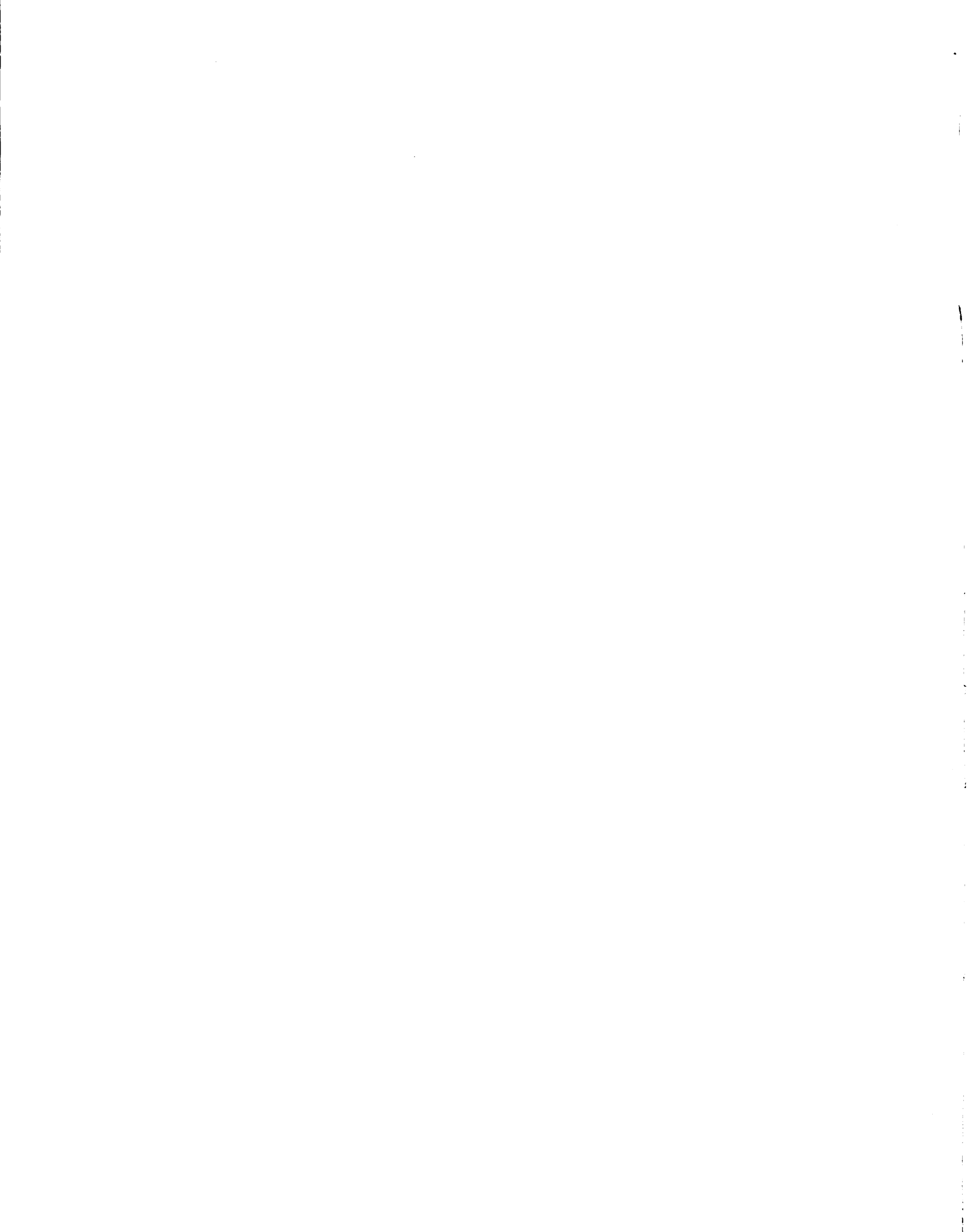


SELF-DECEPTION,  
A MEASURE OF DEFENSIVENESS

Thesis for the Degree of M. A.  
MICHIGAN STATE UNIVERSITY  
Mona Rosenberg  
1962



~~10/27/1975~~



## ABSTRACT

### SELF-DECEPTION: A MEASURE OF DEFENSIVENESS

by Mona Rosenberg

This study, stemming from psychoanalytic theory, was undertaken in order to ascertain whether it was possible to measure degrees of defensiveness (in the form of self-deception) and to determine whether some lawful association between self-deception and amount of anxiety in a stress situation existed. Self-deception was defined as the discrepancy between strengths of needs expressed in a conscious assessment of self and strengths of needs derived from fantasy (material brought to awareness but not necessarily associated consciously with self). The stress situation was defined as an examination where subjects were required to write essays with a strong ingredient of self-reference.

Three sections of a "Methods of Study" course, taught by one instructor, were separated according to grade point average into the Experimental group (those with failing grades) and the Control group (those with passing grades). The two groups were adequately equated on age, sex, number of terms spent at college and intelligence.

Subjects were group administered the EPPS, seven TAT cards and the examination. From this basic data scaled scores of the strength of five needs (Ach., Def., Aut., Int., Agg.) were derived from the EPPS scale and strengths of the same needs were judged on a five point scale on relevant TAT stories. The relevance of particular stories was previously determined by an analysis of all seven stories to elicit which stories contained the most need content across the whole group.

Mona Rosenberg

The discrepancies between needs as expressed on each instrument were calculated, and then the resulting five scores were totalled to form the final discrepancy score (DS). The essay was scored by means of the Discomfort-Relief Ratio technique to ascertain amount of anxiety revealed in the stress situation.

It was predicted that, 1) the DS scores for the Experimental group would be higher than the DS scores for the Control group; 2) the DRQ for the experimental group would be higher than the DRQ for the Control group, and 3) in the sample as a whole subjects with high DS scores would be high DRQ scorers. None of these predictions were borne out, but some slight trends were noted. The probable causes of the failure to elicit significant results were discussed and tended to cluster around the inadequacy of the control measure and the subjective relevance of the experimental situation for individual subjects.

A second analysis was carried out on the second and third hypotheses using the DRQ ratio of .50 as the critical difference rather than the median DRQ. On the latter, where the control variable is not operative significant results were obtained. The implications of this result were discussed. It was concluded that in a stress situation subjects who are more self-deceptive are the more anxious. The self-deception measure would therefore appear to have some validity within the theoretical framework from which it stems.

