Insomnia.
   c. Talking to yourself.
   d. Getting easily irritated.

15. Which of the following techniques helps one to gain self-knowledge?
   a. Coueism.
   b. Extra-sensory perception.
   X c. Psychoanalysis.
   d. Voyeurism.
16. How to Win Friends and Influence People is by:
   a. Liebman.
   b. Freud.
   c. Sokolsky.
   X d. Carnegie.

(The Q3 Scale of the 16PF, Cattell and Eber, 1957)

Instructions: In order to learn something about your attitudes and interests we want you to answer the following questions. There are no 'right' or 'wrong' answers because everyone has the right to his own views. Circle each answer which is true for you.

For each question three answers are indicated. Decide which answer is correct for you.

1. In my job I appreciate constant change in the type of work to be done.
   a. yes       1
   b. in between 2
   c. no

2. I would rather stop in the street to watch an artist painting than to listen to some people having an argument.
   a. yes       1
   b. uncertain 2
   c. no

3. I can work on most things without being bothered by people making a lot of noise around me.
   a. yes       1
   b. in between 2
   c. no
4. The idea that sickness comes as much from mental as physical causes is much exaggerated.

2  1
a. yes  b. in between  c. no

5. When talking I like:

a. to say things just as they occur to me.
1  b. in between
2  c. to wait and say them in the most exact way possible.

6. I know I do most things at least a little more thoroughly than most people.

2  1
a. yes  b. in between  c. no

7. I like to wait till I am sure that what I am saying is correct, before I put forward an argument.

2  1
a. always  b. generally  c. only if it's practicable

(Sa Scale of the California Psychological Inventory, Gough, 1956)

Instructions: Here is a series of statements. Read each one, decide how you feel about it, and then mark your answer by circling either TRUE or FALSE. If you agree with a statement, or feel that it is true for you, answer TRUE. If you disagree with a statement, or feel that it is not true about you, answer FALSE. Be sure to answer either TRUE or FALSE for every statement, even if you have to guess at some.
1. I looked up to my father as an ideal man.
   TRUE FALSE X

2. When in a group of people I usually do what others want rather than make suggestions.
   TRUE FALSE X

3. My daily life is full of things that keep me interested.
   X TRUE FALSE

4. I doubt whether I would make a good leader.
   TRUE FALSE X

5. It is hard for me to start a conversation with strangers.
   TRUE FALSE X

6. I sometimes pretend to know more than I really do.
   X TRUE FALSE

7. Women should not be allowed to drink in cocktail bars.
   TRUE FALSE X

8. I would disapprove of anyone's drinking to the point of intoxication at a party.
   TRUE FALSE X

9. Most of the arguments or quarrels I get into are over matters of principle.
   X TRUE FALSE

10. I must admit that I often do as little work as I can get by with.
    X TRUE FALSE

11. I would like to see a bullfight in Spain.
    X TRUE FALSE
Figure 14. (cont.)

12. When in a group of people I have trouble thinking of the right thing to talk about.

   TRUE       FALSE X

13. I set a high standard for myself and I feel that others should do the same.

   TRUE       FALSE X

14. I was a slow learner in school.

   TRUE       FALSE X

15. I seldom or never have dizzy spells.

   X TRUE FALSE

16. I would like to wear expensive clothes.

   X TRUE FALSE

17. I never make judgements about people until I am sure of the facts.

   TRUE       FALSE X

18. I am certainly lacking in self-confidence.

   TRUE       FALSE X

19. When I work on a committee I like to take charge of things.

   X TRUE FALSE

20. I would rather go without something than ask for a favour.

   TRUE       FALSE X

21. I often do whatever makes me feel cheerful here and now, even at the cost of some distant goal.

   X TRUE FALSE
22. Once in a while I laugh at a dirty joke.

   X TRUE          FALSE

23. Before I do something I try to consider how my friends will react to it.

   TRUE          FALSE X

24. I have frequently found myself when alone pondering such abstract problems as free will, evil etc.

   TRUE          FALSE X

25. At times I have worn myself out by undertaking too much.

   X TRUE          FALSE

26. It is hard for me to find anything to talk about when I meet a new person.

   TRUE          FALSE X

27. A person does not need to worry about other people if only he looks after himself.

   X TRUE          FALSE

28. When a man is with a woman he is usually thinking about things related to her sex.

   X TRUE          FALSE

29. In school I found it very hard to talk before the class.

   TRUE          FALSE X

30. Sometimes I rather enjoy going against the rules and doing things I'm not supposed to do.

   X TRUE          FALSE

31. It is hard for me to act natural when I am with new people.

   TRUE          FALSE X
I would like to belong to a motorcycle club.

X TRUE FALSE

I would like to be an actor on the stage or in the movies.

X TRUE FALSE

Police cars should be especially marked so that you can always see them coming.

X TRUE FALSE
Figure 15

Directions for Administration of the Idec-Q-Sort

'Here are twenty-five blank cards'. (Present cards and pencil). 'I want you to write on each of them a statement which might describe you at any time'.

(Wait until that is completed, then...)

'Put these cards in order from the statement most like you to the statement least like you as you are at this moment. When you have done that, number the cards in that order: number one being the one most like you, down to twenty-five, the one least like you'.

(After that sort and numbering, say ...)

'Now sort the cards into the order they would be in if you were the kind of person you would really like to be'.

'Thank you'.

Note to Administrators:

Some comment on the anonymity of respondents may be advisable.

Reiteration or variations of wording of the central theme of the instructions are permissible.

Please preserve the order of the second sort, unless it too is numbered.
Questionnaire (including Scales Q3 and G of the 16PF, A & B).

Instructions: In order to learn something about your attitudes and interests we want you to answer these questions. There are no 'right' or 'wrong' answers because everyone has the right to his own views. Answer each question according to what is true for you.

