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Development and Prediction of I-E Orientation and its Relationship With Some Personality Correlates

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DEVELOPMENT AND PREDICTION OF I-E ORIENTATION AND ITS
RELATIONSHIP WITH SOME PERSONALITY CORRELATES

by
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Bachelor of Arts, University of North Dakota 1966

Master of Arts, University of North Dakota 1970

A Dissertation
Submitted to the Faculty
of the
University of North Dakota
in partial fulfillment of the requirements
for the degree of
Doctor of Philosophy

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Barry L. Johnson

1972

ii

This Dissertation submitted by Barry L. Johnson in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota is hereby approved by the Faculty Advisory Committee under whom the work has been done.

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RELATIONSHIP WITH SOME PERSONALITY CORRELATES

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ABSTRACT

Locus of control is a personality dimension involving an individual's perceived control over events occurring in his life. An internal (I) person is one who feels that he controls his reinforcement contingencies. The external (E) person feels that his rewards or reinforcements occur on a chance basis, are due to fate or luck, or controlled by something or someone else.

Though the body of information surrounding the I-E construct is growing, there are still many questions to be answered and areas to be explored. One of the goals of this investigation was to examine some underlying factors in the development of I-E orientation. An attempt was also made to predict I-E orientation from the Thematic Apperception Test (TAT). In addition, personality characteristics and fantasy styles of individuals were investigated as they related to locus of control, for both males and females.

The Experiential Self Report Quasi (ESRQ) Questionnaire was completed by all subjects. The (ESRQ) Questionnaire included the following instruments which were used as dependent variables: the Family Relations Inventory, the STAI A-Trait scale, a five item scale measuring perceived confidence in problem-solving abilities and items from the Daydream Questionnaire developed by Singer. The independent variables were the two levels of locus of control (internal and external) and two levels of sex (male and female).

Analysis of variance was used to examine the relationship between I-E and the dependent variables. The results indicated that maternal child rearing attitudes of over-protectiveness and restrictiveness were strongly related to an external orientation.

External Ss were also found to be significantly more anxious than internal Ss. In addition, male external Ss rated themselves as less confident in problem-solving abilities than did internal Ss. No differences were found between internals and externals in regards to daydream activity or defense mechanisms.

It was suggested that individuals who score within the moderate ranges on the Rotter I-E scale may represent the best adjusted individuals.

Two judges were able to predict I-E orientation from responses to TAT cards with 70% accuracy. They predicted external Ss with much greater efficiency than they were able to do with internal Ss.

The implications of these findings were also discussed in reference to therapeutic management of clients. It was suggested that insight-oriented therapy may be the preferred treatment modality for internal clients, while more structured therapeutic techniques may be more effective for the external client during the beginning stages of therapy.

CHAPTER I

INTRODUCTION

Man's environment is continually becoming more complex and difficult to understand. Technology and ever-growing bureaucracy exercise greater impact on the individual's perception of his world. Some people tend to maintain a sense of personal control over their lives despite the seemingly diverse and complicated forces with which they must contend. There are other people, however, who feel that they no longer have as much control over events in their lives. These people tend to believe that whatever happens to them is more a result of luck, chance, fate or of external influences rather than assuming personal control for events occurring in their lives. As an example of the current relevance of perceived responsibility, Rotter (1971) reported that much of the impetus behind recent campus unrest has been due to a feeling on the part of students that they can no longer change the world in which they live.

Locus of control is a personality dimension involving an individual's perceived control over events occurring in his life. An internal (I) person is one who feels that he controls his reinforcement contingencies. The external (E) person feels that his rewards or reinforcements occur on a chance basis, are due to fate or luck, or controlled by something or someone else. The I-E dimension has received increased

attention during the last two decades. In fact, the research pertaining to the I-E construct has almost doubled since 1966, when reviews of literature were conducted by both Lefcourt and Rotter.

Though the body of information surrounding the I-E construct is growing, there are still many questions to be answered and areas to be explored. One of the goals of this investigation was to examine some underlying factors in the development of I-E orientation. An attempt was also made to predict I-E orientation from the Thematic Apperception Test (TAT). In addition, personality characteristics and fantasy styles of individuals were investigated as they related to locus of control, for both males and females.

CHAPTER II

REVIEW OF THE LITERATURE

The following review of locus of control is divided into five sections. The first section presents a brief theoretical review of the locus of control construct. The second section deals with the development of an I-E orientation. Locus of control in relation to anxiety and under conditions of stress is covered in the third section. The relationship between locus of control and defense mechanisms is reviewed in section four. The last section focuses on locus of control and fantasy activity.

Theoretical Description of I-E Construct

Locus of control or Internal-External control is a personality dimension representing one's perceived control over constructing and maintaining reinforcement contingencies in the environment. The I-E construct is seen as a continuum with internality and externality falling at the extreme ends. Theoretically, an internal (I) person is one who feels that he controls his reinforcement contingencies. The external (E) person feels that his rewards or reinforcements occur on a chance basis, are due to fate or luck, or controlled by something or someone else. Thus, regarding locus of control, the major difference

between internal and external persons is the amount of control they believe they have over their environments.

Rotter's (1954) Social Learning Theory serves as the basis for the locus of control construct. This theory is composed of four basic concepts: behavioral potential, expectancy of reinforcement for a given behavior, the value of the expected reinforcement, and the psychological situation in which the individual is behaving. Rotter summarizes his Social Learning Theory in the following formula:

$$BP_{XS_1R_a} = f(E_{XS_1R_a} \ \& \ RV_a)$$

This equation states that the potential of behavior X 's occurrence in situation 1 , with reinforcement a , is a function of the subjective expectancy that the behavior in this situation will lead to reinforcement a and the value of the reinforcement. The I-E variable is directly related to the expectancy term ($E_{XS_1R_a}$) in the above formula. The expectancy term in relation to the I-E dimension becomes a generalized expectancy that a specific behavior will or will not have a significant influence on the environment.

Development of an I-E Orientation

In a major review of the literature on locus of control, Lefcourt (1966) indicated that little research had been directed at determining how an I-E orientation develops. The first study in this area was done by Cromwell, Rosenthal, Shakow, and Zahn (1961). These investigators obtained measures of locus of control and descriptions of parental behavior from both schizophrenic and normal subjects (Ss).

Schizophrenics were found to be significantly higher than normals in terms of externality. The authors suggested that one of the determinants of externality may be excessive parental control.

More recently, several investigators have studied the relationship between I-E control and Ss' recalled perceptions of parental attitudes. The Maryland Parental Attitude Survey (MPAS) was used by Tolor (1967) in an attempt to explore the relationship between parental attitudes and locus of control. The MPAS purports to measure four types of child-rearing attitudes: Disciplinary, Indulgent, Protective and Rejecting. Tolor predicted that an Indulgent attitude would be positively correlated with externality. It was also predicted that a Disciplinary attitude would correlate with internality. Contrary to the first hypothesis, the results indicated that an Indulgent attitude was significantly associated with internality. No other relationships were found. Tolor replicated this study and found no significant relationships. Based on these results, he concluded that the significant finding between Indulgence and internality was only a chance relationship. Although none of the MPAS scales were found to be either consistently or significantly related to locus of control, he indicated a need for further research examining the relationship between parental attitudes and locus of control.

In a subsequent study, Tolor and Jalowiec (1968) explored the relationship between parental attitudes and internal-external expectancies using the Parental Attitude Research Instrument (PARI). The PARI is a 115 item scale in which Ss are asked to respond to the items in accordance with how they feel their mother might respond. Previous

factor analytic work had suggested that the PARI measures the following three dimensions: Authoritarian Control, Hostility-Rejection, and a Democratic attitude factor. Results of the Tolor and Jalowiec study indicated that externality was positively correlated with both the Authoritarian Control and the Hostility-Rejection factors. No relationship was found between the Democratic attitude factor and the I-E scores. They concluded that "certainly there is a need to verify the suggestion that deleterious maternal attitudes contribute to the development of externality by further research more directly pointed at this hypothesis." It was further suggested that one's sense of identity should be related to locus of control. For example, if an individual has a stable sense of identity, it would be easier for him to perceive his reinforcements as a result of his own behavioral efforts rather than attributing them to external sources of control.

In a further investigation of this line of reasoning, Palmer (1971) cited a number of personality theorists who suggest that identity formation is in part a result of previous identifications with parental attitudes and behavior. Individuals accept and reject specific parental attitudes and in the process, formulate their own sense of identity.

Palmer's study examined the relationship between varying degrees of parental identification and psychopathology. His Ss were psychiatric and nonpsychiatric hospitalized male veterans. The Ss were given the Rotter I-E scale and Slater's (1961) Parental Role Perceptions (PRP) questionnaire. Three hypotheses were formulated: (1) Psychiatric patients were predicted to score higher on externality than would hospitalized nonpsychiatric patients because of a poorly developed sense of

personal identity. (2) Psychiatric patients would indicate less acceptance of parental norms and values than would nonpsychiatric patients.

(3) Nonpsychiatric patients would view their parents as possessing greater parental warmth and support than would psychiatric patients.

Although Palmer was also interested in the relationship between locus of control and the individual's perception of his parents, he made no formal predictions in this regard.

The results showed that psychiatric patients were significantly higher in externality than were nonpsychiatric patients. Alcoholic psychiatric patients reflected the greatest amount of externality among the various psychiatric categories.

With respect to the second hypothesis, it initially appeared that the psychiatric patients were less accepting of parental norms and values. However, the psychiatric patients showed much greater variance than did the nonpsychiatric patients. When the psychiatric and nonpsychiatric patients were matched to equalize the variance, the differences between the two groups became nonsignificant.

The third hypothesis received only partial support. That is, psychiatric patients perceived their mothers as significantly less emotionally supportive and warm than did the nonpsychiatric patients. The psychiatric patients also tended to perceive their fathers as less emotionally supportive and warm in comparison to the nonpsychiatric patients. However, this difference was not significant.

In a post hoc analysis, Palmer selected Ss scoring at the extremes on the I-E scale and compared them with Slater's PRP measure. It was found that external patients perceived their mothers as

significantly less supporting and warm as compared to internal patients. Externals also tended to perceive their fathers as lower on the supportiveness-warmth dimension than did internals. However, this difference was not found to be significant. Palmer suggested that external orientation may represent a learned phenomena stemming from an individual's experience of being unable to elicit positive reactions from his parents, especially from his mother. Consequently, the individual might develop the perception that rewards are contingent upon forces over which he has little control.

From the research just reviewed, it is apparent that investigators are becoming interested in antecedent conditions leading to an I-E orientation. Cromwell, et al., (1961) suggested that externality may be related to excessive parental control. The investigation by Tolor and Jalowiec (1968) found evidence that deleterious maternal attitudes were significantly correlated with externality. Further research by Palmer (1971) indicated that external patients perceived their mothers as significantly less supporting and warm than did internal patients. The external patients also tended to see their fathers as less warm and supporting than internals, but the difference was not significant.

It is important to note that the study by Palmer attempted to determine parental attitudes for both mother and father. Although prior research has been primarily concerned with maternal attitudes, it is certainly reasonable to expect that paternal attitudes may be just as important in the development of a locus of control orientation. With this in mind, one of the aims of the present study was to investigate the relationship between both maternal and paternal attitudes and the development of locus of control orientation.

Locus of Control and Anxiety

The relationship between anxiety and locus of control has been explored by several investigators. While the general finding has been that externals rate themselves as being more anxious than internals, there is some evidence that other factors such as sex and the type of anxiety measure employed may be operating to confound this supposition.

As part of an extensive correlational study, Butterfield (1964) investigated the relationship between the Rotter I-E scale and the Achievement Anxiety Test (AAT) developed by Alpert and Haber (1960). The AAT provides measures of both facilitating and debilitating anxiety. A significant negative correlation was found between externality and facilitating anxiety. When the effects of facilitating anxiety scores were partialled out, external control correlated significantly with debilitating anxiety scores. This suggests that externals manifest more debilitating and less facilitating anxiety than internals.

A large sample correlational study between locus of control, manifest anxiety, and test anxiety (Alpert-Haber Achievement Anxiety Test) was conducted by Watson (1967). Significant relationships were obtained between all variables. That is, externals scored higher on the MAS measure than did internals. Externality was also found to be positively correlated with debilitating anxiety. These findings were considered to support Watson's previously stated hypothesis that actual or apparent lack of control results in anxiety (Mandler and Watson, 1966).

A study by Tolor and Reznikoff (1967) examined the relationship between I-E control and death anxiety. Viewing death and the process of

dying as a very threatening phenomena for many people, they hypothesized that external Ss, because of their belief that forces outside their control determine their failures, would demonstrate greater death anxiety compared to internal Ss. Results of the study supported this hypothesis.

In a multi-correlational study, Feather (1967) predicted that external control would be positively related to debilitating anxiety, but negatively related to facilitating anxiety. The anxiety measures used were the Alpert-Haber Facilitating-Debilitating Test Anxiety Questionnaire, and the Test Anxiety Questionnaire developed by Mandler and Cowen (1958). Anxiety as measured by the Test Anxiety Questionnaire was found to be positively related to external control for both males and females. They also found that debilitating anxiety was positively related to external control for males, but not for females. With facilitating anxiety, the predicted negative relationship with external control was not supported. It is interesting to note that these results are contrary to the findings obtained by Butterfield (1964), in that Butterfield found a significant negative correlation between externality and facilitating anxiety.

In the discussion of his results, Feather suggests that Ss who score high on measures of anxiety and neuroticism may have had difficulty in the past in coping with stressful situations. Thus, they may rationalize their failures by placing blame on external circumstances rather than upon personal inadequacies. However, he also stated that the reverse might be true; an external orientation may result in high anxiety. It was concluded that there may even be other processes operating that account for these correlations, but that this is a question for future research.

Ray and Katahn (1968) used the Manifest Anxiety Scale (MAS) and the Test Anxiety Scale (TAS) to investigate the relationship between anxiety and locus of control. They conducted an item analysis on the Rotter I-E scale to determine if there might be an anxiety factor contained in the locus of control scale. It was found that both the MAS and the TAS were positively correlated with locus of control, and that the locus of control scale was free of any anxiety component that would account for the general relationship between locus of control and anxiety.

An investigation by Bowers (1968) explored the relationship between pain, anxiety and locus of control. Anxiety level has generally been felt to influence one's reactivity to pain (Kornetsky, 1954; Melzack, 1961). Bowers suggested that one component contributing to anxiety about pain may be the degree of perceived control an individual feels he has over a potential stressor. With this in mind, Bowers conducted a study in which Ss were exposed to recurring electrical shocks. He manipulated Ss' perception of control over the shocks by giving them differential instructions. Some Ss were told that the shocks were avoidable while other Ss were told that the shocks would occur on a random basis. One of his hypotheses was that Ss who were told that the shocks would occur on a random basis would rate shocks as being more painful than those Ss who believed that the shocks were avoidable. It was further hypothesized that Ss who were told that the shocks were avoidable would select higher levels of shock than Ss under the random shock instructions.

