INTERNAL-EXTERNAL LOCUS OF CONTROL: A LOOK AT POLITICAL FACTORS AND BEHAVIOR

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In the late 1950's a personality construct was developed which became known as internal-external locus of control. In the intervening years many studies have been carried out using Rotter's 1966 scale as the independent measure. In the last two or three years there have been several studies which call into question the unidimensionality of this scale. Mirels (1970) found two very definite factors, a chance-fate and a political factor. The problem proposed in this present study is to isolate these factors and to look at political beliefs and attitudes. By having the subjects answer the I-E Scale from two points of view, i. e., their personal point of view and also how they believe most others will answer the same statements, and then measuring political attitudes and beliefs, predictions about conservative and liberal political behavior should be enhanced.

In addition to the political question, it was thought that improvement in the prediction of maladjustment and need for achievement from I-E scores could be developed using this Self and Other I-E Score concept.

A generalized literature review of the I-E concept will be presented; this to be followed by a more extensive review of the political factors question. A brief review of the need for achievement and the maladjustment literature as they relate to I-E will also be presented. In each case, the hypotheses generated will be stated and reviewed.

The methodology of the experiment along with the results and a discussion of these results will bring the paper to a conclusion.

General Background

In recent years a number of studies have focused on the measurement and correlates of a personality construct known as internal-external control of reinforcement (I-E). Internal-external control refers to the degree to which an individual sees himself as having control over his reinforcements. Individuals may be placed along a continuum with the internal individuals believing that primary control of reinforcement lies within themselves and external individuals believing that primary control of reinforcement lies outside themselves. That is, internals believe that they themselves control the occurrence of factors which are reinforcing. Conversely, externals believe that they have little control over such occurrences: instead, they attribute such happenings to chance, fate, luck, or powerful "others."

The concept of I-E was derived from social learning theory which, as presented by Rotter (1954) and Rotter, Chance, and Phares (1972). contains four major constructs: Behavior Potential, Expectancy, Reinforcement Value, and the Situation. The relationships among these constructs are defined as follows:

Behavior Potential = f (Expectancy and Reinforcement Value)

This means that the potential for any given behavior to occur in a particular situation is a function of the expectancy that the behavior will lead to a desired goal and the value the individual places on the reinforcement or goal which he hopes to attain. An example of this might be drawn from an individual looking for a job. If the individual does not expect to be able to get a job, i. e., his expectation is zero, then he will not likely apply for the job no matter how high the salary might be.

On the other hand, if the individual has high expectation of acquiring the job, but the salary is very low, he will not apply. In other words, both the expectancy and reinforcement value of the desired goal play an important role in the occurrence of any given behavior.

Of particular interest in this paper are expectancies since I-E is regarded as a type of expectancy. A person's expectations in any situation are based on prior experience in the same situation as well as expectancies which are generalized from past situations which have provided similar reinforcements.

For example, a politician who is trying to decide whether to run for a given office will base his expectancies of being successful on (1) expectancies generalized from his success or failure in past related elections and (2) the specific experience of having run for this particular office before.

I-E is one of many potential types of generalized expectancies.

It relates not to success or failure of attaining a goal, however, but to one's outlook on who controls the reinforcement in problem-solving situations. In short, rather than a success-failure kind of generalized expectancy, it is a belief or attitude about the manner in which situations can be usefully categorized.

Expectancies can be described by the following formula:

$$E_{s} = f(E \& GE_{r} \& GE_{ps_{1}} \& GE_{ps_{2}} \& \cdots GE_{ps_{n}})$$

$$f(N_{s_{1}})$$

A subscript \underline{r} is used to denote expectancies generalized from other attempts to obtain a given reinforcement, and the subscript ps denotes

relevant generalized expectancies for the categorization of problemsolving situations cutting across specific need categories. A generalized expectancy that problems can be solved by looking for alternatives may be developed regardless of the specific need or reinforcement involved is an example of GE_{ps} . Internal versus external control of reinforcement is a broad area of generalized expectancies which deals with a person's belief or attitudes concerning his control of reinforcements and is another variety of GE_{ps} .

The I-E Scale (Rotter, 1966) attempts to measure one's degree of belief that he had control over the occurrence of reinforcements, (i. e., "I made a good grade because I worked hard, or failed because I didn't study enough."), as opposed to other people, chance, fate, luck, etc. controlling such reinforcement (i. e., "I made a good grade because I was lucky, or failed because the teacher doesn't like me."). In the development of the I-E Scale an attempt was made to develop subscales which would measure I-E in a variety of areas such as achievement, affection, and social and political affairs. However, these subscales did not generate separate predictions so they were dropped and a generalized I-E Scale evolved (Rotter, 1966) which is thought to cut across several need areas and have a continuous distribution.

The original tool used to measure internal-external locus of control was developed by Phares (1955). It was a Likert-type scale with thirteen items stated as external attitudes and thirteen items stated as internal attitudes. James (1956) revised the scale, still using the Likert format, to twenty-six items (plus fillers) based on items which appeared to work most successfully in Phares' study. The format in widest use today is a 23-item (plus six fillers) forced-choice scale pub-

lished by Rotter (1966). Since 1966 several attempts have been made to develop other I-E measures; Nowicki and Duke (in press), Jessor, Graves, Hanson, and Jessor (1968), Battle and Rotter (1963), Dies (1968), and Adams - Webber (1969); all for adults. Several measures for children have also been developed (Bialer, 1969; Crandall, Katovsky, and Crandall, 1965; Nowicki and Strickland, 1973).

The research generated by the use of the I-E Scale has been extensive as is demonstrated by well over 300 entries in a bibliography of published studies compiled by Throop and MacDonald (1971). Several reviews of I-E literature have also been published since Rotter's 1966 monograph (Minton, 1967; Lefcourt, 1966 and 1972; Joe, 1971).

Political Action-Taking and Orientation

One of the broad areas of research in which Rotter's I-E Scale has been used is in the area of action-taking. Logically, if one believes that he has control over those factors which are reinforcing to him, then he is more likely to work actively to achieve these reinforcements than is an individual who believes that forces outside himself control reinforcements and that little he personally does will make any difference one way or another. Joe (1971), in a review of I-E literature, came to the following conclusions concerning attempts to control the environment:

In summary, this group of studies tends to support the hypothesis that internals not only show more initiative and effort in controlling their environment but also can control their own impulses better than externals. Although there is negative evidence, it appears safe to conclude that internals, in contrast to externals, would show a greater tendency to seek information and adopt behavior patterns which facilitate personal control over their environments (p. 627).

Rosen and Salling (1971) found that political participation in their sample of 45 males was positively correlated with internal locus of control. The ten-question scale which they used made no distinction between liberal, conservative, or radical activities.