Approved

  
Committee Chairman

Date

February 2, 1952

SELF-DECEPTION: A MEASURE OF DEFENSIVENESS

By

Mona Rosenberg

A THESIS

Submitted to  
Michigan State University  
in partial fulfillment of the requirements  
for the degree of

MASTER OF ARTS

Department of Psychology

1962

U. S. 100-1  
2/28/57

DEDICATION

To Eddie, Iriet and Edor



## ACKNOWLEDGMENTS

The author wishes to express her gratitude to Dr. A. I. Rabin who acted as the original chairman of this thesis committee and to Dr. H. C. Smith who later agreed to act in this capacity.

Gratitude is also here expressed to Dr. Josephine Morse for her close attention, sympathetic treatment and constant cooperation in the preparation of this project.

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## I. INTRODUCTION

### A. Unconscious motivation and the concept of defense.

Freud's critical contribution to contemporary understanding of human behaviour was his theory of unconscious motivation. Fenichel (1945) has stated that the differentiation between conscious and unconscious phenomena is purely descriptive and not quantitative. He proposes that the problem of differentiation be approached by discovering under "what circumstances and what energies" the condition of consciousness arises (p. 14).

Focusing attention on the circumstances under which latent material becomes manifest calls for the necessity of specifying what is latent and what is manifest and of showing that there is a continuity of motivation from one level to another. It is therefore necessary to demonstrate that samples of derived ideation belong to unitary and genotypical motives operative at the different levels of the unconscious-conscious continuum, differing in qualitative features associated with the particular levels.

The point, in time and form of qualitative change, at which unconscious material becomes conscious is highly elusive. This aspect of the problem requires research into phenomena of insight or regression in the service of the ego and similar processes where continuation of primary process thought into secondary process thought can be demonstrated.

Another aspect of the problem is the failure of unconscious material to become conscious. This, too, is relevant to Fenichel's statement which may be rephrased: what are the circumstances and

energies under which the condition of consciousness arises for one group of individuals and how do they differ from the circumstances and energies under which consciousness fails to arise in another group of individuals when the research focus is on the same motivational content?

To account for the failure of unconscious material relevant to a particular stimulus situation to come into awareness, Freudian theory postulates the interaction of anxiety associated with the previous expression of this material. To avoid the painful anxiety a non-discharge apparatus is developed, which in varying degrees of effectivity, employs defensive manoeuvres protecting the individual from awareness of the material (Fenichel, 1945). Schafer (1954) discussing the defensive operations indicates that they usually involve the denial of conscious representation of ideas, affects and other impulses associated with the threatening discharge as well as that discharge itself. The implication is that the complex web of defensive operations is intricately interwoven and interacting so that a single motivational thread would be difficult to isolate and trace. Schafer points out that it cannot be said of any behaviour item or trend, simply that it is a "defense" but that one can speak of a defensive aspect that is particularly striking, relevant or crucial.

The defensive aspects of varying samples of behaviour have been discussed and elaborated by several writers. Anna Freud (1946) has delineated and described the operations of nine major mechanisms. The crucial theme in all these discussions is the protection of the ego from anxiety, conceptualized as avoidance of loss of self-esteem (Fenichel, 1945). Thus defenses are geared to the maintenance of self-esteem.

B. The concept of self and the relation to anxiety.

This emphasis on the dynamic principle of the maintenance of self-esteem in interpersonal experience has been the central notion of theories of personality developed since the early Freudian (Munroe, 1955). To Adler the basic generalized anxiety of the infant, felt as inferiority, is the motivational drive of behaviour directed toward overcoming this vulnerable situation. As a function of social determinants the creative self strives toward self-actualization resulting in the neutralization of anxiety. Adler thus implies considerable awareness in the individual of the source of anxiety and of self.

Horney, too, is concerned with the unitary concept of self and the need to maintain self-esteem. In the neurotic, driven by the conflicting demands of reality and the excessively demanding idealized image of self, the attempt to avoid unpleasant loss of self-esteem engenders conflict which requires the repression of some of his needs. These may now be unconscious but are not eliminated. By virtue of their unconscious form they become more vigorous and are cut off from modification via reality testing. They may erupt into consciousness through the safety devices of rationalization and externalization. The aim of the safety devices (defenses) is the avoidance of anxiety.

Sullivan's emphasis is more on the immediate disorganizing effects of anxiety arising out of interpersonal experience. But the historical antecedents of anxiety are rooted in the early infantile differentiation of self and non-self; as with Horney the antecedents are the infant's insecurity. The developing personality has at its disposal mechanisms of selective inattention and dissociation which permit the exclusion from awareness an aspect of experience that is anxiety provoking. Since anxiety is disorganizing the aim of these mechanisms is essentially the preservation of the self as a unit.

Rogers (1951), concentrating on a more organismic concept of self, has delineated nineteen propositions which underlie the several functional aspects of the self. The essential thread is a striving for consistency which may be thwarted by the introjection of values perceived in a distorted fashion or by experiences perceived as threats. In striving for coherence, and maintenance of the self as worthy, many experiences, feelings and ideas are kept out of awareness as not congruent with the self-image. They nevertheless continue to disturb and disrupt psychological adjustment.

More recently Rogers (1958) has described self-awareness as one of the signs of a mature and "healthy" individual, conceiving of defensive structures as withering away, as anxiety dissipates and spontaneity increases. By implication, it is assumed that under stress, with concomitant anxiety, there will be an increased need for defensive maneuvering.

Hilgard (1949) draws these concepts of self, anxiety and defense together by specifying that defenses have a twofold role in regard to the self: a) defense mechanisms protect the self from anxiety, and b) they are self-deceptive in their operation. Since defenses all have a self-reference an interaction is implied between anxiety, levels of self-awareness and degree of self-deception. Whether this interaction is haphazard and subject merely to chance variations or whether there are some consistent and lawful relationships between these attributes of personality, is the concern of this study.

The research focus is, therefore, upon a group of individuals experiencing considerable generalized threat to self-esteem. From the theoretical viewpoints outlined above, it would be expected that these individuals would need to resort to defensive strategies (equated here with self-deception) in varying degrees. Further, that those individuals



employing the more extensive strategies would be those who are more anxious in a specific stress situation relevant to the generalized threat.