Analysis of the data indicated that Ss who felt they could avoid the shocks, selected, on the average, more than twice the shock intensity than did Ss who expected shocks on a random basis. When asked to select the shock level that was maximally painful, the Ss who believed they could avoid the shocks chose a significantly higher level of shock than did the Ss under the random shock condition. It was also found that Ss in the shock avoidance condition rated themselves as being significantly less anxious than Ss in the random shock condition. These findings suggest that the expectation of little or no control over painful stressors results in an increase in anxiety, which tends to magnify the pain perceived by Ss.

A recent study by Hountras and Scharf (1970) concentrated on the relationship between the Manifest Anxiety Scale (MAS) and the De Kalb Survey Test which is a modified version of the I-E scale developed by James (1957). The results indicated that externals scored significantly higher than internals on the anxiety measure. In their discussion, they summarized some of the characteristics of internals and externals as reported by Rotter (1966). They mentioned that externals are not as success-oriented as internals, and that externals have less self-confidence which makes them susceptible to avoidance behavior. Externals tend to be more self-centered and inhibited, and demonstrate little concern over the needs and interests of others. Internals seem to be more adept at creating favorable impressions and are concerned about other people's reactions to them.

The studies that have been done on the relationship between anxiety and locus of control have generally supported the notion that

externals rate themselves as being significantly more anxious than internals. However, as suggested earlier, the research using the Alpert-Haber Facilitating-Debilitating anxiety scale has apparently yielded contradictory results. It is also evident that sex factors must be considered when exploring anxiety and locus of control. It remains for further investigations to clarify the above findings, as well as to provide additional information with respect to the relationship between the varied components of anxiety and locus of control. The present investigation attempted to further explore the relationship between locus of control, sex and anxiety.

Locus of Control and Defense Mechanisms

Defense mechanisms represent typical ways of dealing with anxiety and stressful situations. Toward this end, personality research tends to characterize individuals as "repressors" versus "sensitizers" or as "copers" versus "avoiders" and so forth. Locus of control is an expectancy variable which also attempts to account for and predict behavior in specific situations. However, locus of control is a general expectancy variable which has applicability over a wide range of behavioral situations. Rotter (1954) indicated that avoidance behavior and "irreal" methods of satisfying or obtaining goals have commonly been referred to as "defense mechanisms" by other personality theorists.

Numerous studies have focused on the relationship between locus of control and the individual mechanisms used to cope with stressful situations. Several investigators have suggested that externality tends to be positively related to psychopathology or maladjustment

(Butterfield, 1964; Harrow and Ferrante, 1969; Lefcourt, 1966; Platt and Eisenman, 1968). The relationship between locus of control and three measures of frustration derived from the Child and Waterhouse Frustration Reaction Inventory was investigated by Butterfield (1964). A significant negative correlation was found between externality and constructive response to frustration scores. In addition, a significant partial correlation was obtained between externality and intro-punitive responses. Thus, as externality increased, constructive responses decreased and an increase in intro-punitive responses was found when extrapunitive response scores were partialled out. Apparently then, the less external person uses more of a problem-solving approach despite frustration, and does not engage in as much guilty rumination or self-accusatory gestures as the more external person. These findings suggest that the less external Ss perceive themselves as more goal-directed and striving to overcome hardships, while high external Ss see themselves as suffering, anxious, and less concerned with achievement. Butterfield's suggestion that externals experience more suffering, may be seen as contradictory to Feather's (1967) hypothesis that externals rationalize their failures by placing blame on external circumstances. These discrepant findings suggest that externality may be a result of situational variables. For example, a graduate student in a highly competitive environment may perceive his immediate world as externally controlled, and might experience a sense of failure if he does not perform satisfactorily. In more ambiguous and less-structured situations, however, a person may tend to deny personal failure and project blame onto external circumstances.

Hersch and Scheibe (1967) further explored the relationship between locus of control and maladjustment. The instruments used were the Rotter I-E scale, the California Psychological Inventory (CPI), the Adjective Check List (ACL), and the Pt scale from the Minnesota Multiphasic Personality Inventory (MMPI). A significant relationship was found between externality and trait anxiety as measured by the Pt scale of the MMPI. High trait-anxiety individuals tend to be chronically anxious, and they respond with inappropriate anxiety to situations which inherently seem to have little danger. Internals were found to score higher than externals on the ACL measures of Defensiveness, Achievement, Dominance, Endurance and Order. Internals scored lowest on ACL measures representative of Succorance and Abasement. Regarding the CPI, internal Ss scored higher than external Ss on Dominance, Tolerance, Good Impression, Sociability, Intellectual Efficiency, Achievement via Conformity, and Well-Being scales. It was also reported that externals checked fewer positive and more unfavorable self-descriptive adjectives than did internals.

The investigators then selected Ss scoring at the extremes on the I-E scale and analyzed the various adjectives from the ACL that were checked by the internal and external Ss. The analysis revealed that internal Ss checked twenty-three items significantly more frequently than external Ss. All of the items checked by the internals represented positive traits or characteristics such as clever, efficient, self-confident, assertive, industrious or dependable. It is significant to note that the only adjective checked more by externals than internals was "self-pitying." The test performances of internals were more homogeneous on

the various measures than the test performances of external Ss. Thus, it was suggested that externality may represent a very complex psychological trait. That is, a person may be an external because he realistically has little control over his environment. It is also possible that one views himself as an external because he tends to see himself as being in a competitive situation in which his success is dependent upon significant others around him. A person may also believe in luck or fate in such a manner that he feels these forces are on his side. Reasons such as those enumerated above may account for some of the inconsistencies in the self-descriptions of externals. The investigators concluded that their data supports the notion that internality is associated with indices of social adjustment and personal achievement. It was further concluded that if the external dimension could be delineated as concisely as internality, then many of the complexities surrounding the I-E construct and its relationship to maladjustment might be resolved.

A study by Burnes, Brown and Keating (1971) investigated the relationship between I-E control and the MMPI. These two measures were administered to twenty-five male volunteers of a suburban rescue squad. It was found that externality correlated significantly with three MMPI scales: F, K, and Hy. The relationships with K and Hy were found to be negative. The authors suggested that these findings further clarify the relationship between locus of control and "ego control" or adjustment. More specifically, high K values, low F, and low I-E scores indicate self-acceptance, self-reliance and an absence of serious pathology. The data also suggests that internals tend to deny difficulties or

inadequacies. This finding implies that internality could also lead to maladaptive behavior. The results of this study also go along with the finding by Hersch and Scheibe (1967), that externality was positively related to trait anxiety as measured by the Pt scale of the MMPI. These findings are also similar to those obtained by Goss and Morosko (1970) with a population of alcoholics. These latter investigators found that I-E scores correlated positively with F, Hs, D, Pt, Sc, Ma, and Si scales from the MMPI. They concluded that alcoholics who scored in the external direction were anxious and passive, exhibited more pathology and showed little adaptive defensiveness.

Other studies have attempted to focus on the specific types of defense mechanisms utilized by internal and external individuals. For example, Tolor and Reznikoff (1967) explored the relationship between locus of control and the Repression-Sensitization (R-S) scale. The R-S scale measures reactions to potentially threatening stimuli. Avoidance, denial and repressive defenses constitute the repressive dimension. It was found that externality was significantly related to sensitization and the internality was correlated with repression. Research by Byrne, Golightly and Sheffield (1965) indicated that sensitizers are the most maladjusted whereas repressors are the best adjusted. An unpublished doctoral dissertation by Efran (1963) found that a tendency to repress failure was associated with internality. Generally speaking, this finding makes sense since the external person has little need to repress failure because he places the blame for his failure on outside forces (Rotter, 1966). Thus, it is suggested that externals utilize defense mechanisms such as projection and rationalization, whereas internal Ss tend to make more frequent use of repression and denial.

Some investigators have begun to study the relationship between locus of control and other personality constructs such as dogmatism, authoritarianism, aggression and hostility. A study by Williams and Vantress (1969) attempted to clarify how aggression and hostility are related to locus of control. Previous research by Rotter, Seeman and Liverante (1962) found a significant correlation between externality and authoritarianism. It has also been found that authoritarianism is correlated with hostility (Siegel, 1956). Based on these findings, Williams and Vantress proposed that externality should be correlated with hostility. The frustration aggression hypothesis suggests that frustration often leads to aggressive behavior (Buss, 1961). Thus, it was also hypothesized that aggression should correlate with externality as people who see themselves as having little control over their environments likely experience considerable amounts of frustration. In order to examine these hypotheses, they correlated scores on the I-E scale with the Buss Durkee Hostility Inventory (BD). This inventory was developed by Buss and Durkee (1957) and measures several different forms of aggression.

The results indicated that there was a small but significant correlation between externality and scores on the BD scale. Further examination of the subscales revealed that externals scored significantly higher than internals on the Resentment, Verbal, Suspicious, Irritability and Indirect aggression subscales. There were no differences between internals and externals on the Negativism, Guilt or Assault subscales.

Clouser and Hjelle (1970) found a positive correlation between externality and dogmatism. Rokeach's (1960) construct of dogmatism was felt to resemble Rotter's locus of control dimension. Rokeach theorized that the more closed (dogmatic) the individual's belief system becomes, the more it can be construed as a structure of cognitive defenses against anxiety. Along the same lines, Rotter has suggested that externally oriented individuals may become highly defensive when confronted with failure. Thus, the investigators hypothesized that externality would vary with dogmatism. The results indicated a positive relationship between externality and dogmatism. It was concluded that externals have a more closed belief system than do internals.

Houtras and Scharf (1970) described externals as holding attitudes that comprise a defense against failure. Externals are more inhibited, wary, resentful and self-centered. They can also be characterized as confused, cautious, and stereotyped in thinking, and as lacking in self-direction and self-discipline. They described internals as being more cooperative, enterprising, diligent, capable of creating favorable impressions, and as more concerned about how others react to them.

Several investigators have found a significant relationship between externality and schizophrenia (Cromwell, *et al.*, 1961; Harrow and Ferrante, 1969; Hartsook, 1968). These findings lend support to the results of other studies which have consistently found a positive relationship between externality and measures of maladjustment. However, as mentioned earlier, the situational variables contributing to externality must be considered before labeling behavior as maladaptive.

The afore-mentioned studies suggest some basic personality differences between internals and externals. Research has suggested that externality is associated with maladjustment. That is, externality tends to be related to high anxiety, nonconstructive responses to frustration, the use of maladaptive defense mechanisms and schizophrenia. Externals tend to use mechanisms such as intellectualization, obsessive thinking or magical-type fantasies to resolve problem situations. Evidence also has been reported which suggests that internals are likely to use avoidance, denial or repressive type mechanisms as a means of coping with conflict and frustration. Thus, internality could also lead to maladaptive behavior. The present investigation attempted to focus on and further delineate the relationship between locus of control and coping mechanisms.

Locus of Control and Fantasy

During the last few years there has been an increasing amount of interest directed toward the areas of fantasy and daydreaming. The literature on locus of control has also been increasing dramatically. However, few efforts have been made to relate fantasy activity to the locus of control construct. This section presents literature on both fantasy theory and research having relevance to locus of control.

The function of fantasy has not been clearly defined. According to the psychoanalytic viewpoint, fantasy serves as a drive-reducing mechanism. However, a study conducted by Berkowitz (1964) suggested that fantasy may be drive-inducing. Singer (1966) reported that our folklore gives the impression that fantasy is drive-arousing in terms of sexual

material, but drive-reducing in the area of aggression. He concluded that a predisposition to daydreaming may be a crucial variable as the individual who daydreams may be less likely to become aroused to direct action in comparison to one who has little experience in fantasy activity.

Singer and McCraven (1961) administered a daydream questionnaire to over 500 college students. These investigators concluded that the variables of sex and intelligence did not yield any significant differences in terms of frequency or function of daydreaming with college educated individuals. It was also reported that 96% of normal Americans engage in daydreaming activities, and visual imagery was found to be the most predominant modality utilized. In addition, their data indicated that most of the daydream content dealt with future planning or interpersonal contacts.

Singer and Schonbar (1962) investigated the frequency of daydreaming among female Ss. They found a relationship between perceived similarity to mother and frequency of daydreaming. Thus, Ss who perceived themselves as being more similar to mother engaged in more daydream activity. This finding also suggests that the ability to identify with others, and particularly mother, may be related to frequency of daydreaming activity.

For a long time, it has been felt that important differences exist between males and females on a number of different variables. Research reported by May (1966) found sex differences regarding fantasy content. He had his Ss respond to a task similar to the TAT. The responses to this task suggested that women are more sensitive to their

environments and are more "open" in discussing matters such as failure. He also found that women expressed optimism, made reference to needing help, and were concerned about acceptance and security. Men, on the other hand, seemed to have a more pessimistic orientation, appeared more ill at ease when asked to write fantasy stories, and used more irony and sarcasm in their responses.

Singer discussed an article by Wagner and Stegemann (1964), who reviewed a number of studies in the hope of tracing pathological outcomes of childhood traits. The early histories of adult schizophrenics indicated that during childhood, these people were generally more outgoing, demonstrated more overt hyperactivity, and emitted more externally oriented responses than did the more "withdrawn" children. They reported that contrary to popular belief, "there are no grounds whatsoever for linking adult schizophrenia with an early history of shyness, quiet behavior, and daydreaming." They concluded that the introverted child is least likely to develop schizophrenia.

Singer also made reference to an investigation by West (1962) that hallucinators have less of a predisposition toward daydreaming than non-hallucinators. Singer suggested that this indicated that being able to engage in daydreaming activity enables the adult to accept his internal processes and to recognize more readily the difference between fantasy and reality.

An investigation by Baker (1971) focused on fantasy activity and locus of control. He was interested in reported nocturnal fantasy of external and internal people. He analyzed the Rotter I-E scale and suggested that many of the items measure the degree of perceived malevolence

existing in a world governed by chance events. This led him to the notion that externals may react to a fortuitous world by resorting to mechanisms of escape to alleviate anxiety caused by the perception of malevolence or threat. Baker reasoned that if externals see themselves as pawns of fate, they likely experience considerable personal frustration. The individual may deal with this frustration by finding suitable alternatives or by escaping. He indicated that externals are more anxious and would probably engage in more fantasy activity than internally-oriented people. A seven item three-point rating scale measuring frequency and satisfaction with nocturnal activities such as sleeping, dreaming, and television watching were completed by graduate students in education.

It was found that externals reported that they spent significantly more time watching television than internals. The externals also reported that they dreamed more than internals and that they found dreaming more enjoyable. Baker concludes that externals may experience more frustrations than internals in the process of daily living and, therefore, tend to use conscious and unconscious fantasy to gain satisfactions. He suggested that as the external person lacks a sense of control, he must, therefore, create some type of fantasied justification for his behavioral repertoire.

The Thematic Apperception Test (TAT) is a projective instrument designed to elicit basic personality characteristics and tendencies of people. Social learning theory stresses the individual's relationship with his environment, including his interactions with significant others such as mother and father, as well as his typical methods of dealing with

life situations. It has been suggested by Rotter (1954) that the TAT may be a useful instrument for obtaining information pertinent to understanding individual behavior from a social learning point of view. Evidence has been reported earlier that suggests basic differences in how internal and external Ss deal with conflict and frustration. It might be expected that these differences would evidence themselves also in responses made to the TAT. If these differences do appear in the TAT, then one should be able to predict I-E orientation based on the responses given to the TAT.