Gore and Rotter (1963) attempted to measure willingness to participate in civil rights movements at a southern Negro college. They found that internals showed a greater amount of commitment than did externals. Gore and Rotter used a form in which the student had to sign his name as well as check the activity in which he actually was willing to participate. Strickland (1965) went one step further. She obtained I-E scores on actual civil rights participants along with types of activities in which they had participated. These were compared with a non-active group. The comparison of the active and non-active groups on internal-external control produced a significant difference with internals being more active. Comparisons between active and non-active groups were complicated, however, by the fact that the active group was found to be older and to have completed more grades of school.

Just recently, Brown and Strickland (1972) have followed the same line of reasoning except with white students and with a much less stringent criterion of activity. They gave the I-E Scale to introductory psychology classes from 1962-1965. They then examined the campus activities and grade point averages of graduates from whom they had scores from 1964-1968. They found trends suggesting that internals were more likely than externals to participate in academic activities and to hold offices in various organizations. The results did not reach the usual .05 level of significance when both males and females were included; however, when just males were considered, internals were more likely to hold office

 $(\underline{p}.05)$ and to have higher grades $(\underline{p}.01)$. Such a finding reiterates the fact that there are often sex differences in this area.

That internals tend to be more active has been demonstrated in these and many other studies. However, Gurin, Gurin, Lao and Beattie (1969) raise a question about the meaning of "internal" and "external", According to Rotter's definition, internal control represents a person's belief that rewards follow from, or are contingent upon, his own behavior. Conversely, external control represents the belief that rewards are controlled by forces outside himself and thus may occur independently of his own actions (Rotter, 1966). Gurin et al. point out that "one" of the complexities in the concept springs from the fact that the writings in this area have not distinguished between the belief that internal or external control operates generally in society and the application of this to one's own personal situation" (p. 31). This problem becomes accentuated when one looks at a person of lower income who has grown up facing situations over which he has very little control. This would be particularly true in the case of those experiencing racial and/or socio-economic discrimination. Such an individual might view much of his own life as being internally controlled, while viewing the situation of others in general as being subject to external forces. Thus, such an individual would tend to view society as being generally external.

Gurin et al. (1969) and Mirels (1970) have both contended that the present Rotter Scale can be broken down into several factors. Gurin et al. added statements from a so-called Personal Efficiency Scale and some racially oriented statements to Rotter's I-E Scale. From this combination four factors evolved: Control Ideology, Personal Control, System Modifiability, and Race Ideology. All of Rotter's I-E items fell into

the first three factors, with four items not falling clearly into any one of the three factors.

If one combines the Control Ideology and Personal Control factors into one factor and keeps the System Modifiability, he ends up with two factors very similar to what Mirels (1970) found. Through the use of a Varimax rotation, Mirels found in the male sample that Factor I accounted for 10.9% of the variance and Factor II 8.6%. In the female sample the figures were 12.1% and 6.7% respectively. The items loading high on Factor I "concern the respondents' inclination to assign greater or lesser importance to ability and hard work than to luck as influences which determine personally relevant outcomes" (p. 227). Factor II, in contrast, focuses "on the respondents' acceptance or rejection of the idea that a citizen can exert some control over political and world affairs" (p. 228). It is interesting to note that all of the items in Gurin et al's Personal Control factors are worded in the first person singular, while none of the items which fall into their System Modifiability or Mirel's Factor II are in the first person singular. This one fact tends to suggest that people may view items on the scale from different points of view. The personally worded items may be viewed from their own personal vantage point while the items worded in the third person may be answered as they believe such items relate to others in general.

Lao (1970) broke an expanded I-E Scale into high and low personal control, individual versus system blame, and discrimination modifiability. She found that on academic performance, academic confidence, and educational expectations and aspirations, there was a main effect for Personal Control; that is, the more internal the person, the higher the goals, performance, and confidence. However, in measuring actual partici-

pation in civil rights activities and preferences for social action strategies, she found a main effect for "individual--system" blame. Those who blamed the system showed higher participation and favored collective action instead of individual action. The major problem in comparing these results directly with other I-E studies is that the "System Blame" questions used contained only two questions from the 1966 Rotter version.

Thomas (1970) calls into question the idea that internals are more active in seeking to influence their environment than externals. He proposes that there is an ideological bias within the scale such that one who is generally conservative would indeed score internally but an "individual holding liberal social and political views...might well disagree with (internal) statements because he feels strongly that slum conditions and racial prejudice deny many persons equal opportunity" (p. 276).

In order to test this conservative-liberal bias, Thomas chose 60 families who were politically active and living in upper middle-class Chicago suburbs; half were chosen who held liberal political views and half held conservative political views. In all families one parent and one college-age child were interviewed. He used ten of the original 23-items to compute an I-E score. It was found that conservative parents scored more internally than liberal parents and that there were significant differences between left-wing activists, non-activists, and right-wing activists among the students, with the left-wing being most external and the right-wing being most internal. The picture, however, is not as simple as the overall results tend to indicate. When the raw I-E scores were examined, six of the liberal parents had nine or ten internal responses while four chose one or two internal responses. This is from a total of 29 parents. In contrast, 18 of the 30 conservative parents scored 10 while none re-

ceived scores of one or two.

Rotter, Seeman, and Liverant (1962) suggest that persons with a greater belief in internal control:

may include those who believe in their own potential to change the environment or world around them. They are not merely ambitious but could be creative non-conformists, or revolutionary...It is quite possible that the real innovators could be drawn from that population which is relatively high in generalized belief in internal control of reinforcement. (p. 476).

This interpretation, however, does not agree with what Lao (1970) or Thomas (1970) have found. Thomas suggests that:

in order for the I-E Scale to be a valid indicator of such personality traits, it must be able to tease out those aspects of an individual's world view which are reflections of unique traits of his personality from those aspects of his world view which reflect cultural and subcultural norms to which he has been exposed (p. 285).

Silvern and Nakamura (1971) also point out that one must take into account socio-political views when looking at activism and locus of control. In both Thomas and Silvern and Nakamura, the idea of trying to control for the individual's world views versus those views which might reflect how he views the items as they apply to others is brought out. Silvern and Nakamura demonstrate in their study that Mirel's Factor I (chance-fate) and not Factor II (political) indicates a relationship between externality and a left orientation.