C. The concept of self-deception: rationale and statement of hypotheses.

The concept of self-deception rests on the theory that the individual operates at different levels of self-awareness, particularly with regards to sources of motivation, and the need to externalize derived ideation despite its unpleasurable associations. Fenichel (1945) states that:

Unconscious material under (such) high pressure has only one aim: discharge. Its freely floating energy is directed according to the 'primary process'; that is, it is unburdened by the demands of reality, time, order or logical considerations; it becomes condensed and displaced, following only the interests of increased possibilities of discharge. This mode of functioning of the archaic mind remains effective in the realm of the unconscious; in the more differentiated parts of the mind it gradually becomes supplanted by the organized secondary process (p. 15).

Here, then, two levels of awareness are described and another intermediate level, more accessible to consciousness, functions just below awareness and is called the preconscious. Material from the preconscious can be brought into awareness by the act of attention but is altered by the displaced unconscious material which, in a sense, has used the preconscious as a vehicle for externalization.

Hilgard (1949) presents two concepts to embrace the implications of self at all levels of awareness. 1) The self present in awareness which is dependent on the organizing features of continuity of memories as binding the self and maintaining self-identity, and self-evaluation and self-criticism. 2) the inferred self which comprises both conscious but not necessarily ego controlled phenomena, and unconscious phenomena. A critical differentiation between these is that some conscious phenomena

(e. g. dreams) may be in awareness but are not part of the self in awareness and the inferred self may be excluded from awareness.

Then, if we can validly obtain a description of a particular aspect of personality which the individual consciously ascribes to himself in a self-evaluative and self-critical manner, and juxtapose it with a description of the same aspect of his personality inferred from material in awareness which he does not consciously ascribe to himself we will have two descriptions of the self. The first description represents the self in awareness and the second the inferred self and the discrepancy between the two, assuming that they are measured with the same or similar rule, is the operational definition of self-deception.

Since impulses and needs denied conscious expression by the ego, theoretically continuing to strive to break through into consciousness, are assumed to be linked with anxiety when they do begin to reach awareness (Blum, 1954) we would expect,

- 1) that subjects who are experiencing the greater objective threat to their self-esteem are those who will exhibit more self-deception, and
- 2) that subjects exhibiting more self-deception will be the more anxious in a stress situation relevant to that particular threat.

These hypotheses rest on the following three assumptions:

- a) That a description of a sample of needs ascribed to the self in awareness may be validly obtained from individual subjects.
- b) A description of the same needs applicable to the inferred self may be reliably derived from samples of fantasy produced by these subjects.
- c) The discrepancy between these descriptions are the result of defensive strategies in the form of self-deception.

The burden of demonstrating the validity of assumptions (a) and (b) rests on data from experimental literature cited in following chapters. Assumption (c) is inherent in the theory upon which this study is based.

## II. METHOD

This study was designed to investigate the relationship between a measure of defensiveness pertaining to a circumscribed area of threat to self and a measure of anxiety obtained during a relevant stress situation. For this purpose two groups of subjects differing with respect to that threat to self, and matched on all other pertinent variables, were compared on the amounts of defensiveness assessed and the amounts of anxiety expressed.

Self-deception, our measure of defensiveness, was defined as the discrepancy between strength of needs as expressed through statements consciously attributed to self (i. e., in awareness) and strength of the same needs as assessed from fantasy material (i. e., inferred self).

The instrument selected to measure needs ascribed to the self in awareness was the Edwards Personal Preference Schedule (EPPS)(1954). The instrument selected to obtain fantasy material was the Thematic Apperception Test (Murray and Morgan, 1935), which was then rated on scales of the strength of needs expressed. Discrepancy scores derived from the differences between the obtained values for each need at the two levels of awareness were summed for each subject and this summed score represented the measure of self-deception.

The measure of anxiety selected was the Discomfort-Relief Ratio (Dollard and Mowrer, 1953).

We come now to a description of the materials used and the relevant literature.

### A. Edwards Personal Preference Schedule.

In the EPPS manual Edwards maintains that the statements to which

subjects respond measure 15 personality variables which have their origin in a list of manifest needs suggested by H. A. Murray. The manifest needs are listed below and the operational definitions of each are given in Appendix 1.

1. Achievement
2. Deference
3. Order
4. Exhibition
5. Autonomy
6. Affiliation
7. Intraception
8. Succorance
9. Dominance
10. Abasement
11. Nurturance
12. Change
13. Endurance
14. Heterosexuality
15. Aggression

Also the EPPS has built in a measure of test consistency.

The EPPS is constructed in the forced choice form and statements are paired for equality of value on a social desirability scale in order to minimize the influence of the social desirability (SD) factor in responses. Edwards (1957) is of the opinion that each statement from the population of statements describing personality may be characterized in terms of its position on a single dimension of desirability-undesirability. Using the scaling method he obtained the scale values of each statement and paired them accordingly. He believes that only 16 per cent of the total variance in the EPPS may be attributed to the S-D factor. He further claims that conscious distortion of scores (faking) is to this extent controlled and also that unconscious self-deception and role-playing are simultaneously controlled.

Recent studies (Borislow, 1958; Heilbrun and Goodstein, 1961) have indicated that the EPPS can be faked under special conditions of

instructions and that social desirability set is an important source of variance for some (Deference, Succorance and Abasement) but not all variables. However, these authors do conclude that the instrument is not greatly susceptible to the influence of fakability.

The manual presents internal consistency correlations for each of the 15 variables ranging from .60 to .87 and stability coefficients from .74 to .88. Fiske, Howard and Rechenberg (1960) investigated the profile stability coefficient and found that their results were highly congruent with those of Edwards. They point out that the stability coefficient is in part a reflection of the relative scatter or differentiation of the subject's profile of needs and that it is also associated with separate scale scores. They suggest that individuals who attribute to themselves statements positive and active in meaning may be less variable both in responses and behaviour than individuals who attribute more negative and passive terms.

Evidence for the validity of this scale as a measure of manifest needs has been sought in various areas. Correlations have been obtained from studies involving subjects who were given the EPPS, The Guilford-Martin Personnel Inventory and the Taylor Manifest Anxiety Scale (Edwards, 1959). Edwards has shown that the common S-D factor contributes a not inconsiderable amount to this common variance.

Studies have been reported wherein the validity of subscales or clusters of subscales has been investigated. Zuckerman and Grosz (1958) used the Sway test (a test with a high loading on a factor of "primary suggestibility") with the subscales of Deference and Succorance comprising the construct 'Dependency'. They found that subjects who scored 'high sway' scored higher on these two scales of the EPPS while the 'low sway' subjects were higher on the Autonomy scale.