Dies (1968) has made some initial efforts along this line. In his study, Dies developed a scoring procedure for predicting internal-external control from TAT narratives. Ss in his study were forty female psychiatric nurses between the ages of nineteen and twenty-two. He administered the Rotter I-E scale to all of his Ss. One to two weeks later, Ss were individually requested to write stories to TAT cards: 1, 2, 4, 6GF, 12F, and to one additional card portraying a psychotherapeutic relationship. The usual instructions were given, and the Ss were allowed five minutes per story. Dies developed a detailed manual for rating I-E control on a five point scale.

On the basis of a median split, the I-E scale was used to classify the student nurses as either internals or externals. Analysis of variance was then used to compare the groups in their ratings on the seven cards. It was found that internals reported significantly more narratives reflecting a belief in personal control. Externals more frequently produced stories indicative of an expectancy of outside control.

Dies was able to correctly classify 80% of the students as being either internal or external, predicting from S's responses to TAT cards. The analysis of variance indicated that there was no over-all effect due to the different TAT cards. However, cards 6GF and 9GF proved to be of greater efficiency in differentiating internals from externals.

The research cited above has attempted to relate fantasy activity to locus of control. It has been reported that most people frequently engage in daydream activity. However, the function that daydreaming serves may be different from person to person. One of the purposes of the present investigation was to further explore the fantasy activity of internal and external individuals. Both frequency and function of fantasy was studied. In addition, an attempt was made to replicate and expand Dies' study by predicting I-E orientation from responses given to TAT cards by both male and female Ss.

It can be seen from the review of the literature that the locus of control dimension encompasses a broad behavioral range. The construct evolved out of social learning theory, but the notion of a general expectancy of perceived control has relevance to many theoretical models attempting to describe and explain the behavior of organisms. The present investigation further explored the relationship between locus of control and a number of different personality variables.

CHAPTER III

PURPOSE

Locus of control is rapidly becoming an important variable in personality research. However, it is still unclear as to how an I-E orientation develops. Although several preliminary investigations have been done in this area, most of the research has concentrated on the relationship between locus of control and maternal child-rearing attitudes. It seems equally important to consider the impact of paternal attitudes on the development of an I-E orientation. Accordingly, one of the aims of this study was to investigate the relationship between both maternal and paternal attitudes and the development of locus of control orientation.

Measures of general anxiety have frequently been found to correlate with externality. Research investigating the relationship between locus of control and test anxiety have yielded contradictory results. Evidence has been reported that factors such as sex and the type of anxiety measure utilized may be confounding the correlation between locus of control and anxiety. Thus, the present study attempted to further clarify the relationship between locus of control, sex, and trait anxiety.

Research has also been reported that suggests internal and external Ss respond to frustration and conflict differentially. It is felt

that these differences should evidence themselves in responses to the TAT. Accordingly, the present investigation analyzed coping and defense mechanisms of internal and external Ss on the basis of their responses to TAT cards.

Butterfield (1964) found that internal Ss tended to make more constructive responses to frustration-type situations than did external Ss. Thus, one might hypothesize that internals are more confident regarding problem-solving abilities. A five item rating scale measuring perceived confidence in problem-solving abilities was developed to explore this hypothesis.

Fantasy and daydreaming are rather elusive processes which are also beginning to receive increased attention. However, there have been few attempts to relate fantasy activity to locus of control. Fantasy has been described as being both drive-reducing and also as drive-inducing. Research by Baker (1971) indicated that external Ss dreamed more than internal Ss. He suggested that this finding supports the notion that external Ss experience more frustration in living than do internal Ss, and therefore, have a greater tendency to resort to fantasy activity as a method of obtaining personal satisfactions. Dies (1968) was able to predict I-E orientation from responses to TAT cards with 80% accuracy. It should be noted that Dies used only female Ss in his study. The present investigation utilized the scoring procedure developed by Dies to predict I-E orientation from responses to TAT cards for both males and females. In addition, both frequency and function of fantasy activity was examined in relation to locus of control.

Preliminary Investigation

In order to examine some of these initial hypotheses, a pilot study with 142 college students as Ss was conducted by the author. All Ss were given the Rotter I-E scale in addition to scales measuring the following dependent variables: anxiety, confidence about problem-solving abilities, frequency of daydreaming activities, and recalled perceptions of parental identification. Anxiety was measured by the A-Trait scale from the State-Trait Anxiety Inventory (STAI), confidence and daydreaming by scales developed by the author, and recalled perceptions of parental identification with a Parental Identification Technique developed by Oliner (1958). The scores obtained on the dependent variables were then evaluated in reference to the I-E dimension. A median I-E split was used to categorize Ss as either internals or externals. Those Ss with scores above the median were classified as externals, and those Ss with scores below the median were classified as internals. Means were computed for both internals and externals on each dependent variable. The data was examined with t-tests to determine if significant differences existed between the two groups.

Results indicated that internals were significantly less anxious than externals at the .02 level. On the five item scale measuring subjective confidence about problem-solving abilities, internals rated themselves as being significantly more confident than externals at the .02 level. A five item daydream scale developed by the author was used to assess frequency of daydreaming. No significant differences were found between internals and externals with respect to daydream frequency.

Closer examination of the five item daydream scale strongly suggested that some of the items, were in fact, not relevant to frequency of daydreaming. For this reason, in the actual investigation, items from a daydream questionnaire developed by Singer (1961) were used as one measure of frequency of daydreaming.

The current preliminary investigation utilized the Parental Identification Technique developed by Oliner (1958) to assess perceived similarity to parents. Results with the Parental Identification Technique indicated that males tended to see themselves as closer to father, and that females tended to see themselves as closer to mother. These findings were significant at the .01 level, and were consistent regardless of I-E orientation. It is possible that a social desirability factor may have been operating in reference to this variable. That is, males might have felt it more acceptable to rate themselves as being closer to father, whereas females might have felt it more acceptable to rate themselves as being closer to mother. However, it is also possible that perceived closeness to mother or father is not a relevant variable in regards to the development of an I-E orientation. It is reasonable to hypothesize that the quality of the parent-child relationship may be a more important and critical variable. The findings obtained by Tolor and Jalowiec (1968) that externality was significantly correlated with Authoritarian Control and Hostility-Rejection factors lends support to this hypothesis. These investigators measured only perceived attitudes of mother in their investigation. It might be hypothesized that the child-father relationship is just as important as the child-mother relationship. The overall emotional atmosphere or climate of the home may

also be a relevant factor. Thus, if the parents are seen as being permissive as opposed to controlling and restrictive, the development of an I-E orientation may be affected. To examine these hypotheses, the proposed study utilized the Family Relations Inventory (FRI) developed by Brunkan and Crites (1964). This scale was originally developed to determine the influence parental attitudes have on vocational choice, and was selected because it might provide useful information in the area of development of I-E orientation. The FRI measures three factors for both mother and father: Acceptance, Concentration, and Avoidance.

Another goal of the present study was to further explore the relationship between parental attitudes and the development of I-E orientation. In addition, the personality variables of anxiety, frequency and function of fantasy activity, and problem-solving ability were investigated in relation to locus of control. An attempt was also made to extend the study done by Dies (1968). He was able to correctly classify 80% of female Ss regarding I-E orientation. The present study attempted to determine if I-E orientation among male Ss could be predicted as accurately.

Hypotheses

Hypothesis I: Internal Ss would rate their parents as being significantly more accepting than would externals.

Hypothesis II: External Ss would rate their parents as being significantly more "protective and controlling" than would internals.

Hypothesis III: External Ss would rate their parents as being significantly more avoiding than would internals.

Hypothesis IV: Internal Ss would score significantly lower on anxiety than would external Ss.

Hypothesis V: There would be a significant difference between internals and externals regarding the amount of fantasy activity they engaged in.

Hypothesis VI: Internal Ss would rate themselves as being more confident regarding problem-solving abilities than would external Ss.

Hypothesis VII: External Ss would utilize defense mechanisms such as projection and rationalization, whereas internal Ss would tend to make more use of repression or denial in their efforts to deal with life situations as portrayed in TAT cards.

CHAPTER IV

METHODOLOGY

Subjects

The Ss used in the present study were forty males and forty females selected from undergraduate psychology classes at the University of North Dakota during the summer session of 1971. Ss were selected on the basis of their scores on the Rotter I-E scale. Ss scoring one standard deviation or more above the mean on the Rotter I-E scale were classified as externals, and those Ss scoring one standard deviation or more below the mean were classified as internals. The Rotter I-E scores for external Ss ranged between fourteen and twenty-two, while the scores for internal Ss ranged between zero and six.

Experimental Design

One of the goals of this investigation was to examine the relationship between parental attitudes and the I-E construct. In addition, personality characteristics and fantasy styles of individuals were investigated as they related to locus of control for both males and females. The independent variables were the two levels of locus of control (internal and external) and two levels of sex (male and female).

The following measures served as dependent variables in this study: the Family Relations Inventory to assess parent-child relationships, the STAI A-Trait scale as a measure of anxiety, and a five item

scale developed by the E to measure perceived confidence about problem-solving abilities. In addition, sixteen items from a daydream scale developed by Singer (1961) served as one measure of frequency of daydreaming. Written responses to six TAT cards provided another measure of amount of fantasy activity. Weisskopf's Transcendence Index was used to determine amount of fantasy activity contained in the responses given to TAT cards. Each S was also requested to write a paragraph about himself in which he listed those characteristics or traits which made him an interesting person to know.

Experimental Instruments

The Experiential Self Report Quasi (ESRQ) Questionnaire included the Rotter I-E scale in addition to the Family Relations Inventory, the STAI A-Trait scale, a five item scale measuring perceived confidence in problem-solving abilities, and items from the Daydream Questionnaire developed by Singer. The (ESRQ) Questionnaire which contains all the scales appears as Appendix A.

The Rotter I-E Scale.--This is a twenty-nine item forced choice scale representing one's perceived control over constructing and maintaining reinforcement contingencies in the environment (Rotter, Seeman, and Liverant, 1962). High scores indicate an external orientation or a feeling that what happens to one's self is due to luck, chance, fate or external influences. Low scores indicate an internal orientation with the corresponding perception of personal control over reinforcement contingencies.

The Family Relations Inventory.---This is a 202 item inventory in which each item is responded to as being either true or false (Brunkan and Crites, 1954). This inventory measures Acceptance, Concentration, and Avoidance factors for both mother and father.

"Acceptance" means that the parents regard the child as an important person and as one who needs to develop a certain amount of independence. They assume that the child has the capacity to assume personal control over his behavior and thus, they encourage the child to fulfill his potentialities as best he can. As the main characteristic of internal individuals is their sense of responsibility and control, it was predicted that internals would rate their parents as being more accepting than would externals.

"Concentration" represents parental attitudes of over-control and direction of their children. Concentration-type parents either over-protect and restrict their children, or they place undue demands for achievement on them. Parental attitudes such as those listed above, are likely to lead to an expectation by children that reinforcements are derived from sources external to and independent of themselves. Thus, it was predicted that externals would rate their parents as being more "protective and controlling" than would internals.

The "Avoidance" factor can be described as a parental attitude of either neglect or rejection of the child. Avoidance-type parents only tolerate their children and withdraw when the child approaches them for affection or love. Children reared by Avoidance-type parents are likely to feel inadequate with little self-confidence. It was, therefore, hypothesized that externals would rate their parents as being more avoiding than would internals.

The State-Trait Anxiety Inventory (STAI).--The STAI (Spielberger, Gorsuch, and Lushene, 1970) consists of separate self-report scales which measure two different anxiety concepts: state anxiety and trait anxiety. The A-Trait scale asks people to describe how they generally feel, while the A-State scale of the STAI asks people to describe how they feel at a particular moment in time. This study used only the A-Trait scale.

The Thematic Apperception Test.--Dies (1968) attempted to predict I-E orientation with female Ss with the following TAT cards: 1, 2, 4, 6GF, 9GF, and 12F. The same TAT cards were utilized in this study for female Ss, and cards 1, 2, 4, 6BM, 9BM, and 12M were administered to male Ss.

The Self-Report Questionnaire.--This is a five item scale developed by the E to measure an individual's perceived confidence in problem-solving abilities. It is a seven point rating scale in which the individual is requested to place a check-mark anywhere along the continuum. The scale has face validity regarding confidence in problem-solving abilities. It was hypothesized that internal Ss would rate themselves as being more confident about problem-solving abilities than external Ss, and this was found to be true in the pilot study.

The Daydream Questionnaire.--This questionnaire consists of sixteen statements taken from a more extensive Daydream Questionnaire developed by Singer (1961). The questionnaire attempts to measure frequency of daydreaming.

Self-Report.--Each S was asked to write a paragraph about himself in which he listed those characteristics or traits which made him an interesting person to know. This task was included to see if differences exist in how internals and externals perceive themselves.

Procedure

The (ESRQ) Questionnaire was administered to 260 students enrolled in undergraduate psychology courses at the University of North Dakota during the summer semester of 1971. The (ESRQ) Questionnaire included the Rotter I-E scale, the Family Relations Inventory, the Spielberger (Trait) Anxiety Inventory, (a five item scale measuring perceived confidence in problem-solving abilities), and sixteen items from the Daydream Questionnaire developed by Singer. The Rotter I-E scale was presented as the first scale in every questionnaire. The remaining scales were presented in a counter-balanced manner to eliminate order effects. The (ESRQ) Questionnaire was administered during the regular class period, and was completed in approximately thirty-five minutes.

After the (ESRQ) had been completed, the eighty selected Ss were seen individually for the purpose of obtaining responses to TAT cards. The Ss were seen by the E in a comfortable, well-furnished therapy room. The E was not aware of the S's locus of control orientation. The following TAT cards were administered to male Ss: 1, 2, 4, 6BM, 9BM, and 12M. Female Ss were given TAT cards 1, 2, 4, 6GF, and 12F. The Ss were read the following instructions:

This is a test of imagination. I am going to show you some pictures, one at a time. You are to use your imagination to write a story about what is happening in the picture. You may want to

describe what led up to the scene in the card, what is happening now, or how it may turn out. In any case, you are to use your imagination to write a story about the picture. You will be given five minutes to write each story.

After the responses to the TAT cards had been obtained, each S was asked to write a paragraph about himself in which he listed those characteristics or traits which made him an interesting person to know. No specific number of characteristics or traits was suggested and there was no time limit on this task.

Data Analysis

A two-by-two analysis of variance was used to determine differences between internals and externals on the dependent measures. The independent variables were the two levels of locus of control (I and E) and two levels of sex (male and female).

Two judges were used to rate the TAT responses along the I-E continuum using the rating procedure developed by Dies (1968). The rating scale appears as Appendix B. The Pearson product-moment correlation was used to obtain an estimate of interjudge reliability with a random sample of twenty-five protocols. Each S was given an average rating based on six TAT cards. Agreement between the two judges on the average rating for ten randomly selected protocols was assessed by the Spearman rank order procedure.

Weisskopf's Transcendence Index was used to determine the amount of fantasy activity contained in the responses given to the TAT cards. The Transcendence Index refers to the number of comments about a picture which go beyond pure description. Reference to past or future events, or ascribing emotions to characters in the picture are examples of

transcendental comments. The Transcendence Index of a picture is the mean number of such comments per S. Two judges were used to rate the TAT responses in accordance with Weisskopf's Transcendence Index. The Transcendence Index appears as Appendix C. A random sample of twenty-five protocols was used to obtain an estimate of interjudge reliability on the Transcendence Index.