For each question three answers are indicated, a., b., and c.. Decide which answer is correct for you and mark it with a circle.

1. If I saw two neighbour’s children fighting I would:
   a. leave them to settle it
      (1) b. uncertain
      (2) c. reason with them.

2. Through getting tense I use up more energy than most people in getting things done.
   a. constantly
      (1) b. occasionally
      (2) c. never

3. In my job I appreciate constant change in the type of work to be done.
   a. yes
      (1) b. in between
      (2) c. no
Figure 16. (cont.)

4. I am an easy going person, not insisting on always doing things as exactly as possible.
   a. true
   (1) b. in between
   (2) c. false

5. I would rather stop in the street to watch an artist painting than to listen to some people having an argument.
   (2) a. yes
   (1) b. uncertain
   c. no

6. I think that plenty of freedom is more important than good manners and respect for the law.
   a. yes
   (1) b. uncertain
   (2) c. no

7. I can work on most things without being bothered by people making a lot of noise around me.
   (2) a. yes
   (1) b. in between
   c. no

8. People sometimes call me careless, even though they think me a fine person.
   a. yes
   (1) b. in between
   (2) c. no
9. The idea that sickness comes as much from mental as physical causes is much exaggerated.

(2) a. yes
(1) b. in between
  c. no

10. I make sure that anyone who hurts my good name regrets it in the long run.

(2) a. generally
(1) b. sometimes
  c. not usually

11. When talking I like:

   a. to say things just as they occur to me

   (1) b. in between

   (2) c. to wait and say them in the most exact way possible

12. I think the police can be trusted not to ill-treat innocent people.

   (2) a. yes

   (1) b. in between

   c. no

13. I sometimes let my actions get swayed by feelings of jealousy.

   a. yes

   (1) b. in between

   (2) c. no
14. I know I do most things a little more thoroughly than most people.
   a. yes
   (1) b. in between
   (2) c. no

15. In thinking of difficulties in my work I:
   a. assume I can handle them when they come
   (1) b. am in between a. and c.
   (2) c. try to plan ahead, before I meet them

16. I always make a point, in deciding anything, to refer to basic principles of right conduct.
   (2) a. yes
   (1) b. in between
   c. no

17. I have periods when I cannot stop a mood of self-pity.
   a. often
   (1) b. occasionally
   (2) c. never

18. I like to wait till I'm sure that what I'm saying is correct, before I put forward an argument.
   (2) a. always
   (1) b. generally
   c. only if it's practicable

19. Everyone could make a success of his life with reasonable effort and perseverance.
   (2) a. yes
(1) b. in between
c. no

20. I enjoy work that requires careful, exacting hand skills.
   (2) a. yes
   (1) b. in between
   c. no

21. I admire more a person who:
   a. is brilliantly intelligent and creative
   (1) b. is in between
   (2) c. has a strong sense of duty to the things he believes in

22. I often say things on the spur of the moment that I later regret.
   a. yes
   (1) b. in between
   (2) c. no

23. In going places, eating, working, etc., I:
   a. seem to rush from one thing to another
   (1) b. in between
   (2) c. go in a very deliberate, methodical fashion

24. I enjoy giving my best time and energy to:
   a. social activities and public affairs
   (1) b. in between
   (2) c. my home and the real needs of my immediate circle of friends
25. However difficult and unpleasant the obstacles, I always persevere and stick to my original intentions.
   (2) a. yes
   (1) b. in between
   c. no

26. In my work and dealings with others, I:
   a. believe in aiming at only what is practicable
   (1) b. in between
   (2) c. sometimes set standards almost impossibly hard

27. Business superiors and members of my family, as a rule, find fault with me only when there is real cause.
   (2) a. true
   (1) b. in between
   c. false

28. When a town has a lot of stray, diseased cats it is best to:
   a. ask people to take them in
   (1) b. uncertain
   (2) c. do away with them painlessly and humanely

29. I am always able to keep the expression of my feelings under exact control.
   a. yes
   (1) b. in between
   (2) c. no
30. A strong will power is a more valuable gift than a well-formed imagination.
   (2) a. yes
   (1) b. in between
   c. no

31. I find that my interests and hobbies in people and amusements tend to change fairly rapidly.
   a. yes
   (1) b. in between
   (2) c. no

32. I find it desirable to make plans to avoid waste of time between jobs.
   (2) a. yes
   (1) b. in between
   (2) c. no

33. I tend to get over-excited and rattled in upsetting situations.
   a. yes
   (1) b. in between
   (2) c. no

34. I make a point of not being absent-minded or forgetful of details.
   (2) a. yes
   (1) b. in between
   c. no

35. When I do something my main concern is that:
   a. it is really what I want to do
Figure 16. (cont.)

(1) b. uncertain

(2) c. no bad consequences will follow for my associates.

36. If people would talk less and work more, everybody would be better off.

(2) a. yes

(1) b. in between

(2) c. no

37. I feel 'cramped' on a job where I have to take orders from several people.

a. yes

(1) b. in between

(2) c. no

38. If people think poorly of me, I can still go on quite serenely in my own mind.

(2) a. yes

(1) b. in between

(2) c. no

39. I believe that one cannot be too scrupulously correct in manners and social obligations.

(2) a. true

(1) b. uncertain

(2) a. yes

39. I believe that one cannot be too scrupulously correct in manners and social obligations.

(2) a. true

(1) b. uncertain

(2) a. yes

40. I always check very carefully the condition in which borrowed property is returned, either to me, or by me to others.

(2) a. yes
(1) b. in between

c. no

Note: The scoring key is provided, with weights listed in black for Scale Q_3 and in red for Scale G in brackets before the relevant item.