Bernadin and Jessor (1957) had previously investigated the construct 'Dependency' in three experimental situations. High Deference and low

Autonomy scorers were clearly differentiated from high Autonomy and low Deference scorers in two of these situations (reliance on others for approval and reliance on others for help) but were not differentiated in the third situation (conformity to opinions and demands).

Zuckerman (1958) using a sample of student nurses and relating their EPPS scores to peer-ratings on a 'dependency-rebelliousness' measure obtained significant results indicating that the overtly rebellious nurses had higher scores on a combined score derived from the Autonomy, Deference and Abasement subscales.

Gebhardt and Hoyt (1958), using an analysis of variance design of 2 schools by 3 ability levels by 2 achievement levels, were able to show that overachievers scored significantly higher on Achievement, Order and Intraception subscales while underachievers scored significantly higher on Nurturance, Affiliation and Change.

The foregoing is evidence that the EPPS is a sufficiently stable and reliable test for measuring manifest needs which do, indeed, have considerable validity in behavioural correlates. These studies also tentatively indicate that there are clusters of needs and variabilities of patterns on the EPPS which may have a meaning associated with, and supporting constructs in personality theory. An example of the former is the association between overt rebelliousness and scores on Autonomy, Deference and Abasement with the implication of conflict between needs.

#### B. The Thematic Apperception Test.

Holt (1951) has spelled out the rationale for the projective interpretation of stories written to TAT picture stimuli (Murray and Morgan, 1935) which forms the basis for its use in this study. This rationale is closely related to the psychoanalytic theory of dreams. The following assumptions are necessarily drawn from his discussion:

1. The picture stimulus stands in the same relation to the story response as the thought residues of the day stand in relation to the dream.
2. The perceptual awareness of the stimulus makes some meaningful contact with the ideational content of the subject's past conative and emotional experiences (preconscious) which he draws upon for story content.
3. Unconscious material seeking discharge is likely to be condensed and displaced onto this vehicle of externalization (the story) within the limitations set by the demands of reality, time, order and logic.

In other words, the basic assumption is that the perceptual impact of the picture stimulus has set off a particular train of thought determined by and relevant to motivational forces and their derivatives.

Further assumptions for this method are clarified by Henry (1956) under the concept of 'habitual response tendencies' which allow the experimenter to infer a consistency between the deduced dynamic meaning of the TAT story and the stable aspects of the personality. Henry writes,

These habituated tendencies are then seen as characteristic modes of response descriptive of the individual's emotion and behaviour in situations broader than the test but parallel to the particular stimulus situations provided by the pictures. . . (p. 31).

King (1960) has recommended that the experimenter also take cognizance of the implied assumptions, in all projective tests, that the particular test samples enough of the subject's personality to allow generalizations to be made and that the responses reflect the stated needs equally in different subjects.

King asserts that there is considerable evidence in research results to warrant the revision of some of these assumptions which are accordingly made in our discussion of procedure for this particular study. Some of the evidence he refers to is reviewed by Masling (1960). These are the situational and interpersonal variables which tend to contaminate



the perception of the stimulus and the resultant response. Although there is strong evidence of the influence of these variables, Masling writes that "it is important to note, however, that the projective response did not change with any and all conditions imposed by the experimenter" (p. 81) and further, that the "subject in the projective test setting will not only use those cues furnished by the (picture) but also those supplied by his feelings about the examiner, those furnished by his needs, attitudes and fears, those implied in the instructions, the room and previous knowledge of the test and those cues supplied consciously or unconsciously by the Experimenter." Moreover, we accept his contention that these are indications of adaptation to the task rather than sources of error.

The reliability of the TAT is not a simple matter of statistical verification of the consistency of the technique for measuring attributes of a single individual over time, or equally measuring the several individuals along a specific continuum. King has asserted that the problem of reliability is implied in validity. On this issue he points to the flexibility of the instrument, which both prohibits the simple validation study and yet enhances the varied ways in which validity has been demonstrated. The work of McClelland, and Atkinson is cited in this connection.

Murstein and Pryer (1959) specify four distinct concepts subsumed under the concept of projection, all of which have been shown to have some validity. Most relevant to this study is the concept of "attributive projection" emphasizing the externalization of the subject's needs, motives et cetera. They cite Friedman's work (1955) which revealed significant relationships between self-sorts and projected self on the TAT for normal and neurotic groups but not for a psychotic group. This supports the assumption of habitual response tendencies at least for non psychotic groups.

Returning to the reliability issue, King notes that interscorer reliability is the essential measurable form which must bear the burden of the reliability of a particular research project using a technique such as the TAT. Interscorer reliability is basically a problem of the communicability of scoring criteria and categories used. Henry and Shaw (1956) present a method of analyzing TAT data which is intended to stabilize the interpretative procedure and allow for communicability to other workers without overformalizing the data. Their method purports to adequately compare groups without losing the dynamic nature of the material or the individual variations pertaining to particular subjects. Thematis, the unit of response, are categorized according to Murray's need-press scheme. The central issue of a story is analyzed into elements of the initial stage, the manipulatory phase and the outcome. Thus it is possible to denote differing thematis for each story and the different ways the same issues are handled by individuals or subgroups within the research sample.

These central issues (in terms of needs) are here considered the appropriate variables to be dealt with, since they are the needs most frequently and forcefully projected into the stories. The spectrum of needs reflected by our sample through this type of analysis are those more relevantly and directly related to the purpose of this research rather than an a priori selected group of needs.

#### C. Studies Seeking Relationships Between the TAT and EPPS.

Since the description of the needs measured by the EPPS and TAT (or projective tests derived from the TAT), have the same origin several investigators have studied the possibility of a direct relationship between the two, with little apparent success.

Dilworth (1958) using a correlation technique found no significant relationship was present between strengths of needs of 20 male subjects, as measured by the EPPS and relative strengths of the same needs as assessed from TAT protocols. Also using the correlation technique, Bendig (1957) found a small correlation between n Achievement as measured by the EPPS and as measured by McClelland's Need Achievement Scale. From this Bendig concluded that the traits being measured by each instrument are probably a different type of n Achievement, or each instrument taps different aspects of it.

Melikian (1958), also using these two instruments, obtained an  $r$  0.16, non-significant. In accounting for this absence of relationship he points out that Edwards' description of n Achievement implies only success whereas McClelland's concept is more complex. Melikian thought too, that the responses measured were at different levels of psychic functioning, one manifest and one latent, hence the discrepancy.