Responses to the TAT cards were also analyzed in terms of defense mechanisms. Two judges were trained to recognize defense mechanisms and were then asked to make a frequency count of specific defense mechanisms appearing in the TAT stories.

CHAPTER V

RESULTS

The original subject pool consisted of 260 Ss. Males and females scoring at the extremes on the Rotter I-E scale were used in the actual study. Thus, there were twenty male internals and twenty male externals, and twenty female internals and twenty female externals. Means and standard deviations for the original subject pool on the Rotter I-E scale appear as Table 1. As there was no significant difference between male and female means, the mean for all Ss was used for classifying internals and externals. This mean was 9.49 with a standard deviation of 4.24. Ss scoring at least one standard deviation above the

TABLE 1
MEANS AND STANDARD DEVIATIONS OF I-E SCORES
FOR MALES AND FEMALES

	N	Mean	Standard Deviation	Difference	t	P
Males	106	9.641	4.33			
Females	154	9.487	4.36	.154	.28	NS

mean were classified as externals. External Ss were easily obtained. Ss scoring at least one standard deviation below the mean were classified as internals. Female internals were also easily obtained. However,

the subject pool provided only fifteen male Ss who scored at least one standard deviation below the mean. This necessitated including five male Ss who scored .8 standard deviation below the mean to make the twenty male internal Ss.

Family Relations Inventory Results

The analysis of variance of Father Acceptance scores appears as Table 2 and from this it can be seen that there was no significant effects.

TABLE 2
ANALYSIS OF VARIANCE OF FATHER ACCEPTANCE SCORES

Source	Sum of Squares	D.F.	Mean Squares	F	P
Sex	8.45	1	8.45	.13	NS
Locus of Control	12.80	1	12.80	.21	NS
Sex X Locus of Control	57.80	1	57.80	.94	NS
Within Cells	4625.70	76	60.86		

Table 3 contains the analysis of variance of Mother Acceptance scores. It can be seen from Table 3 that no significant effects were obtained.

TABLE 3

ANALYSIS OF VARIANCE OF MOTHER ACCEPTANCE SCORES

Source	Sum of Squares	D.F.	Mean Squares	F	P
Sex	74.113	1	74.113	1.84	NS
Locus of Control	103.513	1	103.513	2.57	NS
Sex X Locus of Control	86.112	1	86.112	2.13	NS
Within Cells	3060.25	76	40.266		

The analysis of variance of Father Concentration scores appears as Table 4. Again, there were no significant differences, however, locus of control approached significance at the .10 level. Thus, there was a tendency for external Ss to rate their fathers as higher in the Concentration factor than did internal Ss. More specifically, male internals obtained a mean score of 7.8 on this variable, while male externals obtained a mean of 9.35. Female internals obtained a mean score of 8.15, while female externals had a mean of 9.55.

TABLE 4

ANALYSIS OF VARIANCE OF FATHER CONCENTRATION SCORES

Source	Sum of Squares	D.F.	Mean Squares	F	P
Sex	1.51	1	1.51	.09	NS
Locus of Control	43.51	1	43.51	2.87	*
Sex X Locus of Control	.12	1	.12	.0079	NS
Within Cells	1149.25	76	15.12		

* $p < .10$

Table 5 contains the analysis of variance of Mother Concentration scores. The results indicate a significant effect for locus of control at the .025 level. This indicates that external Ss rated their mothers as higher on the Concentration factor than did internal Ss. The mean score for male internals was 8.5 while the mean for male externals was 11.1. Female internals obtained a mean of 8.65, while female externals had a mean of 10.95.

TABLE 5
ANALYSIS OF VARIANCE OF MOTHER CONCENTRATION SCORES

Source	Sum of Squares	D.F.	Mean Squares	F	P
Sex	.013	1	.013	.0007	NS
Locus of Control	117.613	1	117.613	6.639	*
Sex X Locus of Control	.312	1	.312	.0176	NS
Within Cells	1346.25	76	17.713		

* $p < .025$

The analysis of variance of Father Avoidance scores appears as Table 6 and from this it can be seen that the interaction effect approached significance at the .10 level. This interaction is shown in Figure 1. Inspection of Figure 1 shows that male externals rated their fathers as being more avoiding than did male internals. Female externals on the other hand, rated their fathers as less avoiding than did female internals. The means between internals and externals for both male and female Ss were analyzed with t-tests. The differences were not significant.

TABLE 6

ANALYSIS OF VARIANCE OF FATHER AVOIDANCE SCORES

Source	Sum of Squares	D.F.	Mean Squares	F	P
Sex	70.313	1	70.313	1.762	NS
Locus of Control	2.113	1	2.113	.052	NS
Sex X Locus of Control	154.012	1	154.012	3.86	*
Within Cells	3032.05	76	39.895		

* $p < .10$

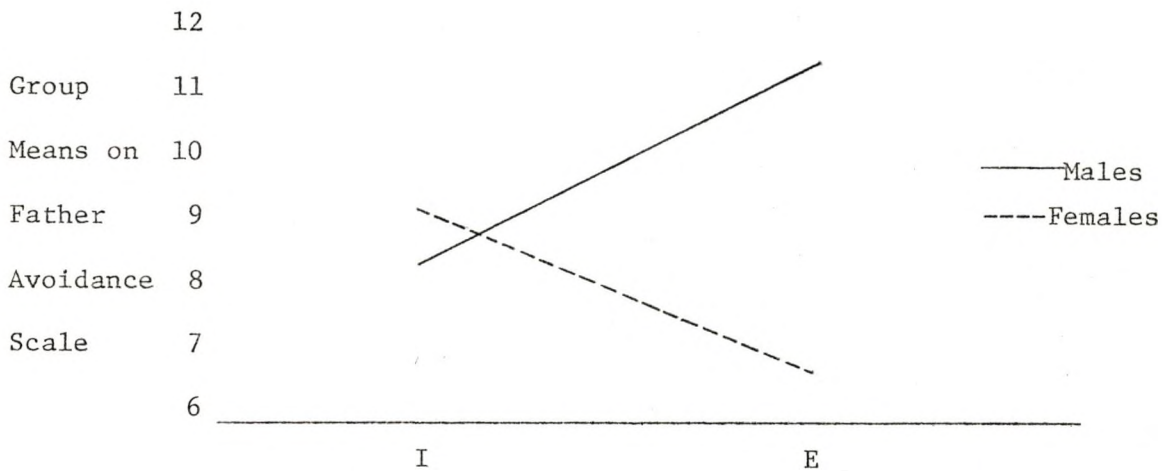


Fig. 1.--Index of sex X locus of control interaction

Table 7 contains the analysis of variance of Mother Avoidance scores. It can be seen from Table 7 that no significant effects were obtained.

TABLE 7

ANALYSIS OF VARIANCE OF MOTHER AVOIDANCE SCORES

Source	Sum of Squares	D.F.	Mean Squares	F	P
Sex	1.513	1	1.513	.0417	NS
Locus of Control	1.013	1	1.013	.0279	NS
Sex X Locus of Control	.012	1	.012	.0003	NS
Within Cells	2753.95	76	36.236		

Results with the Trait Anxiety Inventory

The analysis of variance of Anxiety scores appears as Table 8. It can be seen that there was a significant effect for locus of control at the .001 level. Thus, internal Ss rated themselves as being less anxious than external Ss. The mean for male internals was 33.7, and male externals obtained a mean of 43.85. Similarly, female internals obtained a mean score of 34.1, while the mean for female externals was 40.3. The means were analyzed with t-tests, and found to be significant for male Ss at the .01 level, and for female Ss at the .02 level.

TABLE 8

ANALYSIS OF VARIANCE OF TRAIT ANXIETY SCORES

Source	Sum of Squares	D.F.	Mean Squares	F	P
Sex	35.11	1	35.11	.57	NS
Locus of Control	1256.11	1	1256.11	20.72	*
Sex X Locus of Control	99.02	1	99.02	1.54	NS
Within Cells	4605.75	76	60.60		

* p < .001

Daydream Questionnaire Results

The analysis of variance of Daydream scores appears as Table 9. It can be seen from Table 9 that there were no significant effects.

TABLE 9
ANALYSIS OF VARIANCE OF DAYDREAM SCORES

Source	Sum of Squares	D.F.	Mean Squares	F	P
Sex	48.05	1	48.05	.30	NS
Locus of Control	96.80	1	96.80	.61	NS
Sex X Locus of Control	198.45	1	198.45	1.27	NS
Within Cells	11873.90	76	156.23		

Results with the Problem-Solving
Abilities Measure

Table 10 contains the analysis of variance of scores obtained on the Problem-Solving Abilities scale. It can be seen from Table 10 that there was a significant effect for locus of control at the .05 level. Male internals obtained a mean score of 26.25, while male externals obtained a mean score of 21.3. Female internals had a mean of 22.3, while the mean for female externals was 22.5. There was also a significant interaction effect at the .01 level. This interaction is shown in Figure 2. Inspection of Figure 2 shows that male internals rated themselves as being more confident in problem-solving abilities than did male externals. A t-test was computed for male Ss and was found to be significant at the .01 level. Female internals, on the other hand,

rated themselves as less confident in problem-solving abilities than did female externals. However, this difference was not significant.

TABLE 10
ANALYSIS OF VARIANCE OF PROBLEM-SOLVING SCORES

Source	Sum of Squares	D.F.	Mean Squares	F	P
Sex	37.808	1	37.808	2.136	NS
Locus of Control	112.808	1	112.808	6.376	a
Sex X Locus of Control	132.622	1	132.622	7.493	b
Within Cells	1345.15	76	17.699		

^a $p < .05$

^b $p < .01$

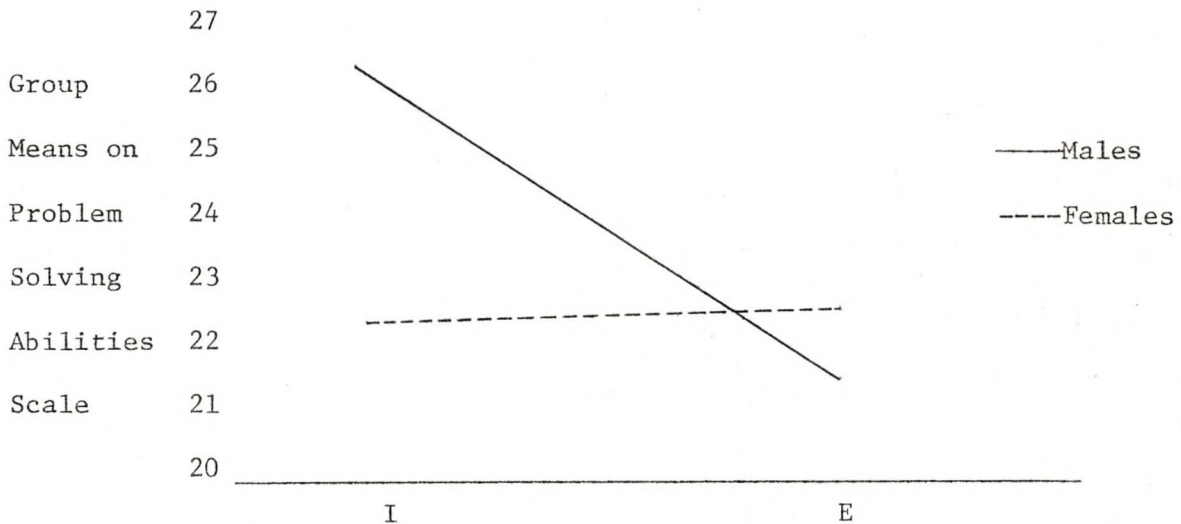


Fig. 2.--Index of sex X locus of control interaction for problem-solving abilities

Dies Rating Procedure

As previously mentioned, Ss scoring at the extremes on the Rotter I-E scale were classified as either internals or externals. An

analysis of variance, mixed design (Myers, 1966) was used to compare these two groups in terms of I-E orientation based on the rating procedure developed by Dies. The results of the analysis for male Ss appears as Table 11. It can be seen from Table 11 that there were significant effects for both locus of control and for the different TAT cards.

TABLE 11
ANALYSIS OF VARIANCE OF MALE SCORES
ON THE DIES I-E RATING SCALE

Source	Sum of Squares	D.F.	Mean Squares	F	P
Total	<u>369.65</u>	239			
Between S	<u>55.316</u>	39			
A (I-E)	8.437	1	8.437	6.859	*
S/A	46.879	38	1.2336		
Within S	<u>314.334</u>	200			
B (Cards)	17.837	5	3.5674	2.354	*
AB	8.501	5	1.7002	1.122	NS
SB/A	287.996	190	1.5157		

* $p < .05$

Thus, externals reported significantly more TAT narratives reflecting a belief in outside control such as luck, chance, or fate when compared to stories produced by internal Ss. Only three of the twenty external Ss, however, gave stories representing a belief in internal control. Card 9BM showed greater effectiveness than the other cards in differentiating between internal and external males ($t = 3.50, p < .01$).

Table 12 contains the analysis of variance of female Ss regarding their responses to the six TAT cards. Examination of Table 12 reveals that there were significant effects for both locus of control

TABLE 12
ANALYSIS OF VARIANCE OF FEMALE SCORES
WITH THE DIES I-E RATING SCALE

Source	Sum of Squares	D.F.	Mean Squares	F	P
Total	340.999	239			
Between S	86.29	39			
A (I-E)	11.484	1	11.484	5.83	a
S/A	74.806	38	1.968		
Within S	254.709	200			
B (Cards)	25.792	5	5.158	4.386	b
AB	5.385	5	1.077	.9158	NS
SB/A	223.532	190	1.176		

^a $p < .05$

^b $p < .01$

and for the different TAT cards. All twenty external Ss produced stories representative of a belief in external control. Only nine of the twenty internal Ss, however, gave stories reflecting a belief in internal control. TAT card 1 demonstrated greater effectiveness in differentiating degree of externality between female internal and external Ss than did the other cards ($t = 2.44, p < .02$).

Two judges were used to rate the TAT cards with the I-E procedure developed by Dies. Each S was given an average rating based on the six TAT cards. A random sample of twenty-five protocols was selected to provide a check on interjudge reliability. The product-moment correlation between the two judges for the 150 individual stories, six cards for twenty-five Ss, was .76 ($p < .0005$). The Spearman rank order procedure was used to assess agreement between judges on average scores for

the twenty-five TAT protocols. A highly significant correlation of .81 was obtained ($p < .01$). The overall correlation of .73 between the Rotter I-E scale and the I-E rating scale developed by Dies was highly significant ($p < .0005$).

Weisskopf's Transcendence Index

Weisskopf's Transcendence Index was used to assess the amount of fantasy activity contained in the responses given to the TAT cards. The analysis of variance of transcendence comments can be seen in Table 13.

TABLE 13
ANALYSIS OF VARIANCE OF TRANSCENDENCE COMMENTS

Source	Sum of Squares	D.F.	Mean Squares	F	P
Sex	155.579	1	155.579	12.01	*
Locus of Control	9.338	1	9.338	.72	
Sex X Locus of Control	1.685	1	1.685	.13	
Within Cells	984.527	76	12.954		

* $p < .001$

Table 13 reveals that there was a significant effect for sex at the .001 level. This indicates that female Ss gave more transcendence comments than did males regardless of I-E orientation.