In a study of the Protestant Ethic, as measured by a scale developed by Mirels and Garrett (1971), MacDonald (1972) found a significant negative correlation (-.23) between the I-E Scale and support for the Protestant Ethic. The I-E Scale was scored externally which would mean that the more internal a subject, the greater his support for the

Protestant Ethic Scale. The fact that there are relationships between the Protestant Ethic Scale, the Poverty Scale, and the F Scale (authoritarianism) along with the I-E Scale tends to lend support to the idea that the I-E Scale may be conservatively oriented. If the internals who are liberals could, in some way, be eliminated from the sample, the correlation might be even greater.

There were correlations in the high ,40's and .50's between the Protestant Ethic Scale and such statements as: "I can't understand why some people make such a fuss over the disadvantaged state of the poor. Most of them could improve their condition if they only tried." Or, "Although we don't like to face it, most people on welfare are lazy", (MacDonald, 1972, P. 118).

Political Action Hypotheses

Agreement with the quotations in the preceding paragraph by strong internals would tend to indicate that such an internal applied an internal orientation to other people's lives. If, however, he applied an external view to other people's lives, he would not agree with such statements. Such a person would have a more "liberal" orientation. By having subjects fill out the I-E Scale from their own point of view and then as they believe to be the case as it applies to other people's lives, one might be able to isolate two different types of internals from different aspects of the I-E Scale: one, who is personally internal and believes that an internal point of view largely applies to other people's lives as well: and another who, as far as he himself is concerned, is internal but feels an external point of view applies better to other people's lives.

Since there have been findings showing that I-E orientation has some effect on political action-taking and political orientation, and since a political factor in Rotter's 1966 I-E Scale has been shown by Mirels (1970), an attempt could be made to isolate this political factor. By giving Rotter's I-E Scale (1966) to a group of subjects who are required to answer it from two points of view: 1) as they believe to be the case in their lives (Self I-E score) and 2) as they believe the case to be as it applies to most other people's lives (Other I-E score), three hypotheses can be developed in the political realm:

- 1. If a factor analysis is carried out with the Self and Other Scales, the two factors found by Mirels (1970) and the three by Gurin et al. (1969) should merge into one general factor on each scale. This would follow if the subjects, especially those scoring internally on one scale and externally on the other scale, are under normal instructions to view items from two points of view, that is, their own personal point of view versus the point of view of "others".
- 2. Those scoring high internally on the Self Scale, without regard to their score on the Others Scale, should be more active in political and campus activities, as measured by Rosen and Sallings Scale, than those scoring externally on the Self Scale. This would follow from Gore and Rotter (1963), Rosen and Salling (1971), Strickland (1965) and Brown and Strickland (1972).
- 3. Those scoring internally on the Self Scale can be divided into subgroups on the basis of their scores on the Others Scale and would accordingly be expected to support different causes politically. The Internal Others would support more conservative "status-quo" causes, tend to be

Republican, and to express more conservative attitudes on MacDonald's (1970) Poverty Scale. Those scoring externally on the Others Scale would tend to support more liberal points of view in society, to be Democrats, and to score lower on MacDonald's Poverty Scale.

Lao (1970), in her breakdown of I-E items, found the individual versus system blame dimension to be the single factor affecting participation in civil rights and preferences for collective versus individual action and protest versus negotiation types of social action. The system blamers or externals preferred collective and protest action. Silvern and Nakamura (1971) found that those with a left political orientation, which is generally defined as liberal, were more external. They also found that support for peace candidates was correlated with left political orientation. Since the Democrats nominated a "peace" candidate for President, one might expect the externals on the Others Scale to support the Democrats more than the internals on the Others Scale.

As was stated in the introductory remarks, in examining the design of this proposed study, it was thought that perhaps the concepts of both need for achievement and maladjustment could be examined in this two by two breakdown. While not the major focus of this study, these two concepts will be very briefly reviewed and some additional subsidiary hypotheses developed in the following two sections.

Achievement

Most people, when they first encounter the I-E concept, immediately relate an internal orientation to the motivation to achieve. There are several limitations, however, to actual achievement behavior and internal expectancies. First, some people with strong motivation for achievement

may have low expectations for success, thus leading them to verbalize external beliefs for themselves in a defensive fashion. Second, if I-E is a generalized expectancy, it may, in highly structured situations, be superseded by more specific expectancies. Thus, externals would probably behave much as would internals in specific situations.

Several studies have been carried out with children, relating internality to higher grades, stronger scores on achievement tests, and greater evidence of achievement behavior (Nowicki and Duke, 1972; Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld, and York, 1966; Crandall, Katkovsky, and Crandall, 1965). The large scale study by Coleman, et al. (1966) showed in impressive fashion that a belief in personal control of academic rewards was a strong predictor of academic achievement. These results have shown greater consistency with males than with females, however.

There has been little work with adults relating I-E and achievement; although, based on the children's studies, one might expect that internality in males would be positively related to achievement. For females there might be reversals, since in many situations, especially considering prevalent social norms, high achievement in females may be regarded as a negative characteristic. Brown and Strickland (1972) indicate that, for male college students, a belief in internal control is related to holding office in various college organizations and to academic achievement. Hersch and Scheibe (1967) found that internally oriented subjects were higher than externally oriented subjects on the Achievement versus Conformance Scale on the California Psychological Inventory (CPI). Gurin, et al. (1969) and Lao (1970) noted that students who had a high sense of personal control showed higher achievement test scores and grades, higher academic confidence, and higher educational expectations and aspirations than did students who held

a belief in external control. Joe (1971, p. 628) states: "The evidence indicates that internals tend to manifest greater interest and effort in achievement-related activities than do externals. However, the predictions are not consistent for both boys and girls."

From this brief literature review one hypothesis can be derived within the design of the present study. Those scoring internally on both the Self and Others Scales should show a higher need for achievement as measured by Edwards Personal Preference Scale (EPPS) (1956, See Appendix F) than those scoring externally on both the Self and Others Scales. This follows from such studies as Brown and Strickland (1972) and Lao (1970) who found that personal goals, especially in the academic area, were positively related to internality. Nowicki and Duke (1972) also hypothesized that since there are positive relationships between need for achievement and internality in male children, this might well carry over into the adult population. A sub-hypothesis following from Lao (1970) would suggest a similar difference in these two groups in their educational goals and grade point averages.

Maladjustment

From the beginning of I-E studies, its potential relationship to maladjustment and anxiety has intrigued investigators. If, indeed, individuals show discrepancies between their personal locus of control and how they believe others view the world, at least some of those persons should show up as more maladjusted than those who see no discrepancy between themselves and others. Thus, in the present study maladjustment would seem to be a logical measure to examine.