Marlowe (1959) added to the above dimensions a sociometric measure. He sought to find relationships among a direct, and an indirect measure of n Achievement and overt behaviour. His results revealed no significant relationship between the projective responses and the EPPS or between the sociometric and the EPPS, but there was a significant correlation between the sociometric and the projective measure. He concludes that the EPPS and McClelland's TAT method are not equivalent measures and suggests that the former is the subject's view of self while the latter is a measure of the strength of internal motivation.

The discrepancy between the strength of motivation and overt behaviour, on the one hand, and a view of the self, on the other, suggests the existence of some form of self-deception. Melikian's point that the EPPS is measuring a manifest level of functioning (self in awareness) while the TAT is measuring a latent level (and perhaps a more unconscious

motivational pattern) gains considerable support from this latter study. Moreover, these findings tend to support the contention held here, that ego defensive mechanisms are operative for some (if not most) of the subjects when responding to the EPPS, which results in the small correlations obtained. Operationally, the mechanisms fit into the concept of self-deception as defined earlier. The experimental procedure of this study, to be described later, attempts to avoid some of the difficulties encountered by these workers as well as using their negative findings as a starting point for the theoretical approach taken here.

#### D. Discomfort-Relief Ratio.

The problem of obtaining a valid non-physiological measure of anxiety is particularly thorny. Our interest is to measure anxiety specific to, or at least most closely associated with the particular life-experience, of the subjects, under scrutiny. In this study, the major life experience variable is academic achievement at college. The thesis is, that if failure is imminent the concept of self as adequate is threatened, arousing anxiety. The situation of potential threat is the examination with its concomitant anxiety. Dollard and Mowrer (1953) provide a method of measuring tension in written documents which is applicable to the examination essay if the topic has some personal reference.

In their discussion of the theory behind this method they state:

Learning theory holds that responses are incited by drives-- primary and secondary. In a learning dilemma, these drives produce novel responses. In the earliest learning situations, responses are connected directly to drives, under the pressure of reward. Reward is viewed as drive reduction. In most complex learning situations drives acquire cue properties; that is, lesser strengths of drive can elicit a response. Similarly other cues (often external) become patterned with drives and drive cues as a condition of evoking a response.

In the sense of learning theory, thoughts, ideas, and plans are all special cases of habits which are mediated by sentences (p. 235).

Accordingly words, phrases or sentences may indicate drive-tension or drive-reduction (i. e., relief) and the ratio of the discomfort phrases to the sum of both discomfort and relief phrases may indicate the amount of tension (equated with anxiety) experienced while writing.

The authors report an average inter-correlation between ten independent scorers, using this method on a single case, of  $r+.88$ . Mowrer, McV. Hunt and Kogan in their chapter (1953) report further research which was undertaken with this method, largely on counseling and psychotherapy cases. Their data tended to validate the DRQ as a reliable measure of tension and tension change during single interviews, and over several interviews of terminated therapy cases.

They also report a study using 35 chronic schizophrenic patients where the DRQ was used to assess tension in free verbalization. The ratio was then correlated with clinical ratings of tension for each subject, by a psychiatrist. An insignificant correlation was obtained indicating that the DRQ could not be used as a valid measure of tension in schizophrenics. The discussants point out that this finding does not invalidate the DRQ as a measure of tension in written documents since schizophrenics use language in a qualitatively different way from normal or neurotic subjects.

#### E. Selection of Subjects.

"Methods of Study" (Psychology 101) is a course at Michigan State University provided more especially for those students doing poorly in their college work. On the whole it is attended by freshmen and sophomores with a grade point average of less than two; in other words, it is composed largely of students faced with the threat of suspension because of failure to attain the required scholastic standard. There are a few students who enroll in this course as an introductory course to further courses in Psychology. Their scholastic status is not in the same precarious position.

Three sections of the "Methods of Study" course of the winter term of 1961 were chosen to represent the sample for this research. These sections were taught by the same instructor, in the same classroom, and were administered the three tests by him. Conditions of testing were relatively uniform for all subjects. Those subjects who completed all three tests constituted the sample. Two subjects were dropped from the sample because they were foreign students, whose limited use of English confounded their responses. Yet another three were eliminated from the total sample because their Consistency scores on the EPPS were below the recommended nine points. The remaining 35 subjects constitute the sample, divided into the experimental group (those under objective threat of suspension) and the control group (those under no such threat). Thus this division results in an experimental group of 21 subjects with grade point averages below 2.00 and the control group of 14 subjects with averages of 2.00 or higher.

Table 1 shows the relative status of both groups with respect to age, sex, intelligence and time in college. It can be seen that there are no significant differences between the two groups on these variables.

In summary then, the experimental group is comprised of students faced with the objective threat of suspension from university if their grades are not improved while the control group is made up of students not now facing such threat. The two groups have been matched on all important variables.

#### F. Procedure.

1) Administration: The three tests were administered by the instructor after the course was already in progress and students were well acquainted with him. Initially the EPPS was administered in group

Table 1. The Experimental and Control Groups Compared on Four Variables.

Group	Female	Male	Total	* Age (Years-Months)		* Percentile Rating on M.S.U. Entrance Exams		* Number of Terms at College	
				M	SD	M	SD	M	SD
Experimental	8	13	21	19-6	1-5	21.8 (N.17)	16.4	2.9	2.09
Control	6	8	14	19-3	2-1	32.9 (N.10)	24.2	2.2	2.14

\* t-test for the difference between the means, not significant.

form, with standard instructions. About three weeks later cards 1, 2, 4, 6BM, 8BM, 7BM and 17 were group administered with instructions suggested by Henry (1956). At the end of the nine week term, during the scheduled examination period, the subjects were required to write an essay which clearly called for self-reference. The stimulus to which they responded was a quotation from Goethe (see Appendix B).

2) Steps in the Analytic Procedure:

a) The EPPS protocols were scored according to the procedure outlined in the manual. The analysis is based on the raw scores collapsed to a five point scale.

b) The TAT protocols were analyzed by the Henry and Shaw method by two judges scoring independently. Scorer agreement was 83 per cent.

In order to ascertain which of the fifteen needs specified for the EPPS were most often expressed in the TAT responses, a count was made across all protocols for the whole sample. Column one of Table 2 presents this result ranking the needs from the most frequently expressed to those least frequently expressed. Column two of that table presents the breakdown of the most frequently expressed needs in terms of the first and second most productive stories.