A random sample of twenty-five protocols was selected to provide a check on interjudge reliability regarding number of transcendence comments. The product-comment correlation between the two judges for the 150 individual stories, six cards for twenty-five Ss, was .93 ($p < .0005$).

Defense Mechanisms

Two naive judges were trained to recognize defense mechanisms. They were then asked to rate the responses given to the TAT cards in terms of defense mechanisms. This proved to be an unrealistic task and there was little agreement between the raters. The E then attempted to rate the stories himself regarding defense mechanisms. Table 14 contains the Chi square table for total number of defense mechanisms. The obtained Chi square of .228 was not significant.

TABLE 14
CHI SQUARE CONTINGENCY TABLE FOR TOTAL
NUMBER OF DEFENSE MECHANISMS

	I	E
M	91	102
F	130	137

The defense mechanisms were then divided into two main types. "Repressor" mechanisms included repression, denial, and suppression. "Sensitizers" included the mechanisms of rationalization, intellectualization, projection, daydreaming, sublimation, reaction formation, and regression. Tolor and Reznikoff (1967) suggested that internals make more use of "repressor" mechanisms while externals tend to utilize

"sensitizers." Table 15 contains the Chi square contingency table for "repressors." The obtained Chi square of .16 was not significant.

TABLE 15
CHI SQUARE CONTINGENCY TABLE FOR "REPRESSORS"

	I	E
M	19	25
F	19	21

Table 16 contains the Chi square contingency table for "sensitizers." While the obtained Chi square of 1.197 was not significant, it can be seen that females tended to use mechanisms of "sensitization" to a greater extent than did male Ss.

TABLE 16
CHI SQUARE CONTINGENCY TABLE FOR "SENSITIZERS"

	I	E
M	72	77
F	111	116

Self-Report

Each S was also asked to write a paragraph in which he described those characteristics or traits which made him an interesting person to know. These paragraphs were rated in reference to categories such as introvert, extrovert, people-centered, object-centered, recreational interests, and academic interests. A frequency count of statements falling in each category was made, and then evaluated with the Chi square method. No significant results were obtained. Internal Ss tended to give more statements than did externals, but this difference was also not significant.

While much of the data in this investigation was dealt with in the typical analysis of variance fashion, the investigator is currently assessing the data with a multivariate correlational procedure.

CHAPTER VI

DISCUSSION

Family Relations Inventory

It was predicted that internal Ss would rate their fathers as being more accepting than would external Ss. The finding did not confirm this prediction though they were in the right direction for male Ss. It was also hypothesized that internals would rate their mothers as being more accepting than external Ss. Again, this hypothesis was not confirmed, but the scores were in the predicted direction.

Probably the most crucial factor in parental attitudes is the amount of over-control or restrictiveness parents impose on their children. It was hypothesized that internal Ss would rate their parents as being less controlling and restrictive than would external Ss. Internals rated their fathers as less controlling than did externals, but this finding only approached significance at the .10 level. More conclusively, internals rated their mothers as being less controlling and restrictive than externals at the .025 level. This finding concurs with and supports the finding obtained by Tolor and Jalowiec (1968) that deleterious maternal attitudes contributed to the development of an external orientation. The present results also suggest that fathers may play a more benign role regarding development of an I-E orientation in children when compared to the importance of maternal attitudes. This would certainly go along with psychoanalytic theory that a child's basic

personality structure is formed by the time he begins school. During these early developmental years, children usually have much greater contact with their mothers than with their fathers.

It was predicted that internal Ss would rate their fathers as less avoiding than would external Ss. A sex X locus of control interaction effect approached significance at the .10 level. That is, male externals showed a tendency to rate their fathers as being more avoiding than did internal Ss. Female externals, on the other hand, rated their fathers as being less avoiding than did female internals. One explanation for these results may lie in the identification process. Males tend to identify with their fathers and when the father avoids them, they may experience feelings of helplessness and insecurity which could lead to an external orientation. As females tend to identify with mother to a larger extent than they do with father, perception of paternal avoidance may not have as much negative repercussions for females as it would for male children.

It was hypothesized that external Ss would rate their mothers as more "avoiding" than would internal Ss. No differences were found between internals and externals on this variable. The failure to confirm this hypothesis may be due to a number of factors such as a lack of a real world relationship or possible experimental errors. It should be recalled that external Ss rated their mothers as being more over-protective and controlling than did internal Ss. In order to be over-protective and controlling, mothers have to maintain a certain amount of involvement with their children and thus, they would not be seen as "avoiding" mothers. It should also be kept in mind that the concept of

"avoiding" may take many forms and that over-protection and restriction of children could be considered as one form of avoidance or rejection type behavior.

Trait Anxiety Inventory

It was hypothesized that external Ss would rate themselves as more anxious than would internal Ss. This hypothesis was strongly confirmed for both male and female Ss at the .001 level. As trait anxiety refers to a general anxiety level, this suggests that external Ss may be more uncomfortable and likely experience more tension than do internal Ss as they attempt to resolve problems in living.

Daydream Scores

It was predicted that there would be a difference between internals and externals regarding frequency of daydream activity. Male externals tended to report more daytime activity than did male internals, but the difference was not significant. There was also no significant difference between female internals or externals. While no significant differences were found in this investigation, this does not mean that differences in daydream frequency do not exist. Daydream activity is a multi-faceted process and Singer has further developed his daydream scale which can be expected to provide a more accurate assessment of this mental process. It should also be noted that the daydream items used in this study were taken from a more comprehensive daydream scale developed by Singer. Only sixteen of Singer's original thirty-seven items were included as an attempt was made to keep the overall

questionnaire as brief as possible. Future research on the function and frequency of daydream activity among internals and externals should be conducted utilizing Singer's new daydream scale.

Problem-Solving Scores

It was predicted that internals would rate themselves as more confident in problem-solving abilities than would externals. The results indicated that there was a significant effect for locus of control at the .05 level. However, there was also a significant locus of control X sex interaction effect at the .01 level. Analysis of this interaction effect revealed that male internal Ss rated themselves as significantly more confident in problem-solving abilities than did male externals. Female internals, on the other hand, rated themselves as less confident in problem-solving abilities than did female externals. However, this difference was not significant. The failure to confirm this hypothesis for female Ss may reflect a cultural bias. That is, until recently, females have not been expected to demonstrate as much efficiency or competency in problem-solving endeavors as compared to males. Even though females may be as effective or efficient or even more so than their male counterparts, it has not been as socially acceptable for them to talk openly about their abilities, as it has been for males. It is possible that in the near future, females will score as high as males on instruments measuring confidence such as the one used in this study.

I-E Orientation and TAT Cards

Dies (1968) developed a procedure for determining I-E orientation from responses given to TAT cards. He used forty female psychiatric nurses in his study and was able to predict I-E orientation with 80% accuracy. This investigation attempted to replicate Dies' finding and to go beyond this study by including male as well as female Ss. Some rather interesting results were obtained. Analyses of variance indicated that internals tended to give more responses typical of personal control, and externals more frequently produced stories suggestive of greater outside control. The overall accuracy rate for predicting I-E orientation for both males and females combined was 70%. This appears to offer firm support for the Dies I-E rating procedure. However, when one looks at the prediction rate for internals and externals, the accuracy of prediction is only differentially effective. That is, external Ss were correctly classified with 92.5% accuracy, while internal Ss were correctly classified with only 47.5% accuracy. One explanation for the less than chance accuracy rate for internal Ss may be that the TAT cards tend to "pull" external responses from individuals. Two judges were trained to rate the responses to the TAT cards along the procedure developed by Dies. The product-moment correlation coefficient between the two judges was .76. This suggests that the judges agreed upon their individual ratings to a fairly high degree. In addition, the overall correlation of .73 between the Rotter I-E scale and the I-E rating scale developed by Dies was significant ($p < .0005$).

As the Ss in this study were drawn from students enrolled in undergraduate psychology courses, they represented individuals from many different fields of study. The Ss used by Dies were all student psychiatric nurses. Thus, the Ss in this study represented a much more heterogeneous sample than the Ss utilized by Dies, and this could account for the lowered accuracy rate in I-E classification among internal Ss. If this is the reason for the lowered accuracy rate for internals, this places a limitation on the rating scale developed by Dies. That is, the rating scale may be most efficient when used on homogeneous populations such as psychiatric nurses, biology majors, etc.

In the study conducted by Dies, no effects for the different TAT cards were found. In the present investigation, however, significant main effects were obtained for cards with both male and female Ss.

Weisskopf's Transcendence Index

The transcendence index was one measure used to determine amount of fantasy activity contained in responses given to the TAT cards. It was hypothesized that there would be significant differences between internals and externals on this variable. This hypothesis was not confirmed. However, there was a significant sex difference at the .001 level. Female Ss reported significantly more transcendence comments than did male Ss regardless of I-E orientation. Male and female externals also reported more transcendence comments than did male and female internals, however, these differences were not significant. These findings suggest that female Ss utilize internal processes such as daydreaming to a larger degree than do males. A possible explanation for this

may simply be that females are more verbal than males. Thus, when given an opportunity to do so, they write more about themselves. May (1966) indicated that females tend to be more open than males when responding to tasks such as the TAT and this might account for the larger number of comments given. However, Singer and McCraven (1961) investigated frequency and function of daydream activity and found no evidence for sex differences. Thus, the reason for the present finding is unclear and can only be answered by future research more directly related to this issue.

Defense Mechanisms

An attempt was made to train two judges to recognize defense mechanisms from responses to TAT cards. Though the judges achieved a moderate degree of efficiency in recognizing defense mechanisms as demonstrated during the training sessions, they were unable to depict defense mechanisms with any consistency on the actual task. The E then attempted to examine the TAT responses himself. Due to the vagueness of many of the stories, the E also found this task a very difficult one that was subject to considerable error. Thus, future investigators who are interested in defense mechanisms, may find it more efficient to utilize tasks for which there are discrete response categories.

This study explored a number of factors and variables relevant to the locus of control construct. Several investigators have indicated that externality tends to represent a more maladaptive level of functioning as compared to people who are classified as internals. For example, externality has been found to correlate positively with diagnosis of

schizophrenia, with debilitating anxiety, and with measures of lack of confidence in problem-solving abilities. However, this does not necessarily mean that internality represents the ideal in mental health or in positive adjustment. It is not too difficult to conceptualize the internal person who has such a strong need for personal control that he cannot tolerate riding in an automobile unless he is driving, as being somewhat maladaptive. This suggests that the best adjusted person may be the one who is able to assume personal control when the situation requires this, but who is also able to cope with external control and demands when specific conditions call for this. An example of the latter would be an employee who has to conform to certain standards of behavior in carrying out his occupational or professional activities. Thus, the I-E person, or the individual who scores within the middle ranges on the I-E scale, may represent the best adjusted person.

The present investigation found that externality was strongly associated with maternal child rearing attitudes of over-protectiveness and restrictiveness. If this finding is borne out in future investigations, then this may suggest some implications regarding child rearing practices.

Male internals were found to rate themselves as being more confident in problem-solving abilities than did external Ss. Internal Ss also rated themselves as less anxious than did external Ss.

The I-E orientation of clients may have important implications regarding their therapeutic management. Therapists may wish to deal with individuals differentially depending on their I-E orientation. Internals might be more reluctant to become involved in a therapeutic

relationship as they may view this as evidence of failure on their part to "cope" with problems in living. However, as internals appear to have more ego-strength and self-motivation in comparison to externals, it could be expected that once the internal becomes involved in a therapeutic relationship, he would make sincere efforts to regain "control" over his life circumstances. As internals are less anxious than externals, and more confident in their problem-solving abilities, they may respond to and benefit most from an insight-oriented therapeutic approach. This type of approach places considerable responsibility on the client for discovering what is interfering with his ability to function effectively. This may be a very important consideration as the internal tends to assume control for his actions, and he will also likely expect to have major responsibility for resolving his own difficulties.

Externals, on the other hand, might become involved in therapy just because it was requested of them. In addition, because of their reliance on external control, they would likely expect the therapist to do most of the work and make all the changes for them. Their needs for conformity might predispose them to verbally accept anything the therapist said or did, without really getting involved and thus, consequently achieving little if any lasting changes. As externals are more anxious and less self-confident than internals, it seems reasonable to assume that they would not be good candidates for insight-oriented therapy in the beginning stages of therapy. The therapist might want to begin with a structured technique such as systematic desensitization. Once the anxiety level is decreased, efforts could be directed at building up ego

strength and confidence by using techniques such as role-playing and assertive training. As the patient begins to experience increased feelings of adequacy and self-esteem, the therapist could then begin to focus on dynamics and move into a more insight-oriented approach. Along these same lines, a research project is currently in progress at a California state institution to investigate the effects of structured vs unstructured therapy in relation to the I-E construct.

With the increasing emphasis being placed on which type of therapeutic intervention works best for which kind of patient and under what conditions, it would seem productive for investigators to explore therapeutic procedures in relation to I-E orientation.

CHAPTER VII

SUMMARY

This experiment was designed to explore the relationship between locus of control and a number of personality variables. Development of an I-E orientation was also investigated in relation to recalled parental child rearing attitudes. An attempt was also made to predict I-E orientation from responses given to the Thematic Apperception Test. The Ss used in the study were enrolled in undergraduate psychology courses at the University of North Dakota. Ss scoring at the extremes on the Rotter I-E scale were used in the actual study. The (ESRQ) Questionnaire included the following instruments which were used as dependent variables: the Family Relations Inventory, the STAI A-Trait scale, a five item scale measuring perceived confidence in problem-solving abilities and items from the Daydream Questionnaire developed by Singer. The independent variables were the two levels of locus of control (internal and external) and two levels of sex (male and female).

Two weeks after the (ESRQ) Questionnaire had been completed, the Ss were seen individually for purposes of obtaining responses to TAT cards. The TAT responses were rated along the I-E continuum using the rating procedure developed by Dies (1968).

The data was collected and the analysis of variance was used to examine the relationship between I-E and the dependent variables. The

results indicated that maternal child rearing attitudes of over-protectiveness and restrictiveness were strongly related to an external orientation.

External Ss were also found to be significantly more anxious than internal Ss. In addition, male external Ss rated themselves as less confident in problem-solving abilities than did internal Ss. No differences were found between internals and externals in regards to day-dream activity or defense mechanisms.

It was suggested that individuals who score within the moderate ranges on the Rotter I-E scale may represent the best adjusted individuals.

Two judges were able to predict I-E orientation from responses to TAT cards with 70% accuracy. They predicted external Ss with much greater efficiency than they were able to do with internal Ss.

The implications of these findings were also discussed in reference to therapeutic management of clients. It was suggested that insight-oriented therapy may be the preferred treatment modality for internal clients, while more structured therapeutic techniques may be more effective for the external client during the beginning stages of therapy.

APPENDIX A

ESRQ QUESTIONNAIRE

This is a research project involving various aspects of human personality development. Your cooperation in completing the various parts of this questionnaire is greatly appreciated. Some of you may be asked to participate in the second part of this project which will require approximately twenty-five minutes.