Phares (in press) provides a review of the adjustment-maladjustment

concept in relation to I-E work. He points up several important features of I-E: 1) In a number of correlational studies, there is a significant relationship between anxiety and stated external beliefs. Not all anxiety should be construed as having negative consequences, however. Several studies have reported that externals manifest a significant degree of what might be called debilitating anxiety while, at the same time. there has been little or no relationship to facilitating anxiety reported. 2) In much work of a similar nature internals have been shown to be better adjusted, less angry, hostile or depressed, and less likely to turn to drinking behavior. Externals appear to be lacking in inter-personal trust. are more suspicious, and show lower self esteem. 3) Some have suggested that the relationship between I-E and psychopathology might be curvilinear. That is, either extremely internal or external individuals should be associated with pathology. However, this has not been borne out thus far, possibly due to the insensitivity of the I-E Scale at the upper and lower ends of the distribution and to the nature of the populations studied.

In a review which covered the years 1964-1966, Hersch and Scheibe (1967) found significant correlations between maladjustment and externality. Rotter's Incomplete Sentence Blank (ISB), the Minnesota Multiphasic Personality Inventory (MMPI), the California Psychological Inventory (CPI), and the Adjective Check List (ACL) were all used as measures. The subjects were college students who were doing volunteer summer work on wards of Connecticut's four state mental institutions. Nowicki and Duke (1972) cite several studies in which hospitalized schizophrenics were significantly more external than non-schizophrenics. Freides (1972) also found that externality was related to high scores on Eysenck's Neuroticism Scale and the Taylor Manifest Anxiety Scale.

Feather (1967) noted a significant tendency for externals of both sexes to report more debilitating anxiety and neurotic symptoms. Tolor and Reznikoff (1967) found internal scores significantly correlated with scores on a scale measuring insight. Williams and Vantress (1969) discovered that externals scored significantly higher than internals on five of eight subscales of the Buss-Durkee Hostility Inventory. A statement by Joe (1971, p.623) summarizes very nicely the wide diversity of findings:

The findings depict externals, in contrast to internals, as being relatively anxious, aggressive, dogmatic, and less trustful and more suspicious of others, lacking in self confidence and insights, having low needs for social approval, and having a greater tendency to use sensitizing modes of defenses.

In the studies cited externality has been demonstrated to be related to maladjustment or to potentially maladaptive behavior. In deriving a testable hypothesis, however, it was thought that since all the preceding work was done from a single I-E score, one might expect a slightly different picture with a Self I-E score and an Other I-E score. An individual who is himself an external but views the world as being internally oriented is saying that as far as he personally is concerned, his reinforcements are controlled by luck, chance, or some other person; however, in other people's lives, they obtain their reinforcements because of their own efforts. Such incongruent expectancies might well lead to feelings of personal distress or maladjustment. In contrast the individual who scores internally on both scales should be better adjusted. It is hypothesized, therefore, that those scoring externally on the Self Scale but internally on the Others Scale will show higher maladjustment scores as measured by Rotter's Incomplete Sentence Blank (ISB) (1950,

Appendix B) than those scoring internally on both scales.

Summary of Hypotheses

- It is hypothesized that:
- I. When a factor analysis is carried out with the Self and Other Scales, one general factor will emerge on each scale rather than two as in previous work.
- II. Those scoring subjects internally on the Self Scale will be more active in political and campus activities than those scoring externally on the Self Scale.
- III. Those scoring internally on the Self Scale but differing on the Others Scale are expected to support different causes politically in the following fashion: The Internal Self/Internal Other group will be conservative supporters; the Internal Self/External Other group will be more liberal supporters.
- IV. Those scoring internally on both the Self and Others Scales will have a higher need for achievement than those scoring externally on both the Self and Others Scales.
- V. Those scoring externally on the Self Scale but Internally on the Others Scale will show higher maladjustment scores than those scoring internally on both scales.

Method

Subjects and Instruments

179 males enrolled in a fall semester class of introductory psychology were given 1) the Social Reaction Inventory (Rotter's 1966 I-E Scale) with modified instructions (see Appendix A), and 2) a shortened form of

Rotter's Incomplete Sentences Blank (ISB) (Rotter and Rafferty, 1950.

See Appendix B). The subjects were asked to reply to the I-E Scale

first as they believed to be the case in their own lives and second as

it applied to other's lives. Subjects who participated in the second

phase of the experiment were given experimental credit for participating.

The instruments used in the second half of the experiment were: a biographical data sheet (Appendix C), a modified political activity questionnaire (Rosen and Salling, 1971, Appendix D), MacDonald's (1971) Poverty Scale questions and statements concerning current political issues (Appendix E), and the need Achievement items drawn from Edwards Personal Preference Schedule (EPPS) (1956, Appendix F).

Procedure

The I-E scale and the ISB were given to two General Psychology classes during the first week of the fall semester. From this pool of subjects, male volunteers were solicited to participate in the remainder of the experiment. The large pool of male subjects was divided into groups according to their scores on the I-E Scales: internal-external on the Self Scale and internal-external on the Others Scale; thus creating four cells. The divisions were made by doing median splits on the Self I-E scores and the Other I-E scores. As the volunteers appeared, each was placed in one of the four cells, depending upon his scores on the two scales. A cell was considered full when it had twenty subjects in it. The External Self/Internal Other cell was slow in filling. In this case all those males whose scores fell into this cell and had not participated were contacted and asked to participate. In this manner the necessary twenty were obtained.

When the subjects arrived for the second half of the experiment, they were given the biographical data sheet, political activity questionnaire, MacDonald's Poverty Scale and political issues statements, and the sheet with the Need Achievement items from the EPPS. The following instructions were read:

"This study is one in which we are attempting to measure certain political activities and attitudes in this Presidential election year. We are particularly interested in the views of college young people like yourselves. Please read the instructions prior to filling out each sheet and proceed as rapidly as possible. The answer sheet to the last set of items is the very last sheet of the booklet. You may remove this sheet to make marking your choices easier. Just insert it in the booklet when you have finished. At the conclusion of the experiment, those wanting to know more about the different measures and the purpose of the experiment may check with me. Are there any questions? You may begin."

It should be noted here that the subjects were run throughout September and the first two weeks of October prior to the Presidential election in November, 1972.

Results

In the case of all of the hypotheses except the second, there was some support observed for the hypothesis, but seldom the strength as great as expected. Let us examine each of these hypotheses in turn and the results obtained in its support.

Effects of Self and Other Scales on the factor structure of I-E (Hypothesis I)

Hypothesis I stated that one general factor would emerge on each of the Self and Other Scales rather than the two factors Mirels (1970) found or the three Gurin et al. (1969) found. The scores of all 179 males who took the I-E Scale with the Self and Other instructional set were sub-

mitted to a principal components factor analysis with Verimax rotation.