This analysis revealed that the responses to the seven picture stimuli did not reflect all fifteen needs in appreciable strengths, or by all subjects, and therefore we concluded that these stimuli do not sample enough of the subjects' personalities to allow generalizations to be made on each category of the 15 needs. Five of these needs are revealed in the elicited responses in more than one story in appreciable strength, and to this extent only further analysis and generalizations are made. These needs are Achievement on stories 2 and 17, Deference on stories 1 and 4, Autonomy on stories 4 and 2, Intraception on stories 1 and 7BM, and aggression on stories 4 and 1.



Table 2. Frequencies of Needs Expressed in TAT Stories

Need	Total Fre- quencies	1st Most Productive Story	Fre- quency	2nd Most Productive Story	Fre- quency
Aggression	160	4	37	1	34
Autonomy	101	4	21	2	19
Achievement	99	2	34	17	19
Intracception	80	1	21	7BM	15
Affiliation	75	1	15	6BM	15
Deference	62	1	20	4	13
Abasement	62	6BM	15	4	13
Nurturance	57	7BM	14	4	13
Endurance	37	1	15	17	8
Succorance	36	2	8	4	8
Heterosexuality	35	4	20	2	9
Exhibition	23	17	17	8BM	2
Dominance	10	4	7	1	1
Change	5	2	2	8BM	1
Order	1	6BM	1	-	-

c) Evaluation of the strength of these five needs, comparable to the EPPS needs were then made in terms of the definitions provided by Edwards in the manual (see Appendix A). Evaluation of the strengths of these five needs were made by two independent scorers applying the following scales to each story (as specified above), across the entire sample arranged in random order.

List of scales of needs derived from Edwards' definitions:

1) Achievement.

1. No involvement in, or avoidance of, achievement.
2. Occasionally exerts some effort but sees outcome as failure.
3. Frequently exerts some effort but sees outcome as doubtful.
4. Often exerts effort and sees some success in outcome.
5. Always exerts effort to accomplish and sees outcome as successful.

2) Deference.

1. Never makes himself acceptable to others, no need to accept leadership or conform to will of others.
2. Occasionally makes himself acceptable to others, or accepts leadership, or conforms slightly.
3. Frequently makes himself acceptable to others or accept leadership or conforms.
4. Often makes himself acceptable to others, accepts leadership and conforms.
5. Always accepts leadership, decisions of others and makes himself acceptable at all costs.

3) Autonomy.

1. Has constant need to do what others require of him. (Never attempts to be his own master.)
2. Usually acts in accordance with the requirements of others, sometimes is self-directive.
3. Frequently takes cognizance of requirements of others yet retains ability to be self-directive.
4. Rarely heeds requirements of others, almost always attempts to be self-directive.
5. Always acts according to the idea that he is his own master.

## 4) Intraception.

1. No contact with the feelings and motives of others or of self.
2. Some superficial and stereotyped categorizing of feelings.
3. Some understanding of the feelings of others with little empathy.
4. Considerable understanding of the feelings of others and empathy.
5. Always sees into, feels and empathizes with, the feelings and behaviour of others.

## 5) Aggression.

1. Never disparages, attacks or feels angry with others.
2. Occasionally disparages, attacks or feels angry with others.
3. Frequently disparages, attacks or feels angry with others.
4. Often disparages, attacks or feels angry with others.
5. Always disparages, attacks and is angry with others.

As previously pointed out, each subject is rated on each of the five needs twice. That is, a particular need is scored on only two pictures and is ignored when it appears in lesser strengths on other pictures. The relevant scale was applied to the first story, and a value from 1-5 was judged for each subject across the whole sample. Then the same need was judged on the second story. Thus for a particular need, two values were obtained pertaining to two stories. These two values were averaged to form the judged strength of a need. This was done for each of the five needs, thus each subject was evaluated ten times and five final ratings were derived. A second judge applied the same procedure. Average percentage agreement between the two judges for the five needs was 88 per cent, with a range of 85-91 for individual needs.

d) The scaled scores of strength of five needs from the EPPS and scaled ratings of the strength of the same needs derived from TAT protocols were then available. It was then possible to determine arithmetically whether the strength of needs expressed in awareness

differed from those assessed from fantasy, by subtracting the TAT score from its EPPS equivalent. Thus five discrepancy scores for each of the five needs were obtained for each subject. These five discrepancy scores were then summed on each protocol to form the experimental variable, total Discrepancy Score (DS). The DS is now a broad and more inclusive self-deception measure, yet confined to an area relating only to Achievement, Deference, Autonomy, Intraception and Aggression.

An example of an individual protocol of scoring as developed through these stages of analysis is given in Figure 1.

Figure 1

Need	EPPS Scaled Score	TAT Average Rating	Discrepancy
Achievement	4	2	2
Deference	2	3	1
Autonomy	3	2	1
Intraception	1	1	0
Aggression	5	4	1
Total			<u>5 DS</u>

The resulting distribution of DS scores for the entire sample of 35 subjects ranged from 2.5 DS to 12 DS with a median of 4.5.

e) The examination essays were then scored for DRQ ratios by two scorers, working independently. Appendix C illustrates the procedure whereby each thought unit, or phrase, was assessed for its implication of discomfort or relief. Neutral phrases were not included in the computation of the ratio  $\frac{\text{Discomfort units}}{\text{Discomfort plus Relief units}}$ . The inter-scorer reliability was 0.82. The resulting distribution of DRQ ratios ranged from 0.273 to 0.711 with a median at 0.525.

### G. Statements of Hypotheses and Operational Predictions.

1. The subjects who are experiencing the greater objective threat to their self-esteem will be more defensive. Operationally, DS scores for the experimental group will be greater than DS scores for the control group.

2. In a stress situation relevant to the particular threat to self-esteem, the more threatened group will be the more anxious. Operationally, the DRQ ratios for the experimental group will be higher than the DRQ ratios for the control group.

3. The subjects who are the more defensive will be those who are more anxious in a relevant stress situation. Operationally, the group with the higher DS scores will be those with the higher DRQ ratios.

### III. RESULTS AND DISCUSSION

#### A. Results.

The first hypothesis--that the DS for the experimental group will be greater than the DS for the control group--was tested by means of the median chi square test and found to be non-significant. Similarly the second hypothesis--that DRQ ratios for the experimental group will be greater than the DRQ ratios for the control group--proved to be non-significant when tested by means of the median chi square test. The results of these analyses are given below in Table 3.

Table 3. DS and DRQ Related to Grade Point Attainment.