ESRQ Study

Name _____ Sex: Male _____ Female _____

Telephone Number _____ Major _____

Instructions: For each question choose either zero or one. Indicate your choice by making an X through either 0 or 1 for each question. Please read each item carefully and be sure that you indicate the response which most closely corresponds to the way which you personally feel.

Choose 0 or 1. (Indicate your choice by placing an X through 0 or 1.)

1. 0. Children get into trouble because their parents punish them too much.
 1. The trouble with most children nowadays is that their parents are too easy with them.
2. 0. Many of the unhappy things in people's lives are partly due to bad luck.
 1. People's misfortunes result from the mistakes they make.
3. 0. One of the major reasons why we have wars is because people don't take enough interest in politics.
 1. There will always be wars, no matter how hard people try to prevent them.
4. 0. In the long run people get the respect they deserve in this world.
 1. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
5. 0. The idea that teachers are unfair to students is nonsense.
 1. Most students don't realize the extent to which their grades are influenced by accidental happenings.
6. 0. Without the right breaks one cannot be an effective leader.
 1. Capable people who fail to become leaders have not taken advantage of their opportunities.
7. 0. No matter how hard you try some people just don't like you.
 1. People who can't get others to like them don't understand how to get along with others.

8. 0. Heredity plays the major role in determining one's personality.
 1. It is one's experiences in life which determine what they're like.
9. 0. I have often found that what is going to happen will happen.
 1. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
10. 0. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
 1. Many times exam questions tend to be so unrelated to course work that studying is really useless.
11. 0. Becoming a success is a matter of hard work; luck has little or nothing to do with it.
 1. Getting a good job depends mainly on being in the right place at the right time.
12. 0. The average citizen can have an influence in government decisions.
 1. This world is run by the few people in power, and there is not much the little guy can do about it.
13. 0. When I make plans, I am almost certain that I can make them work.
 1. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
14. 0. There are certain people who are just no good.
 1. There is some good in everybody.
15. 0. In my case getting what I want has little or nothing to do with luck.
 1. Many times we might just as well decide what to do by flipping a coin.
16. 0. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
 1. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.
17. 0. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.

1. By taking an active part in political and social affairs the people can control world events.
18. 0. Most people don't realize the extent to which their lives are controlled by accidental happenings.
 1. There really is no such thing as "luck".
19. 0. One should always be willing to admit mistakes.
 1. It is usually best to cover up one's mistakes.
20. 0. It is hard to know whether or not a person really likes you.
 1. How many friends you have depends upon how nice a person you are.
21. 0. In the long run the bad things that happen to us are balanced by the good ones.
 1. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
22. 0. With enough effort we can wipe out political corruption.
 1. It is difficult for people to have much control over the things politicians do in office.
23. 0. Sometimes I can't understand how teachers arrive at the grades they give.
 1. There is a direct connection between how hard I study and the grades I get.
24. 0. A good leader expects people to decide for themselves what they should do.
 1. A good leader makes it clear to everybody what their jobs are.
25. 0. Many times I feel that I have little influence over the things that happen to me.
 1. It is impossible for me to believe that chance or luck plays an important role in my life.
26. 0. People are lonely because they don't try to be friendly.
 1. There's not much use in trying too hard to please people, if they like you, they like you.
27. 0. There is too much emphasis on athletics in high school.
 1. Team sports are an excellent way to build character.

28. 0. What happens to me is my own doing.
1. Sometimes I feel that I don't have enough control over the direction my life is taking.
29. 0. Most of the time I can't understand why politicians behave the way they do.
1. In the long run the people are responsible for bad government on a national as well as on a local level.

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you generally feel.

There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

	Almost Never	Some- times	Often	Almost Always
1. I feel pleasant	4	3	2	1
2. I tire quickly	1	2	3	4
3. I feel like crying	1	2	3	4
4. I wish I could be as happy as others seem to be	1	2	3	4
5. I am losing out on things because I can't make up my mind soon enough	1	2	3	4
6. I feel rested	4	3	2	1
7. I am "calm, cool, and collected"	4	3	2	1
8. I feel that difficulties are piling up so that I cannot overcome them	1	2	3	4
9. I worry too much over something that really doesn't matter	1	2	3	4
10. I am happy	4	3	2	1
11. I am inclined to take things hard	1	2	3	4
12. I lack self-confidence	1	2	3	4
13. I feel secure	4	3	2	1
14. I try to avoid facing a crisis or difficulty .	1	2	3	4
15. I feel blue	1	2	3	4
16. I am content	4	3	2	1
17. Some unimportant thought runs through my mind and bothers me	1	2	3	4
18. I take disappointments so keenly that I can't put them out of my mind	1	2	3	4
19. I am a steady person	4	3	2	1
20. I get in a state of tension or turmoil as I think over my recent concerns and interests . .	1	2	3	4

Directions: The statements which follow concern your relationships with your parents, both in the present and in the past. Read each statement and decide whether it applies to your family relationships. If the statement applies, make an X through the T for True in the True column. If it does not apply, make an X through the F for False in the False column. Be sure to make an X through either T or F for every statement, even if you have to guess at some.

	<u>True</u>	<u>False</u>
1. My father was often "too busy to listen" to me.	T	F
2. Mother generally made most of my decisions for me.	T	F
3. If I was right about something, my father generally told me so.	T	F
4. If I got into a quarrel, my father would try to show me who was right and why.	T	F
5. My father seldom asked my opinion on anything.	T	F
6. My father thinks I should have as much opportunity as possible within reasonable limits.	T	F
7. My father was quite concerned about my doing well in school.	T	F
8. I still kiss my father "good night" when I am home.	T	F
9. My mother told me that she wished that I had never been born.	T	F
10. My mother explained sex matters to me if I asked her about them.	T	F
11. My mother gave me encouragement when I needed it most.	T	F
12. My father would explain things to me when I was working with him.	T	F
13. I felt that my father understood me.	T	F
14. My mother almost always kept me dressed better than my young friends.	T	F
15. I could "talk back" to my mother if I didn't overdo it.	T	F
16. My mother was willing to listen to my side of the story and give it consideration.	T	F
17. My father seemed to overdo both "blaming" and "praising."	T	F
18. My mother never seemed to notice my "pet" projects.	T	F
19. When I asked for something my mother would almost always give it to me.	T	F
20. I hardly ever felt that my mother criticized me unjustly.	T	F
21. If I asked my father about sex matters he would explain them in a manner that I understood.	T	F
22. My advances toward my father were often met very coldly.	T	F
23. My mother didn't seem to care about teaching me how to act in social situations.	T	F

- | | | |
|---|---|---|
| 24. My father had little patience with me when I helped him on an unfamiliar task. | T | F |
| 25. I practically always had to play where my mother could keep an eye on me. | T | F |
| 26. I could tell my mother about my dates without fearing that she would ask prying questions. | T | F |
| 27. When I got hurt, my mother would get very upset. | T | F |
| 28. I seldom sat on my father's lap when I was a child. | T | F |
| 29. I seldom talked over personal problems with my mother. | T | F |
| 30. My mother never seemed to be very concerned about what I did or where I had been. | T | F |
| 31. I could depend on my mother to come through in a pinch. | T | F |
| 32. My mother always had time to listen to my stories about the day's events. | T | F |
| 33. It was hard for me to talk about my personal thoughts and problems to my father. | T | F |
| 34. I spent more time with a nurse or baby sitter during childhood than I did with my mother. | T | F |
| 35. I had to get permission from my mother to go out to play. | T | F |
| 36. Only occasionally did my mother kiss or hug me. | T | F |
| 37. My father preferred that I do things with him rather than with some of my young friends. | T | F |
| 38. My father gave me more spending money than I actually needed. | T | F |
| 39. As a child I was able to have some secrets without any objections from my mother. | T | F |
| 40. I can remember going hungry because no one prepared my meals. | T | F |
| 41. My mother explained things to me when I worked with her. | T | F |
| 42. At times when I needed him most, my father was usually busy or not around. | T | F |
| 43. My father didn't care about what kind of grades I got in school. | T | F |
| 44. The main reason I'm in school now is because it's my father's wish. | T | F |
| 45. I often felt that my father wished he could get rid of me. | T | F |
| 46. I can't recall that I ever really discussed my plans for the future with my father. | T | F |
| 47. My father gave me a chance to present my side of the story and would give it consideration. | T | F |
| 48. My father didn't seem to care if I "wandered off" for as long as half a day. | T | F |

- | | | |
|--|---|---|
| 49. My mother saw to it that I got sufficient medical care when I needed it. | T | F |
| 50. When my mother told me to do something, she expected me to do it immediately. | T | F |
| 51. My father generally made most of my decisions for me. | T | F |
| 52. At meals my mother required that I eat only as much as I wanted rather than having to clean up my plate. | T | F |
| 53. I seldom felt that my father criticized me unjustly. | T | F |
| 54. My mother showed little concern over my illnesses. | T | F |
| 55. My mother praised more than she blamed but didn't overdo either one. | T | F |
| 56. My mother didn't seem to care if I drank alcohol when I was young. | T | F |
| 57. My father seldom gave me gifts - - even on special occasions. | T | F |
| 58. If I asked my father a question, he would generally tell me to ask my mother. | T | F |
| 59. I felt that my mother understood me. | T | F |
| 60. When I was a child my mother gave me about as much "freedom" as my friend's mothers gave them. | T | F |
| 61. My mother usually wasn't home when I returned from school. | T | F |
| 62. When I was a child my father would let me have my secrets without interfering. | T | F |
| 63. My father liked to have my friends come to our house. | T | F |
| 64. My father was usually interested in what I was doing. | T | F |
| 65. I seldom received gifts from my mother, even on special occasions. | T | F |
| 66. My mother spent considerable time in dressing me up for school and company. | T | F |
| 67. My father spent very little time with me when I was growing up. | T | F |
| 68. My father used to "snap" at me frequently. | T | F |
| 69. My mother was reluctant to let me stay at a friend's house overnight. | T | F |
| 70. Mother scolded other children who picked on me. | T | F |
| 71. My father gave me more gifts than he should have. | T | F |
| 72. My mother would let me work at a task until I asked for help. | T | F |
| 73. I often felt that I was tolerated more than I was accepted by my mother. | T | F |
| 74. When we were together, either at home or in any other places, my mother would usually put her arm around me or hold my hand. | T | F |

	<u>True</u>	<u>False</u>
75. My father was not concerned about the company I kept.	T	F
76. I could "talk back" to my father if I didn't overdo it.	T	F
77. My mother didn't like the idea of my going on class trips away from home.	T	F
78. My mother would explain things to me just to the point of satisfying my curiosity.	T	F
79. Even when I was big enough to dress myself, my mother did it for me.	T	F
80. It was all right with my mother when I brought friends home with me.	T	F
81. My mother didn't mind if I got my playclothes dirty.	T	F
82. My mother asked for my opinion and considered it seriously.	T	F
83. My mother asks rather than tells me to do things.	T	F
84. My father was reluctant to let me stay at a friend's house, go to camp, or go on a trip for a few days.	T	F
85. My father is too concerned about me but I wouldn't want him to know that I think so.	T	F
86. If I wanted to go somewhere, I usually had to ask my mother.	T	F
87. I could usually get my father to do what I wanted.	T	F
88. I enjoyed helping my father do odd jobs.	T	F
89. My mother often showered me with affection after punishing me.	T	F
90. I could tell my father about things that happened on a date without being afraid of prying questions being asked.	T	F
91. I sometimes wished that my mother would let me fight my own battles.	T	F
92. There was seldom a mealtime that my father did not correct me for something.	T	F
93. My father tried to look at my companions through my eyes.	T	F
94. My mother usually treated others with more consideration and courtesy than she did me.	T	F
95. My mother would tell me to do something over and over again.	T	F
96. My father permitted me to take an occasional alcoholic drink at home, after I was in high school.	T	F
97. I could rely upon my father if it was necessary.	T	F
98. Some of the best times in my childhood were when my father brought me toys as a surprise.	T	F
99. If I got into serious trouble my father would do what he could to help me out.	T	F
100. My father often showed greatest affection toward me right after he had punished me rather severely.	T	F

	<u>True</u>	<u>False</u>
101. My mother never bought anything "just for me" (for example, candy or gum) when I went to the store with her.	T	F
102. My father wouldn't allow me to leave the table until I had eaten everything on my plate.	T	F
103. My mother's attitude was that children are just naturally bad.	T	F
104. My mother would get very upset when I did not come home right after school.	T	F
105. My father would let me work at a task until I asked for help.	T	F
106. My father would often abide by my will even though he did not agree.	T	F
107. My father visited my school and teachers a number of times each year.	T	F
108. My mother would often make promises to me, but would only infrequently keep them.	T	F
109. There were many times when I wished that my father better understood how I felt about things.	T	F
110. When I was criticized by others my mother would take my side and defend me.	T	F
111. My mother didn't care how messy I was when I was young.	T	F
112. I felt like my father was a good friend as well as a parent.	T	F
113. My mother always had time to listen if I had a problem to discuss.	T	F
114. I hardly ever took any of my personal problems to my father.	T	F
115. My mother seemed to overdo both "blaming" and "praising."	T	F
116. My father usually ignored me when there were other adults around.	T	F
117. My mother would take time out to play with me if I wanted her to.	T	F
118. I wish now that my father had been stricter with me than he was.	T	F
119. My father seldom encouraged me in anything.	T	F
120. My mother gave me more gifts than I deserved.	T	F
121. When I was learning table manners my mother didn't mind if I sometimes used my fingers after trying with the silverware.	T	F
122. My mother trusted me.	T	F
123. My father wouldn't consider letting me go out at night if my homework was unfinished.	T	F
124. My mother didn't seem interested in explaining things to me.	T	F

	<u>True</u>	<u>False</u>
125. My father would never let me "putter around" in his workshop.	T	F
126. I can remember my father encouraging me to make "small" decisions when I was quite young.	T	F
127. When I got into serious trouble I could expect very little help from my father in getting things straightened out.	T	F
128. My father was not very much interested in showing me how to act in social situations.	T	F
129. I sometimes wished my father would let me fight my own battles.	T	F
130. My father never seemed to mind when I interrupted him as he was talking.	T	F
131. My friends were allowed to go out at night long before my father would allow me to go with them.	T	F
132. If I kissed or hugged my mother, she seemed to be embarrassed.	T	F
133. My father often expected me to do more than I thought I could.	T	F
134. My father was disappointed if I got only average grades in school.	T	F
135. My mother seldom seemed interested in my opinion.	T	F
136. My father preferred that I date only occasionally.	T	F
137. My father never bought anything "just for me" (for example, candy or gum) when I went to the store with him.	T	F
138. My father preferred that I not go on class trips away from home.	T	F
139. My father always seemed to be very busy when I asked him for something.	T	F
140. My mother doesn't seem to realize that I'm no longer a child.	T	F
141. When I was learning table manners my father didn't mind if I used my fingers after trying to use the silverware.	T	F
142. My father seldom took the time to explain things to me so that I could understand them.	T	F
143. My father almost always gave me what I wanted when I asked for something.	T	F
144. I often felt that my mother expected more of me than I could accomplish.	T	F
145. My father had the knack of knowing just when to "put his foot down."	T	F
146. My mother seldom "tucked" me into bed.	T	F
147. My father never seemed interested in the things I did at school.	T	F