The hypothesis was not specifically supported, but some interesting results did occur. On the Self Scale, using Mirel's cutoff point of \pm .30, the same type of items emerged as defining Factors I and II. In Factor I, all but two of Mirel's items (16 and 18) show up as significant at his criterion of \pm .30 (See table 1). Two other items (13 and 26) loaded highly enough to be considered as defining items. Both items fit nicely with the other defining items concerning the "respondent's inclination to assign greater or lesser importance to ability and hard work than to luck as influences which determine personally relevant outcomes" (Mirels, 1970, p. 227).

Factor II, in contrast, had all four of Mirels' Factor II items plus Item 4. Item 4 has to do with people getting the respect they deserve in the world. The rest of the items deal with "acceptance or rejection of the idea that a citizen can exert some control over political and world affairs" (Mirels, 1970, p. 228). The Self Scale can thus be viewed as essentially a replication of Mirels' experiment with very similar results.

On the Other Scale, Factor I is defined by the political items plus Items 18 and 23 which deal with luck. Factor II on the Other Scale has no clear grouping definition items.

One can conclude that through the use of a Self versus an Other perspective in giving the scale, Mirels' factors do not merge into single factors on each scale, but rather, the political I-E Scale reflected in Factor II on the Self Scale emerges as Factor I when the items are viewed from "others" points of view. The political factor is still there as shown by both Mirels (1970) and Gurin et. al. (1969).

TABLE 1 ROTATED FACTOR ANALYSIS OF 23 I-E ITEMS

(MALES)

SELF

OTHER

Item No.	Factor I	Factor II	Factor I	Factor II
2 3 4 5 A	09 02 03 46* 21	1 07 32* 05 .13	01 .25 .03 13 .07	10 29 .35* .65* 10
7	.09	01	.11	.15
9	25	.02	.01	21
10 A	53*	.06	.05	.67*
11 A	33*	15	.06	.20
12 B	12	67*	.68*	01
13 15 A 16 A 17 B 18 A	76* 72* 06 14 22	13 04 09 76* 30*	.16 .22 .10 .63* .56*	.28 .28 .13 13
20	.10	11	.00	06
21	06	05	.21	58*
22 B	05	63*	.43*	.02
23 A	43*	03	.06	.18
25 A	61*	26	.60*	01
26	31*	.25	.10	09
28 A	40*	.05	.03	.16
29 B	06	49*	.52*	.06

Note: A = Mirels' Factor I Items

B = Mirels' Factor II Items

^{* =} Item used to define the Factor Item $\leq \pm$.30

The same analysis was done with the six filler items included. Appendix G presents the results of this analysis. There was a shift in the definitive items for Factor I on the Self Scale and Factor II on the Other Scale. It would appear that the filler items do have some effect besides just being inert fillers. The political I-E items, however, showed up just as strong with the fillers in as when they were removed. Additional research should be conducted examining the influence and role of the filler items.

methodological comments are in order. In order to adequately test Hypotheses II-V, each dependent measure was submitted to four separate analyses. For clearer presentation these analyses are numbered 1-4 on the following tables. Analysis 1 is composed of all 80 male subjects using an I-E score based on all 23 items. The Subjects were placed into cells according to median splits based on the total male sample population (N=179). In Analysis 2, those 20 subjects are removed who fell nearest the middle of the total I-E score distribution. The purpose of removing these subjects was to amplify any differences which might actually exist and could be accounted for by I-E. Thus, Analysis 2 is based on 60 scores instead of 80.

Since the Rotated Factor Analysis showed the strong influences of the political items (12, 17, 22, and 29), I-E scores for the total male subject population were derived using just these four items and median splits were again made. The 80 subjects were then put into the four cells generated by their Political I-E scores. An analysis was carried out on each dependent measure. Analysis 3 presents the results of all 80 subjects, using a Political I-E score as the independent measure. Analysis 4 excludes, again,

those 20 Subjects nearest the center of the Political I-E distribution.

Effects of Self and Other I-E on Period and Campus Activities (Hypothesis II).

Hypothesis II stated that subjects with internal scores on the Self Scale would score higher on political and campus activities, as measured by Rosen and Sallings Scale, than would external scorers on the Self Scale. This hypothesis was not supported. There was no significant main effect nor interaction between internals and externals on the Self and Other Scales.

Effects of Self and Other I-E on Political Orientation (Hypothesis III).

The third hypothesis stated that the Internal Self/Internal Other group would support more conservative causes while the Internal Self/External Other group would support more liberal causes. The results from the dependent measure of political orientation (Liberal/Conservative Scale) are presented in Table 2. In looking at any differences here, it is well to remember that the higher the score, the more conservative the orientation. In this case again, the predicted results did not occur. Rather, the most liberal subjects were those who scored externally on both scales. The most conservative were the Internal Self/External Other subjects. This difference found in Analysis 1 was lost in the other three analyses.

Table 3 presents an analysis of the first seven items of the Liberal/Conservative Scale which came from MacDonald's (1972) Poverty Scale.

These items proved to be the most useful predictor of Liberal versus Conservative political orientations. The same interaction which showed up in Table 2 appears again in Table 3. When just the Political I-E scores were used as an independent measure, the Other Scale reached significance

TABLE 2

TOTAL LIBERAL/CONSERVATIVE SCALE						
	Source	SS	DF	MS	F	<u>P</u>
1	Total Self Other Self X Other	40799.49 1029.61 316.01 2497.61 36956.25	79 1 1 1 76	516.45 1029.61 316.01 2497.61 486.27	2.12 .65 5.14	<.05
2	Total Self Other Self X Other	32848.00 653.40 1144.07 866.40 30184.13	59 1 1 1 56	556.75 653.40 1144.07 866.40 539.00	1.21 2.12 1.61	
3	Total Self Other Self X Other	40799.49 171.89 1804.52 482.53 38420.15	79 1 1 1 76	516.45 171.89 1804.52 482.53 505.53	.34 3.57 .95	
4	Total Self Other Self X Other	32860.98 253.00 1566.20 4.88 31113.09	59 1 1 1 56	556.97 253.00 1566.20 4.87 555.59	.45 2.81 .01	
		Si	gnifican	t Means		
	1 Self X Oth	er Oth	er S	elf I	E	2
		I		70.1	100	0.00
		E		85.3	30 66 .	95

TABLE 3
POVERTY SCALE ITEMS

		Source	SS	DF	MS	F	<u>p</u>
1	Se Ot	tal lf her lf X Other	11149.99 108.11 201.61 1102.61 9737.65	79 1 1 1 76	141.14 108.11 201.61 1102.61 128.13	0.84 1.57 8.61	<.01
2	Se Ot	tal lf her lf X Other	8434.93 48.60 395.27 448.27 7542.80	59 1 1 1 56	189.71 48.60 395.27 448.27 134.69	1.83 1.03 0.36	
3	Se	tal lf her lf X Other	11149.99 1.37 816.97 96.38 10202.47	79 1 1 1 76	141.14 1.37 816.97 96.38 134.24	0.01 6.09 0.72	<.05
4	Se Ot	tal lf her lf X Other	8921.73 0.00 971.80 5.26 7940.40	59 1 1 1 56	151,22 0.00 971,80 5.26 141,79	0.00 6.85 0.04	6 05
			Signific	cant Mean	s		
	1	Self X Other	Other I E	Self	I 27.75 38.35	E 32.85 28.60	
	3	Other			28.65	35,12	
	4	Other			29.92	35.99	

 $(\underline{p}.05)$ on both analyses 3 and 4. In these cases the internals were the more liberal.