Analysis	Dichotomy	Group		X <sup>2</sup>
		Experimental	Control	
1.	Below median DS	10	8	n. s.
	Above median DS	11	6	
2.	Below median DRQ	9	8	n. s.
	Above median DRQ	12	6	

Again the third hypothesis--that the group with the highest DSs will be the group with the highest DRQs--was tested using the medians of the distributions to separate the two groups. The control variable, grade point average, was ignored for this analysis. The resulting chi square was not significant but a trend in the predicted direction can be observed in the analysis presented in Table 4.

Table 4. DS Scores Related to Strength of DRQ Ratios.

	Below median DS	Above median DS	N.	$\chi^2$
Below median DRQ	10	7	17	n. s.
Above median DRQ	8	10	18	
	18	17	35	

Consideration of these results led the writer to evaluate further the theory behind the DRQ ratio. The ratio of .50 represents a balance between discomfort words and relief words implying an equilibrium of tension, which is more meaningful to this thesis than the artificial division at the median DRQ of the distribution. Therefore, both the second and third hypotheses were again subjected to statistical testing, using the ratio .50 as the value of critical difference. The results of these two tests are given in Table 5.

Table 5. Critical DRQ Ratio of .50 Related to Control Variable and DS.

Analysis	Dichotomy	Group		$\bar{X}^2$	p
		<u>Experimental</u>	<u>Control</u>		
Hypothesis 2	DRQ of .50 or less	7	6		
	DRQ above .50	14	8	n. s.	
Hypothesis 3	DRQ of .50 or less	<u>Below median DS</u>	<u>Above median DS</u>		
		10	3		
	DRQ above .50	8	14	3.88*	.025

It is now more evident that there is a tendency for more of the E group to be the more anxious on the examination, two-thirds of this group have DRQs higher than .50 while just more than half of the control group have ratios above .50. When the control variable is ignored the relationship between high DS and high DRQ, previously masked, is now quite apparent.

#### B. Discussion.

The results of the present study indicate no difference between students with failing grade point averages and those with passing averages with respect to self-deception (as represented by DS) or with respect to anxiety (as represented by DRQ). Both groups exhibit similar distributions of measures for these variables. There is, however, a slight trend to be noted in the predicted direction. This becomes more evident for the anxiety scores when the critical difference score for the DRQ is based on the logic of the ratio rather than the median score.

The explanation for the failure to differentiate between the experimental and control groups, to any appreciable extent, may well lie in the relevance of the control variable (i. e., 2.00 grade point average at the beginning of the term). We have no way of assuring that marginal or better attainment at college (above 2.00 point average) is less threatening for some subjects whose goal may be considerably higher, than is a failing grade for others. Indeed, the extent to which the "objective threat" (failing grade) contributes to the anxiety felt by some subjects in the experimental group, may well be less than the "subjective threat" of not achieving beyond, say, 2.5 grade points for others.

It would appear then, not that DS scores increase with increase of real threat (as defined in this study) but that this relationship must be further investigated with a more reliable measure of objective threat



in order to ascertain if such a relationship does or does not exist. The specific hypothesis that individual subjects who experience a greater objective threat to self-esteem are the more self-deceptive has not been supported by this study. The crucial research problem is clearly the isolation of the pivot upon which self-esteem balances, then the instrument for upsetting the balance, experimentally, can reliably be chosen.

Similarly, although the trend is more in evidence, the results obtained with respect to anxiety (DRQ) experienced in a relevant stress situation (examination) are confounded by the unreliability of the control measure. It must also be noted that certain subjects are intrinsically more anxious in a stress situation irrespective of the particular relevance of the specified situation. This factor becomes magnified in a small sample such as ours. Chronically anxious subjects in the control group perhaps mask the real effects that may indeed exist.

The significant results for the third hypothesis, using the DRQ ratio of .50 as the critical difference indicates that the presence of a few subjects in the control group with both high DS and high DRQ scores on the one hand, and subjects in the experimental group with both low DS and DRQ scores, on the other hand, did tend to obscure an existing relationship. This result supports the more general hypothesis that in a stress situation the subjects who are more self-deceptive are the more anxious. It also contributes validity to a major assumption of this study, that the discrepancies between a description of self in awareness and a description of self derived from fantasy is associated with anxiety. Self-deception as a form of defensiveness which can be measured, requires further support from replications of studies such as this.

#### IV. SUMMARY AND CONCLUSIONS

This study, stemming from psychoanalytic theory, was undertaken in order to ascertain whether it was possible to measure degrees of defensiveness (in the form of self-deception) and to determine whether some lawful association between self-deception and amount of anxiety in a stress situation existed. Self-deception was defined as the discrepancy between strengths of needs expressed in a conscious assessment of self and strengths of needs derived from fantasy (material brought to awareness but not necessarily associated consciously with self). The stress situation was defined as an examination where subjects were required to write essays with a strong ingredient of self-reference.

Three sections of a "Methods of Study" course, taught by one instructor were separated according to grade point average into the Experimental group (those with failing grades) and the Control group (those with passing grades). The two groups were adequately equated on age, sex, number of terms spent at college and intelligence.

Subjects were group administered the EPPS, seven TAT cards and the examination. From this basic data scaled scores of the strength of five needs (Ach., Def., Aut., Int., Agg.) were derived from the EPPS scale and strengths of the same needs were judged on a five point scale on relevant TAT stories. The relevance of particular stories was previously determined by an analysis of all seven stories to elicit which stories contained the most need content across the whole group. The discrepancies between needs as expressed on each instrument were calculated, and then the resulting five scores were totalled to form the final discrepancy score (DS). The essay was scored by means of the Discomfort-Relief Ratio technique to ascertain amount of anxiety revealed in the stress situation.

It was predicted that, 1) the DS scores for the Experimental group would be higher than the DS scores for the Control group; 2) the DRQ for the Experimental group would be higher than the DRQ for the Control group, and 3) in the sample as a whole subjects with high DS scores would be high DRQ scorers. None of these predictions were borne out, but some slight trends were noted. The probable causes of the failure to elicit significant results were discussed and tended to cluster around the inadequacy of the control measure and the subjective relevance of the experimental situation for individual subjects.

A second analysis was carried out on the second and third hypotheses using the DRQ ratio of .50 as the critical difference rather than the median DRQ. On the latter, where the control variable is not operative significant results were obtained. The implications of this result were discussed. It was concluded that in a stress situation subjects who are more self-deceptive are the more anxious. The self-deception measure would therefore appear to have some validity within the theoretical framework from which it stems.