	<u>True</u>	<u>False</u>
148. Quite often I would get a quick, emphatic "NO" from my father even though my request was reasonable.	T	F
149. When my father promised me something, I knew that he would keep the promise.	T	F
150. My father was a willing listener if I had a problem.	T	F
151. My mother seldom gave me much "moral support."	T	F
152. I found it next to impossible to have a heart to heart talk with my mother.	T	F
153. My mother didn't care about what kind of grades I got in school.	T	F
154. At times when I needed her most my mother was usually busy or not around.	T	F
155. My mother showed little affection toward me.	T	F
156. I hardly ever sat on my mother's lap when I was young.	T	F
157. My father often acted as if I was disgusting to him.	T	F
158. I remember that my mother usually told me what I should do.	T	F
159. My father asked for my opinion and considered it seriously.	T	F
160. My mother often wouldn't go to sleep until after I got home at night.	T	F
161. My mother showed little concern if I "wandered off" for as long as half a day.	T	F
162. I felt as if my father was concerned about how I was growing up.	T	F
163. My mother treated me pretty much as her equal.	T	F
164. My father praised more than he blamed but didn't overdo either.	T	F
165. My mother always seemed to be very busy when I asked her for something.	T	F
166. My mother thought I should rank near the top scholastically.	T	F
167. My father often put off seeking medical help when I needed it.	T	F
168. If I got into serious trouble my mother thought it was up to me to straighten things out.	T	F
169. My mother never seemed interested in the things I made for her in school.	T	F
170. My father would explain things to me just to the point of satisfying my curiosity.	T	F
171. My father used to help me with my hobbies.	T	F
172. I could depend on my father for encouragement when I needed it most.	T	F

	<u>True</u>	<u>False</u>
173. When I asked him a question, my father would often explain a thing to the point of boredom.	T	F
174. My mother was often "too busy to listen" to me.	T	F
175. My father used to spend time playing games with me.	T	F
176. I usually went home after school because mother wanted me to.	T	F
177. Mother almost always watched me when I was playing.	T	F
178. My mother knew just how far to let things go before "putting her foot down."	T	F
179. I can remember my mother encouraging me to make "small" decisions when I was quite young.	T	F
180. I felt that my mother could have kept my clothes nicer.	T	F
181. It was long after my friends were allowed to go out at night that my mother finally gave me her permission to go with them.	T	F
182. I could go out and play without first asking my mother.	T	F
183. I felt that my father was too strict about table manners.	T	F
184. My father seldom showed any interest in my "pet" projects.	T	F
185. I could never do anything well enough to completely satisfy my father.	T	F
186. I enjoyed doing little jobs for my mother.	T	F
187. I often felt that my mother wished she could get rid of me.	T	F
188. If I got into serious trouble my mother would do what she could to help me out.	T	F
189. My mother would lend a helping hand on a project if I desired it.	T	F
190. My father trusted me.	T	F
191. My father wanted me to be at the top of my class.	T	F
192. When I was a child my father gave me about as much "freedom" as my friends' fathers gave them.	T	F
193. My mother tried to look at my companions through my eyes.	T	F
194. My mother was unhappy if I wanted to stay away from home for a few days, for example, at camp or at a friends house.	T	F
195. My mother usually dressed me about the same as my friends.	T	F
196. My father didn't care when I got home from school or dates.	T	F
197. There were very few times that my mother tried to teach me to do something.	T	F
198. I was allowed to help myself without asking if I wanted to borrow something from my father's personal belongings.	T	F
199. Because my mother never objected, I ate pretty much what I wanted at home.	T	F

200. My father always wanted me to do things "just a little bit better" than my friends did them. T F
201. When I was in high school, mother didn't mind if I took an occasional alcoholic drink at home. T F
202. My father threatened to evict me when I behaved very badly. T F

Daydream Questionnaire

Most people daydream or engage in silent self-conversations at least sometimes in their adult lives. The actual range, variation, and content of these imaginative activities is really not known as yet. We are asking your cooperation in compiling a body of factual data on day-dream activity in various segments of our population. A great deal of the value of this study hinges on how honest you can be in reporting your thoughts and activities. One criticism of this type of questionnaire is that it is too susceptible to conscious suppression or alteration by respondents who do not wish to appear unusual or abnormal. The question is, "Must you conform?" Please recognize that in the area of questioning included we don't actually know "what's proper" or conventional. Please answer within the fullest limits of your conscious awareness and your comprehension of the questions.

For the purposes of this questionnaire the terms "Day-Dream," "Fantasy," and "Imagine or Imagination" will be used interchangeably. They will be defined as any form of waking activity carried on by a person which involves thinking or visualizing in his "mind's eye" some pattern of behavior or event not directly involved with the task he is immediately engaged in (e.g., typing, mowing lawn, eating) or some form of self-conversation which is carried on privately within the individual. Thus, listening to a talk and thinking about what the speaker is saying at the moment would not be daydreaming but thinking of yourself telling someone about it or imagining yourself actually being the teacher or perhaps faraway on a tropic isle sunning yourself would be.

Answer each item by making an "X" through the appropriate letter. "A" stands for VERY FREQUENTLY and "F" for PRACTICALLY NEVER with B, C, D, & E representing intermediate steps between those extremes. Please take this task seriously and do not simply mark the answer sheets haphazardly or by following any pattern. Allow yourself some time for each item in order to examine your thoughts but do not spend too long over the items attempting to get "the" precise answer.

1. I engage in some form of daydreaming every day. A B C D E F
2. I resort to daydreaming when I am up against a situation I can't handle at once or have a strong need that is unsatisfied. A B C D E F
3. I use my imagination as I lie in bed shortly before falling asleep. A B C D E F
4. I daydream when alone rather than when in the company of others. A B C D E F
5. I drift into daydreaming while doing physical work. A B C D E F

6. I daydream when I run into a difficult problem. A B C D E F
7. I find myself drifting into a daydream while reading a book of fiction. A B C D E F
8. I daydream or engage in some type of fantasy activity while listening to lectures or speeches. A B C D E F
9. I enjoy daydreaming. A B C D E F
10. I daydream after a failure experience or frustration. A B C D E F
11. I daydream about problems or people I have to deal with at the present time. A B C D E F
12. My daydreams involve planning long-range goals or distant-future plans. A B C D E F
13. I daydream about my past life and past events or family history. A B C D E F
14. My daydreams take the form of planning for events or actions I will take in the very near future. A B C D E F
15. I daydream about events of history and my family's background. A B C D E F
16. I engage in fantasies while listening to the radio. A B C D E F

In the following space please write an example of an actual fantasy you have had from time to time. Indicate if it was fairly recent or only in childhood. Include some details about the fantasy but limit yourself to approximately five minutes.

Self Report Questionnaire

Instructions: Answer each question by placing a check mark anywhere along the line.

1. Compared with other college students, how confident do you feel about your problem-solving abilities?

Not Very Confident				Very Confident			

2. How frequently do you change your mind in terms of reaching a decision?

Seldom				Very Frequently			

3. How comfortable do you feel when making suggestions about a difficult problem in a group situation?

Not very comfortable				Very Comfortable			

4. How often do friends come to you for advice?

Very Infrequently				Frequently			

5. How comfortable are you about making difficult decisions?

Very Uncomfortable				Very Comfortable			

APPENDIX B

CRITERIA FOR SCORING BELIEFS IN EXTERNAL
CONTROL OF REINFORCEMENT

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It is apparent that wide variations exist in TAT narratives regarding the general adequacy of the principal character in social situations. In relating their TAT stories, some persons portray their central figure as anticipating failure, disappointment, rebuff, or as being the victim of a variety of external events over which he has little direction. When an outcome or event is perceived as being beyond the control of the main character in a story this is interpreted as indicating a generalized expectancy of external control on the part of the storyteller. In such cases, outcomes are described as being independent of the hero's actions and influenced primarily by such factors as luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of forces surrounding him. The externally controlled individual sees relatively little instrumentality in his own behavior and regards himself as the passive recipient of reinforcements, either positive or negative, dispensed by external forces or agents.

The following story illustrates a belief in external control.

(Card 1) The boy appears broken hearted as he probably has to practice his violin lessons. He probably doesn't like to play the

violin but is forced by his parents to do it. It is also probable that the violin is broken and he feels bad about it.¹

The main figure is seen as doing something against his will. There is no direct rebellion against the coercion that is implied. The story that is developed leaves the impression that nothing can be done about getting rid of the parental pressure directed against the subject's own wishes. That is, the subject of the story finds himself in what he feels is an intolerable position, and does nothing to try to change the situation. It is not simply the adverse environmental circumstances which make this story such a graphic instance of a belief in external control, but more importantly the lack of assertiveness, determination, or power of the principal character; he assumes no responsible actions to cope with the rather harsh demands he faces.

In evaluating a storyteller's orientation with regard to experienced control it is necessary to assess the nature of the stresses facing his TAT hero, for a strong and active person in an environment of plenty is quite a different concept than this same character in an environment of want and poverty. In this regard it is important to consider the themes ordinarily elicited by the individual TAT cards for in many instances the most common motifs introduce at least some elements of external (negative) control. It is probable that more personalized themes more accurately portray the subject's genuine attitudes toward personal control.

¹This story, as well as several others, have been taken from examples given in Personality Through Perception written by Witkin, H. A., Lewis, H. B., Hertzman, M., Machover, Karen, Meissner, P. B., and Asprer S.

Stories projecting a belief in external control do not necessarily have an unfavorable outcome. Note the following example:

(Card 1) The little boy has been wishing he might have a violin. Wouldn't it be wonderful, he thought, to have my own violin like father has. One day as he was dreaming about this his father marches in and says, "Look what I've got for you," and sure enough, it's a violin.

This represents either the story of an individual who has in fact received an abundance of gratuities without effort on his part or a wish fulfillment fantasy. In either case, the individual is pictured as the passive object of external forces and this may be interpreted as conveying a belief in external control of reinforcements. It has been suggested that the above story may represent a form of fantasy solution to a life problem. In general, narratives which present the central figure as solving problems through fantasy, reveries, wishes, and other unrealistic behaviors also illustrate a belief in external control, for under such circumstances there is no reality-oriented problem solving behavior. The individual is not actively coping with dilemmas or mastering his environment, but is instead employing unrealistic thoughts to accomplish his goals. In some cases a particular story may have a "happily-ever-after" quality to the ending. If there are no indications within the major portion of the story of responsible actions on the part of the principal figure, this may (but not necessarily) reflect an external orientation. It should be remembered, however, that if planning and constructive action follow from fantasy this is not to be interpreted as a manifestation of the storyteller's feeling of powerlessness in dealing with problems.

The following narratives also illustrate a belief in external control:

(Card 2) There's a man out there, a farmer plowing the field; two women there. I can see the houses over there. This woman against the tree is taking it easy. Probably day after day doing the same thing. She hasn't any interest. The other woman with books in her hand is probably thinking of leaving the farm.

There is little engagement on the part of the subject with the picture. What little there is suggests a general apathy. The attempt to fight the apathy goes no farther than a thought of leaving it attributed to one of the characters.

(Card 3BM) The boy is sitting on the floor leaning against a couch. He has his head down and is probably crying. He appears to be crying over something that has happened. This is a metal object on the floor; I cannot make out what it is.

Again, the principal character is in a difficult life situation. The circumstances surrounding the development of the situation in which he finds himself are left vague, and no solution is attempted. Stories in which problems are created and then left unsolved reflect a belief in external control because the individual assumes no responsibility in improving the situation.

(Card 7BM) The young man is talking to the elder man. He appears disgusted about something. He is telling the older man about his problems and is seeking his aid. The young man appears to have lost all interest in life. He looks pessimistic and he apparently thinks the whole world is against him.

The pressure of unspecified circumstances is again brought in. The net effect appears to be that the subject of the story is crushed by life. There is some attempt to receive aid by appealing to someone else, but little expectancy of being able to get out of the depression and apathy in which he finds himself. This narrative also illustrates that persons who believe in external control not only portray their figures as being victims of ungovernable environmental forces, but also as incapable of coping effectively with their own impulses and emotions.

They feel unable to maintain control over such feelings as anger, depression, euphoria, and in addition may demonstrate a lack of understanding regarding such experiences as physical illnesses, handicaps, and mental or emotional distress.

What is most crucial for an evaluation of a subject's belief in external control is the competency and general adequacy of his principal characters in coping with environmental and intrapersonal conflict. The TAT protagonist regards reinforcements as being contingent upon factors external to himself and thus beyond personal direction. The more he views chance, fate, or powerful forces as determining outcomes, and the more he fails to cope effectively with problems, the more the storyteller may be regarded as holding a generalized expectancy of external control.

Criteria for Scoring Beliefs in Internal
Control of Reinforcement

When events are construed as being contingent largely upon the actions of the principal character, this is defined as a belief in internal control of reinforcement. Internal control refers, therefore, to the perception of positive and/or negative events as being a consequence of one's own actions and thereby under personal control.

(Card 1) Though a child, this violinist impresses me as having the qualities and qualifications to master the fine technique of violin playing. He seems to be thrusting himself into the future, through his next lesson, through his first recital until he has attained the height of someone he admires. I feel that there must be some inspiring element in his life to fortify the ambition that is written in his facial expression. He will be a success in this undertaking that requires contemplation throughout the years.

The subject sees the main figure as coping in a highly competent fashion with the task of developing into a successful violinist. Other people are referred to, but as ideals, not adamant obstacles. It is the expectancy of success resulting from his own behavior which makes the interpretation of a belief in internal control most apparent.

(Card 7BM) A young man studying to be a surgeon, an older man, a fine surgeon, could they be of assistance to each other? This man had a wealth of knowledge to pass along. The young intern was aware of the mental operations of his sage companion, and it was his desire to receive all that he could as well as to give his gifts to those who were in need of them. Together they thought deeply, not necessarily making any verbal expression, but there was communication. Two great minds acted as magnets--attracting one another.

The ability and wish to be competent and to function are stressed in this story. A strong need for identification with an older person is indicated. But the older man's activities do not substitute for the younger man's. The younger man is receptive but he is also capable of

acting on his own. An outstanding feature in stories reflecting a belief in internal control is the tendency of the characters to deal with tasks and with the world. Determination, self-assertion, and self-control are prominent elements in the protagonist's actions. The internally oriented individual portrays events as being contingent upon the action of his TAT figures, and not as the result of factors external or unrelated to his hero's behavior.

Occasionally, the principal figure will be depicted as relatively passive in the story and upon first glance this may appear to represent an attitude of external control. Closer examination of events portrayed in the narrative, however, will sometimes disclose features that contradict this initial impression. It should be remembered that it is not the passivity of the main character which is important, for some individuals with a strong conviction regarding internal control may portray their figures as passive. It is rather the degree of responsibility accepted by the central figure for the events occurring. Note the following illustration:

(Card 4) The husband is upset because his wife has let their son hurt himself by falling off a chair. The husband feels that his wife should have been more observant of the son since he was a toddler. Therefore, he feels that she is irresponsible. He finally feels badly because he has upset her and made her cry. So they make up; she promises to be more watchful and he promises to be more patient and understanding. The man is disgusted and the woman feels bad for letting her son fall.