According to the hypothesis there should have been a main effect for the Self Scale: however, instead there was found an interaction between the Self and Other Scales (when all 80 subjects were used in the analysis) in both the total Liberal/Conservative measure and when using just Mac-Donald's Poverty Scale. A main effect for the Other Scale appeared for Political I-E when MacDonald's Poverty Scale was used as a dependent measure.

Effects of Self and Other I-E on Need for Achievement (Hypothesis IV).

An interaction between the Self and Other Scales was hypothesized when need for achievement was used as a dependent measure. More specifically, those scoring internally on both the Self and Other Scales were expected to exhibit a higher need for achievement as measured by the EPPS than those scoring externally on both the Self and Other Scales. The specifics of the hypothesis were not confirmed, but otherwise interesting and significant results did occur. The four different analyses of these scores are presented in Table 4. Of the four analyses, three were significant (p .05) for the Self Scale. The only analysis which did not reach the .05 level was the one which examined all the subjects using their total I-E scores as the independent measures. When those subjects whose scores fell near the middle of the total I-E distribution were removed, it was found that internals scored higher than externals. That is, internals have a higher need for achievement as measured by EPPS than externals when only the Self Scale is used as a predictor and the middle of the total I-E distribution is removed.

TABLE 4

EDWARDS PERSONAL PREFERENCE SCALE

(NEED ACHIEVEMENT ITEMS)

	Source	SS	DF	MS	F	<u>P</u>
.1	Total Self Other Self X Other	1706.49 40.61 5.51 10.51 1649.85	79 1 1 1 76	21.60 40.61 5.51 10.51 21.71	1.87 0.25 0.48	
2	Total Self Other Self X Other	1324.98 132.02 .15 16.02 1176.80	59 1 1 1 56	22.44 132.02 .15 16.02 21.01	6.28 .01 .76	<.05
3	Total Self Other Self X Other	1706.49 99.58 .43 .43 1602.10	79 1 1 1 76	21.60 99.58 .43 .43 21.08	4.72 .02 .02	<.05
4	Total Self Other Self X Other	1196.60 83.60 3.81 2.10 1104.23	59 1 1 1 56	20.28 83.60 3.81 2.10 19.72	4.24 .20 .10	<.05

Significant Means

		I	E
2	Self	14.67	11.70
3	Self	14.50	12.24
4	Self	14.50	12.13

The difference between the means on the EPPS is not as great on the Self Scale, using Political I-E scores, but they still reach significance (p.05). The Other Scale and the interaction between Self and Other do not even approach significance. There was a prediction of differences between those who scored internally on Self and Other and those who scored externally on Self and Other, using high school grade point averages and educational goals as dependent measures (See Appendix C). There were no differences found on either of these measures. There were only 10 subjects in the total of 80 subjects who even wanted to go beyond a bachelor's degree. Therefore, this may not have been a particularly sensitive measure.

Effects of Self and Other I-E on Maladjustment (Hypothesis V).

The analysis of Rotter's Incomplete Sentence Blank (ISB), the measure used for maladjustment, is presented in Table 5. Parenthetically, one individual scored 109 out of a possible 120 points on the ISB; the score nearest to his was 83 (with the mean being approximately 65). Since such a deviant score greatly increases the variance, the analysis was carried out after discarding this score.

The hypothesis concerning these maladjustment scores was that those subjects scoring externally on the Self Scale and internally on the Other Scale would show higher maladjustment scores than those scoring internally on both Scales. The significant result occurs in Analysis 2 (total I-E scores with the middle of the distribution removed). In the interaction between the Self and Other Scales, the largest difference in the means is between those who scored internally on both scales and those who were in the Internal Self/External Other group, with this latter group having the highest maladjustment scores. The other analyses are all in the same di-

TABLE 5

ROTTER'S INCOMPLETE SENTENCE BLANK

	Source	SS	DF	MS	F	<u>P</u>
1	Total Self Other Self X Other	7498.61 24.35 32.71 268.71 7172.23	78 1 1 1 75	96.14 24.35 32.71 268.71 95.63	.26 .34 2.81	
2	Total Self Other Self X Other	5141.93 81.06 .00 449.27 4604.68	58 1 1 1 55	88.65 81.06 .00 449.27 83.72	.97 .00 5.37	 د.05
3	Total Self Other Self X Other	7498.61 287.66 4.95 269.97 6898.23	78 1 1 1 75	96.14 287.66 4.95 269.97 91.98	3.13 .05 2.94	
4	Total Self Other Self X Other	5397.93 388.79 22.71 66.65 4922.98	59 1 1 1 56	91.49 388.79 22.71 66.65 87.91	4.42 .26 .76	405

Significant Means

2	Self X Other	Other	Self	I	E
		I		61.00	68.87
		E		66,53	63.36
4	Self			62.56	67.69

rection but do not reach significance. In Analysis 4, instead of an interaction, the Self I-E Scale proved to be the best predictor with internals being significantly less maladjusted than externals (p.05). In all the Political I-E analyses run, the direction of the means was the same but did not reach the .05 level.

Another interesting facet is that those who scored in the external direction on both the Self and Other Scales had low maladjustment scores. It appears that an individual who views others as reacting to the world in the same manner as he does, that is, both Self and Other are either externally oriented or internally oriented, is better adjusted than one who sees a discrepancy between his views of the nature of reinforcement and others' views.

Discussion

By doing a Rotated Factor Analysis of the items on both the Self and Other I-E Scales, it was thought that the political factor would drop out in the Self analysis and the chance-fate factor would drop out in the Other analysis. Such was not the case. When all 29 items were analyzed, as well as when the six fillers were excluded, the political items stood out as items which defined factors. However, there were reversals as to which factors they defined. When the subjects answered the I-E Scale items from a personal point of view, the political items defined Factor II. This is what Mirels (1970) found. When they answered the I-E Scale as they believed others would, the political items showed up in Factor I. This reversal of Factors II and I on the Self and Others Scales lends some support to the first hypothesis.