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## APPENDICES

## APPENDIX A

The manifest needs associated with each of the 15 PPS variables are:

1. ach--Achievement: To do one's best to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something of great significance, to do a difficult job well, to solve difficult problems and puzzles, to be able to do things better than others, to write a great novel or play.

2. def--Deference: To get suggestions from others, to find out what others think, to follow instructions and do what is expected, to praise others, to tell others that they have done a good job, to accept the leadership of others, to read about great men, to conform to custom and avoid the unconventional, to let others make decisions.

3. ord--Order: To have written work neat and organized, to make plans before starting on a difficult task, to have things organized, to keep things neat and orderly, to make advance plans when taking a trip, to organize details of work, to keep letters and files according to some system, to have meals organized and a definite time for eating, to have things arranged so that they run smoothly without change.

4. exh--Exhibition: To say witty and clever things, to tell amusing jokes and stories, to talk about personal adventures and experience, to have others notice and comment upon one's appearance, to say things just to see what effect it will have on others, to talk about personal achievements, to be the center of attention, to use words that others do not know the meaning of, to ask questions others cannot answer.

5. aut--Autonomy: To be able to come and go as desired, to say what one thinks about things, to be independent of others in making decisions, to feel free to do what one wants, to do things that are unconventional, to avoid situations where one is expected to conform, to do things without regard to what others may think, to criticize those in positions of authority, to avoid responsibilities and obligations.

6. aff--Affiliation: To be loyal to friends, to participate in friendly groups, to do things for friends, to form new friendships, to make as many friends as possible, to share things with friends, to do things with friends rather than alone, to form strong attachments, to write letters to friends.



7. int--Intracception: To analyze one's motives and feelings, to observe others, to understand how others feel about problems, to put one's self in another's place, to judge people by why they do things rather than by what they do, to analyze the behavior of others, to analyze the motives of others, to predict how others will act.

8. suc--Succorance: To have others provide help when in trouble, to seek encouragement from others, to have others be kindly, to have others be sympathetic and understanding about personal problems, to receive a great deal of affection from others, to have others do favors cheerfully, to be helped by others when depressed, to have others feel sorry when one is sick, to have a fuss made over one when hurt.

9. dom--Dominance: To argue for one's point of view, to be a leader in groups to which one belongs, to be regarded by others as a leader, to be elected or appointed chairman of committees, to make group decisions, to settle arguments and disputes between others, to persuade and influence others to do what one wants, to supervise and direct the actions of others, to tell others how to do their jobs.

10. aba--Abasement: To feel guilty when one does something wrong, to accept blame when things do not go right, to feel that personal pain and misery suffered does more good than harm, to feel the need for punishment for wrong doing, to feel better when giving in and avoiding a fight than when having one's own way, to feel the need for confession of errors, to feel depressed by inability to handle situations, to feel timid in the presence of superiors, to feel inferior to others in most respects.

11. nur--Nurturance: To help friends when they are in trouble, to assist others less fortunate, to treat others with kindness and sympathy, to forgive others, to do small favors for others, to be generous with others, to sympathize with others who are hurt or sick, to show a great deal of affection toward others, to have others confide in one about personal problems.

12. chg--Change: To do new and different things, to travel, to meet new people, to experience novelty and change in daily routine, to experiment and try new things, to eat in new and different places, to try new and different jobs, to move about the country and live in different places, to participate in new fads and fashions.

13. end--Endurance: To keep at a job until it is finished, to complete any job undertaken, to work hard at a task, to keep at a puzzle or problem until it is solved, to work at a single job before taking on others,

to stay up late working in order to get a job done, to put in long hours of work without distraction, to stick at a problem even though it may seem as if no progress is being made, to avoid being interrupted while at work.

14. het--Heterosexuality: To go out with members of the opposite sex, to engage in social activities with the opposite sex, to be in love with someone of the opposite sex, to kiss those of the opposite sex, to be regarded as physically attractive by those of the opposite sex, to participate in discussions about sex, to read books and plays involving sex, to listen to or to tell jokes involving sex, to become sexually excited.

15. agg--Aggression: To attack contrary points of view, to tell others what one thinks about them, to criticize others publicly, to make fun of others, to tell others off when disagreeing with them, to get revenge for insults, to become angry, to blame others when things go wrong, to read newspaper accounts of violence.

APPENDIX B

THE EXAMINATION TOPIC

"That I am a man,  
this I share with other men,  
That I see and hear and  
that I eat and drink  
is what all animals do likewise.  
But that I am I is only mine  
and belongs to me  
and to nobody else;  
to no other man  
not to an angel nor to God--."

## APPENDIX C

### AN EXAMPLE OF AN EXAMINATION ESSAY SHOWING DRQ SCORING

Each of us is a man (+) in the strict sense of the word. (6) Everyone has certain things in common (+). We all eat, sleep, talk, walk, etc. (+) Everyone is in the same society (+) so therefore we cannot be basically different (-). Our environment, however, influences our lives (-) and this is different for every person (-). One sees different things around him than does the next person (-). These things effect different people in different ways (-). Each and every man is a man within a group (+).

Each one of us has certain characteristics which make us an individual (0). Whether it be leadership ability or artistic ability (+) each has its own place in society (+). Every person is an individual and must act accordingly (+).

My own experience, which didn't take place until I took this course (-) was self-evaluation (-). I thought I knew myself and what I was like (-). But when I began to really look deep (-) I found that there were many things which I thought were so that didn't show the real me (-).

The most important thing I received from this course (+) was the realization that other people have the same problem that I do (+). When I know that there are other people doing the same things that I am (+), then it is that I feel I have a chance (+). I am not easily persuaded to admit my faults (-) but in this course it seemed like it was the right thing to do (+). I have the urge to be a leader (+) and therefore I don't like to admit my faults (-) for fear that it will hinder my major objective (-).

Since I have taken this course I have realized that everyone has faults (+) and the sooner we admit our faults (-) the sooner they can be corrected. (+)

Every man is himself (+) and shouldn't try to copy or imitate (-) someone he admires (+). Our fellow men are like ourselves (+) only they have different interests and tastes. (-) Who is to say which is better? (-) Be yourself (+) and when you know that you are being yourself (-) think that you are just as good as the next person (+) and things will be alright. (+)

Key:

Discomfort. . . . -  
Relief . . . . +  
Neutral . . . . 0

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