Although the woman is relatively passive she does accept full responsibility for whatever happened. Because of this attitude, and since the persons reach a resolution for future action, this story deserves a rating of internal control even though it may be of limited intensity.

The following story, given by a female subject, is also illustrative.

(Card 4) Upon returning home from work one night a man finds that one of his children has been badly hurt. Before his wife has a chance to tell him what happened he runs from the house and leaves for the hospital. He's afraid of just how seriously his child is hurt. He lives for his wife and family. He learns that his child will be well again. When he has heard this he returns home to his wife and other children.

While it might be argued that this story represents a belief in external control over the accident, the action of the central character clearly reveals an attitude of internal control. That is, responsible action is immediately taken by the male to cope with the unfortunate event. Nevertheless, both the plot and the actions of the TAT characters must be closely evaluated. While one would ordinarily anticipate that storytellers holding a particular expectancy toward experienced control would report both plots and character behaviors consistent with that belief, there may be exceptions. In any case, it is probable the actions of the TAT figures which should be given greater weight in rating a story.

Although it is expected that subjects will typically identify with TAT characters of their own sex, this occasionally does not hold true. The above story, reported by a female, clearly indicates identification with the male figure since the story revolves around his actions. The next narrative was also offered by a female subject.

(Card 4) In this picture I view a husband and wife. They were talking over his getting a new job. She didn't agree that he should accept it for there was a chance he wouldn't make it through the battery of tests needed and he would lose his foreman job. Her husband being a man possessive of a great deal of pride and being used to thinking for himself leaves angrily for his new job. He takes the test and makes it.

Again there is identification with the male figure and for this reason a rating of internal control is given since in this story the male is self-sufficient and competent. Moreover, the overall plot is consistent with this scoring. The subsequent suggestions are helpful in determining identification figures.

Determination of Identifications (Rotter, J. B. J. Pers., 1946, 15,

70-92) The following conditions should be considered in evaluating identification, and consequently, in assessing internal-external control. There are, of course, exceptions to each of these points.

- a) The subject is likely to identify with a character of the same sex, either one of his own age or a previous age.
- b) The subject is likely to identify with the central character of the story, that is, the one around whom the story revolves, whose feelings are being expressed, whose behavior is being described, the one is likely to be described first and figures in the ending.
- c) The subject is likely to identify with a character who does not have behavior which is socially unacceptable in the subject's eyes. For example, he is unlikely to identify with a figure who is mean, cruel, perverted, stupid, or unjust. However, he may readily identify with someone who is frustrated, sick, sad, a victim of injustice, etc.
- d) The subject is more likely to be identifying with one of the characters when he gives evidence of emotional involvement in the story he tells.

Outcome

While the outcome of stories is of course related to the internal external control variable, there is some independence. Thus, a

subject who lacks self-determination or fails to accept responsibility for his actions (belief in external control) may fear to face the realities of the situations that he himself has contrived, and, by dealing with them on a fantasy level, may achieve a high proportion of favorable outcomes. Subjects with great competence (internal control), may report unfavorable outcomes because active coping of their TAT figures does not necessarily bring success, or because the ability of the characters in recognizing some of the unstructured features of the future makes it difficult for them to achieve favorable solutions.

In rating a fairly large sample of TAT protocols, it may be helpful to evaluate all the stories to one card across the entire group of subjects instead of scoring all the narratives for a particular person and then proceeding subject by subject. In this manner it may be possible to gain some feeling for the ordering of stories to each individual card and to eliminate any possible "halo effects" for any given subject.

Illustration of Rating Procedures (Using Card 7GF)Rating (5) Considerable Degree of External Control

(Card 7GF) The little girl is blind and her mother is reading to her. The girl wishes she could see the doll she holds in her arms. She is sort of depressed by her blindness. The mother is over-protective and is trying hard to make her interested in this story even though the girl is not really listening. The little girl probably grows up depending upon her mother but wishing she was not so dependent; accepting her blindness, but not to a full degree.

There is no attempt to escape the unbearable situation forcing the little girl. Neither the maternal overprotection nor the blindness are satisfactorily resolved. Furthermore, the general theme is most unusual and communicates an orientation of external locus of control.

Rating (4) Moderate Degree of External Control

(Card 7GF) A governess of some sort is reading to this little girl. The girl is listening, but tending to drift away if she's not interested. Her mind is perhaps on other things. Maybe the story is bringing back other things. The older woman is a kindly person. She seems engrossed in reading the story; seems like she enjoys her work. When the story is over the girl gets up and they go back to the regular routine of life.

In this case the little girl is exposed to an unsatisfactory situation but does nothing constructive to avoid it. The uncomfortable situation ends only upon the decision of the older woman. The little girl makes no effort to improve her unhappy plight, save through fantasy.

Rating (3) Neutral

Elements of both internally and externally controlled behavior are apparent; this is scored, for example, when a character makes an attempt at carrying through a self-initiated project and then finds his drive petering out. Both individual (TAT heroes) and situational (TAT context) variables must be examined. Many narratives will provide only

only minimal clues for evaluation, but this rating is probably more justified than an irrelevant (0) score.

(Card 7GF) A grandmother is reading a fairy tale to her grandchild. The little girl is thinking way ahead. She is at an age where she's deciding to leave dolls or stay a child. She can't decide what she wants to do, whether to grow up and leave everything behind or to stay with the security of childhood. Her grandmother is trying to keep her a little child by giving her a doll and she is trying to act polite but not really happy. She just politely sits and listens until her grandmother says it's all right to leave, then goes off on her merry way.

"Acting polite" and the emphasis upon the child's decision-making process reflect the element of internal control in this story. Nevertheless, the little girl shows some ambivalence regarding her life decision and situation. When the grandmother finishes reading, then and only then, can the little girl run off. The latter features suggest an attitude of external control. Considering the total story, a neutral scoring is offered.

Rating (2) Moderate Degree of Internal Control

(Card 7GF) A mother is holding a book and reading to her daughter. It's not really a fairy tale, but some fiction type of story which possibly has to do with a family situation. The little girl is thinking of putting herself in the story, thinking some day she'll be grown up and will have her own family. The story is a happy one and she's thinking she'll do everything like in the story; like mother did for her children. I think she really believes her mother loves her because she takes all this time with her. She's going to try to raise her family the same way and have lots of love the same way.

This is an instance in which fantasy is not scored as revealing a belief in external control. While daydreaming is a predominant feature in the story, there is also a thoughtful, future-oriented desire to succeed through individual effort. The little girl expects that through self-determined actions she can accomplish her goals. Here fantasy is

not used as an escape from difficult situations but rather as a means of looking forward to a future course of action.

Rating (1) Considerable Degree of Internal Control

(Card 7GF) It looks like a grandmother and grandchild. The grandchild came over to visit for the afternoon and her grandmother decided she was going to read to her. The girl isn't interested in what she is reading and wants to be outside with her friends. Eventually the child tells the grandmother that she wants to go out and play with her friends. The grandmother is an understanding woman and realizes that children are more active and don't like to sit at home and listen to someone read.

Successful coping with a problem through self-initiated, constructive measures is the keynote in this story. There is a straightforward presentation of the problem followed by an effective means of dealing with it; hence, the scoring for internal control.

Rating (0) Irrelevant

A score given to stories having minimal relevance for an evaluation of internal-external control.

(Card 7GF) An older woman, probably the girl's mother, is sitting on a sofa close beside the girl. She is reading to her daughter from a book she holds in her hands. The girl, who holds a doll on her lap, is looking away. The story looks like it takes place a long time ago because of the style of clothing.

An irrelevant (0) rating should be relatively rare, for in most instances there will be some indications of a subject's orientation with regard to experienced personal control. Even if there is only minimal involvement with the story, it is probably best to rate the story as neutral (3) rather than as irrelevant. Logically, this seems most appropriate. In the above narrative there are virtually no indications of beliefs regarding locus of control. The story is strictly a picture description and there are no emotions, attitudes, or reactions illustrated.

Summary of General Criteria for Rating

Rating (5) Considerable Degree of External Control

A perception of positive and/or negative events as being the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of facts surrounding the principal character. Stories in which the main figure encounters numerous obstacles, hazards, or conflicts in the face of which he typically fails, are interpreted as reflecting a generalized expectancy of undesirable external control. In more positive terms are those stories in which the hero is portrayed as the passive recipient of gratuities or as succeeding largely through the intervention of good fortune. What is important for a rating of external control is the relative absence of self-initiated, responsible action or personal mastery. Instead, the central figure is viewed as almost powerless in the face of favorable and/or unfavorable events or as unable to overcome life's dilemmas. There may be some attempts to use fantasy to escape from intolerable situations, but few efforts to solve problems realistically are shown.

Rating (4) Moderate Degree of External Control

The features described in the above category appear with less intensity, but the principal character is still regarded as displaying little personal control over events.

Rating (3) Neutral

Aspects of both internal and external control are evident with some self-initiated, productive behavior in the context of a representation of events as determined partly by uncontrollable external forces or agents.

Rating (2) Moderate Degree of Internal Control

A perception of positive and/or negative events as being a consequence of one's own actions and thereby under personal control. The principal figures are seen as coping with problems and conflicts in a competent, self-determined fashion. If the hero should fail in a difficult situation, or make a mistake, he accepts full responsibility for the outcome.

Rating (1) Considerable Degree of Internal Control

The central figures are depicted as highly competent and in control, or at least responsible for, whatever happens to them. The features described in the above category appear with greater clarity.

Rating (0) Irrelevant

The story fails to provide clues for a rating of internal-external control. The subject either cannot produce a story or else the narrative is simply a picture description.

APPENDIX C

SCORING STANDARDS FOR THE WEISSKOPF TRANSCENDENCE INDICES

1. The following categories were used:
 - (a) Intraception refers to the ascribing of emotions, desires, thoughts, fantasies, actions, etc., to the figures in the pictures.
 - (b) Temporal transcendence refers to the inclusion of events which occur prior to, or after the event shown on the picture.
 - (c) Spatial transcendence refers to the inclusion of persons, objects, events, etc., which are outside the field of vision represented by the picture.
 - (d) Relationship refers to the characterization of figures as related to other figures in the same picture. The great majority of relationship scoring refers to kinship, as when one figure is described as the father, mother, son, daughter, husband, wife, etc., of another figure. Relationships other than kinship like "friend" or "suitor" have also been included in this category (not pertinent to the present study).
 - (e) Content of speech refers to verbal statements made by pictorial figures.
 - (f) Evaluation refers to the characterization of figures or objects by a subjective value statement. Evaluation may refer to aesthetic evaluation (e.g., characterizations such as handsome,

pretty, beautiful, ugly, neat, well-groomed, etc.) or moral evaluation.

- (g) Atmosphere refers to the characterization of the whole picture or part of the picture in terms of the emotional response which it elicits in the observer. Statements such as "this picture is uncanny" or "this scene looks calm and peaceful" fall into this category.
- (h) Imperative refers to comments to the effect that a pictorial figure "should," "must," "is supposed to," act, feel, or think in a certain manner.
- (i) Symbolism refers to the conscious and explicitly verbalized ascribing of symbolic meaning to the picture, such as "This is climbing the ladder of success."
- (j) Emphasis refers to the singling out or stressing of a part of the picture. Statements such as, "The most important thing in this picture is . . ." fall into this category.
- (k) Physiological condition refers to statements attributing to individuals physiological characteristics which cannot be pictorially represented in an unambiguous manner, such as, "he is sick," "he is dead," "he is asleep," "he has a weak heart," etc.
- (l) Possession refers to comments implying that an individual owns an object, such as, "These are his books." However, statements of this kind are not scored if the owned object is a piece of wearing apparel, worn or carried by the owner. For instance, "His suit is black" is not scored.
- (m) Quantification refers to numerical statements on specific times

of the day, dates, ages of individuals, heights, etc.; such statements are scored only if they are not approximation. For example, "She is 20" receives one score, but "She is about 20" receives no score.

(n) Ability refers to comments stating that an individual can, is able to, do something, etc.

(o) Miscellaneous other categories account for a small minority of remaining transcendences.

2. No stringent rules have been worked out concerning the specific transcendence category to be applied to a statement. For example, it does not make any difference whether a statement is scored as "intraception" or as "spatial transcendence," because the results are evaluated in terms of the number of transcendence rather than the kind of transcendences.
3. A simple sentence without dependent clauses is given one transcendence score. Each dependent clause is given one additional score. Compound sentences are given one score for each simple sentence of which they consist. For instance, "The woman is standing in front of her son and she is daydreaming" receives two scores, namely "relationship" and intraception.
4. If one simple sentence contains more than one transcendence category, only one score is given. For instance, if one man is shown in the picture and the subject states that another man has just left the room, this statement is a "spatial transcendence" and a temporal transcendence. However, it is given only one score.

5. This point gives exceptions to some of the rules stated in "4". It states special rules for the category "intraception." Simple sentences which ascribe emotions, feelings, thoughts, etc., to the figures in the picture are given one score, e.g., "he is daydreaming," "he is thinking," "he is worrying." If the content of the emotions, feelings, thoughts, etc., is stated, additional scores are given. Such additional scores, however, are only given if the content mentioned is transcendent. If, for instance, a woman is described as thinking of a man, this statement is given two scores, if the man is not shown in the picture, and one score if he is shown in the picture. If feelings, emotions, thoughts, etc., are ascribed to more than one person, only one score is given if the persons are not separately listed (as in "they are sad"). However, if the persons are separately listed, one score is given for each person. For instance, "the old man and the young man are sad" received two scores. The same rule applies to the category "evaluation." "They are pretty" receives one score, but "the man and the woman are pretty" receives two scores.
6. If alternative descriptions are given (such as "this could be . . . or . . . or . . ."), only one of the alternatives is scored, namely the one with the highest transcendence.
7. Negations are scored in the same manner as affirmative statements. "He is not afraid" receives one score. "She is not his mother" receives one score.
8. "Speech content" does not refer to statements such as "he is speaking." It is only applied if the specific content of the conversation

is stated. "He is speaking" is not considered a transcendence.

However, if the verb used gives indications as to the content of the conversation, as in "arguing," "pleading," "consoling," the statement is given one score.

9. The category "relationship" refers only to figures shown in the picture, not to transcendence figures. It is scored only if both figures which are described as related are shown in the picture.
10. If a transcendent comment is repeated, it is scored once only if it is repeated in exactly the same words. If different words are used in the repetition, another score is given. (Note that different forms of the same noun, verb, etc., are not considered a different word. For instance, if a subject says "He thinks" and later repeats "he is thinking," the second statement is not given an additional score.)
11. "Sequiturs" are not scored separately. "She is his mother. The son is standing behind her" receives one score, namely "relationship." "Son" is not scored separately, since it follows from the preceding statement.
12. The terms "something" or "somebody" are not scored as specific content in the categories "intractions" and "speech content." (For example, "he is thinking of something" receives one score only. "He says something" receives no score.)
13. Belongingness to an occupational group is not scored as a transcendence; "a nurse" receives no score; "her nurse" receives one score, namely "relationship."

14. "Trying to" is to be regarded as "wanting to" and, therefore, it is scored as "intraception."

From, Lasowitz, D. The effect of varied degrees of pictorial ambiguity on fantasy evocation. Doctoral dissertation, N. Y. U., 1959.

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