It should be noted here that the political items are all worded

in the third person, which might be the reason for their clustering together. It was thought that by having subjects actually answering items as they believed others would answer them, the effect of the third person would be overridden, if indeed this was what was causing this factor to emerge. Such did not appear to be the case. However, this general rationale might be tested by wording these items in the first person rather than the third to see if it showed up again. If so, then these items might indeed be used as a political I-E subscale with a greater degree of confidence. Since these political items did show up consistently as Factor II on the Self Scale and Factor I on the Other Scale, and since political attitudes were being used as a dependent measure, a Political I-E score derived from these four items was thought to be more predictive than a total I-E score.

Factor I on Self and Factor II on Other proved to be interesting. It was discovered that when the filler items were included, different items defined the factors. This would imply that the filler items (especially Item 1) are not neutral items. They too define I-E to some extent; in fact, more than some of the other items. Since this is the case, much of the I-E research might need re-examining, utilizing these items to help define an I-E score.

Reasons for the lack of support for the second hypothesis are probably many and varied. One of these reasons may be that Rosen and Salling's Scale was modified by putting each question into the future tense. The reasoning behind this was that in using a Kansas student population, which has a large percentage of rural students, the subjects might not have had the opportunity to participate in many of the activities which comprised the scale, although they might in the future. This reasoning

had some research support from Gore and Rotter (1963) wherein they asked for verbal commitments from students to participate (in the future) in civil rights activities and then related this to I-E scores. In the present research, however, I-E was not a good predictor of generalized political activity. The Political Activity scores were all high (around 8-9 out of 10 possible) and with nearly equal means among cells.

The differences in populations between Kansas State University and University of California at Santa Cruz, where Rosen and Salling used their scale, might also be related to why they found differences while none were found here.

The political orientation data did not even fall in the correct direction. This finding certainly conflicts with the findings of Lao (1970), Silvern and Nakamura (1971), and Thomas (1970). In each case the more liberal group tended to be more external. MacDonald (1972) also found a weak relationship between internality and the Protestant Ethic which was also positively related to the Poverty Scale. Thus, one might expect a positive relationship between internality and support for Poverty Scale items. Such was not the case; in fact, it was the reverse on the Other Scale using a Political I-E Score as the independent measure. The externals scored higher on the poverty items, that is, more conservatively.

On both the total Liberal/Conservative Scale and the Poverty Scale items, there was an interaction between the Self and Other Scales. This interaction makes some sense if one looks at those who are consistent in their Self and Other I-E scores versus those who are inconsistent in their Self and Other I-E scores. The cells which are consistent on both Self and Other scores, i.e., Self and Other score are both external or both internal, are indeed more liberal than those who are inconsistent. The inconsistent

individuals all have some measure of internality. Thus, in this sense the data fit the above research in that some measure of internality is associated with a more conservative score. However, a better explanation of the relationship between I-E and political orientation might be in terms of a consistency factor. Those who view others as having the same general orientation as themselves are freer to take a stand concerning discontent or a desire to change the status quo, that is, being liberal.

Examining the items which made up the Liberal/Conservative Scale, especially the Poverty Scale items, one finds that to support these, he must be against a change in the status quo. Thus, a lack of support for the items must at least infer a desire to change.

These two groups of consistent scorers are well enough adjusted to branch out from themselves and desire to see a change take place. Those who are inconsistent in their expectancies regarding reinforcement control between themselves and others are less likely to support changes. Thus, they are classified as conservatives.

The maladjustment data lend some support to the above conclusions. The I-E score as predictor of maladjustment is not strong enough to handle every type of prediction. However, when one removes the middle scores in the distribution, some predictive statements can be made. Consistency in a person's view of himself and of others appears to be important in being adjusted. The Self-Other I-E breakdown was most useful as a measure of this consistency. Those who viewed others as seeing the world from their point of view, that is, scored either internally or externally on both the Self and Other Scales, had lower malad-

justment scores than those who saw a discrepancy between themselves and others' viewpoints. It was hypothesized that those scoring externally on the Self Scale and internally on the Other Scale would be more maladjusted than those scoring internally on both. The greatest difference however, was between those scoring internally on both scales and the Internal Self/External Other scorers. The means, using all 80 subjects instead of just 60, were in the same direction but did not reach a .05 level.

Instead of an interaction between the Self and Other Scales on need for achievement, the Self Scale alone proved to be the best predictor. The findings support what other researchers have found. That is, internals have a greater need for achievement than externals. The results are clouded a bit in this study by the fact that significance was not attained when using the total I-E score with all 80 subjects. However, when those nearest the middle of the I-E distribution were removed, significant differences showed up in spite of a reduction of 20 scores in the analysis.

The Political I-E score also proved to be a good predictor in this case. Those who view themselves as having some control in world and political affairs also receive higher need for achievement scores. These politically internal individuals would, of necessity, need a greater drive from within if they felt they could exert some effect in changing national policies.

It is not surprising that the Other Scale did not even begin to reach significance. From a grammatical viewpoint alone, one should not expect too much, since all the need for achievement items are worded in the first person and the Other I-E score was supposedly derived from a third person point of view.

The lack of significant results between Self and Other I-E scores and high school grade point averages and desires to continue one's education beyond a bachelor's degree is not too surprising since the sample population used consisted almost exclusively of college freshmen and sophomores. In a more general or heterogeneous population, significant results might be found, but using college freshmen and sophomores did not lend itself adequately to a test of such a hypothesis.

The present research supports some previous research and is inconsistant with others. Mirels' Factors were supported, yet a need to reconsider the part of the filler items was brought to light. With such strong support of the Political factor, a Political I-E score was used in added analyses. These analyses for the most part proved useful. The political hypotheses were not strongly supported; however, a different dimension was added to the I-E and Liberal versus Conservative question, this dimension being one of consistency between personal views of the world and how one views others as seeing the world. This same consistency factor showed up in the maladjustment work. The need for achievement portion of this research basically supported previous research done with children. The internals on the Self Scale manifested higher need for achievement than the externals.

In summary, the positive results found in this study might be characterized as follows. By having subjects take the I-E Scale from a Self versus Other perspective, the political factor still showed up strongly. However, in the Other Scale it appeared as Factor I instead of Factor II as it had on the Self Scale. Consistency between Self I-E scores and Other I-E scores appeared as the deciding factor in determining political orientation and maladjustment. Those who scored both Self and Other

Scales as Internal or External tended to be more liberal in their political orientation and had lower maladjustment scores. Those scoring internally on the Self Scale, both when total I-E scores were used and when Political I-E scores were used, showed a higher need for achievement as measured by the EPPS.

Summary and Conclusions

Subjects were given Rotter's (1966) Social Reaction Inventory (I-E Scale) and asked to answer it from their own personal point of view and as they believed it applied to other people's lives. They were divided into four groups on the basis of whether they scored internally or externally on the Self Scale and the Other Scale.

80 subjects, 20 from each group, participated in an additional part of the experiment. Measures of political orientation and activity, need for achievement, and maladjustment were acquired from these subjects.

It was predicted that: 1) When a factor analysis was carried out with the Self and Other Scales, one general factor would emerge on each scale rather than two as in previous work; 2) Those scoring internally on the Self Scale would be more active in political and campus activities than those scoring externally on the Self Scale. 3) Those scoring internally on the Self Scale but differing on the Others Scale would be expected to support different causes politically. The Internal Self/Internal Other group would be conservative supporters; the Internal Self/External Other group would be more liberal supporters. 4) Those scoring internally on both the Self and Others Scales would have a higher need for achievement than those scoring externally on both the Self and Others Scales. 5) Those scoring externally on the Self Scale but internally on

the Others Scale would show higher maladjustment scores than those scoring internally on both scales.

In the case of all the hypotheses except the second, there was some support observed for the hypotheses, but seldom was the strength as great as that expected. Two factors emerged on the Self I-E Scale: chance-fate composed Factor I and political items Factor II; however, on the Other Scale, the Political Items showed up as the first factor. Because of the strength of the Political I-E factor, these items were used to generate a Political I-E score which became the source of an additional analysis for the other four hypotheses.

There was no support observed for the second hypothesis.

The third hypothesis was only partially supported. Instead of the Internal Self/Internal Other subjects being the most conservative supporters, the External Self/Internal Other group was the most conservative. The most liberal were those who scored either internally or externally on both the Self and Other Scales. This consistency in generalized expectancies of reinforcement between Self and Others showed up again in the maladjustment measures as the groups being the least maladjusted while the Internal Self/External Others being the most maladjusted. The differences were not large, however. The concept of consistency between the way a subject views himself and the way he views others as viewing the world was discussed.

The Self Scale proved to be the best predictor of need for achievement. The internals had a significantly higher need for achievement than the externals. This supports the present literature.

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APPENDICES

APPENDIX A

SOCIAL REACTION INVENTORY

This is a questionnaire to find out the way certain important events in our society affect different people. Each item consists of a pair of alternatives lettered a or b. Under the column labled "I" on the answer sheet select the one statement of each pair (and only one) which you believe to be the case as it applies to your life. Be sure and select the one you actually believe to be more true than the one you think you should choose or the one you would like to be true. This is a measure of personal belief: obviously there are no right or wrong answers. After you make your selection (a or b) then rate the item, from 0 to 10, for the strength with which you hold the belief.

Under the column labled "others" on the answer sheet select the one statement of each pair (and only one) which you believe to be the case as it applies to other people's lives. Be sure and select the one you actually believe to be true as it applies to others rather than the one you think you should choose or the one you would like to be true. After you make this selection (a or b) then rate the item, from 0 to 10, for the strength with which you believe others hold this belief. Here is an example:

l.a. Spankings are necessary to teach social behavior to children.b. Children learn social behavior best by being praised.

Answer Sheet

Your answers to the items on this inventory are to be recorded on a separate answer sheet which is loosely inserted in the booklet. Remove this answer sheet now. Print your name and any other information requested by the examiner on the answer sheet, then finish reading these directions and go on immediately to answer the questions.

Please answer these items <u>carefully</u> but do not spend too much time on any one item. Be sure to find an answer for every choice. Find the number of the item on the answer sheet and cross out the alternative (a or b) which you choose as most true for yourself and then for others. Rate your choices for the strength with which you hold it and the strength which you believe others hold it.

In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you are concerned. Also try to respond to each item independently when making your choice; do not be influenced by your previous choices.

REMEMBER

Select the alternative which you personally believe to be more true for the "I" column, and the alternative which you believe applies to other people's lives for the "other" column.

- 1. a. Children get into trouble because their parents punish them too much.
 - b. The trouble with most children nowadays is that their parents are too easy with them.
- 2. a. Many of the unhappy things in people's lives are partly due to bad luck.
 - b. People's misfortunes result from the mistakes they make.
- 3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
 - b. There will always be wars, no matter how hard people try to prevent them.
- 4. a. In the long run people get the respect they deserve in this world.
 - b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
- 5. a. The idea that teachers are unfair to students is nonsense.
 - b. Most students don't realize the extent to which their grades are influenced by accidental happenings.
- 6. a. Without the right breaks one cannot be an effective leader.
 - b. Capable people who fail to become leaders have not taken advantage of their opportunities.
- 7. a. No matter how hard you try some people just don't like you.
 - b. People who can't get others to like them don't understand how to get along with others.
- 8. a. Heredity plays the major role in determining one's personality.
 - b. It is one's experiences in life which determine what he is like.
- 9. a. I have often found that what is going to happen will happen.
 - b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

- a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
 - b. Many times exam questions tend to be so unrelated to course work, that studying is useless.
- 11. a. Becoming a success is a matter of hard work, luck has little to do with it.
 - b. Getting a good job depends mainly on being in the right place at the right time.
- 12. a. The average citizen can have an influence in government decisions.
 - b. This world is run by the few people in power, and there is not much the little guy can do about it.
- 13. a. When I make plans, I am almost certain that I can make them work.
 - b. 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. a. There are certain people who are just no good.
 - b. There is some good in everybody.
- 15. a. In my case getting what I want has little or nothing to do with luck.
 - b. Many times we might just as well decide what to do by flipping a coin.
- 16. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
 - b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.
- 17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
 - b. By taking an active part in political and social affairs the people can control world events.
- 18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
 - b. There really is no such thing as "luck."

- 19. a. One should always be willing to admit his mistakes.
 - b. It is usually best to cover up one's mistakes.
- 20, a. It is hard to know whether or not a person really likes you.
 - b. How many friends you have depends upon how nice a person you are.
- 21. a. In the long run the bad things that happen to us are balanced by the good ones.
 - b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
- 22. a. With enough effort we can wipe out political corruption.
 - b. It is difficult for people to have much control over the things politicians do in office.
- 23. a. Sometimes I can't understand how teachers arrive at the grades they give.
 - b. There is a direct connection between how hard I study and the grades I get.
- 24. a. A good leader expects people to decide for themselves what they should do.
 - b. A good leader makes it clear to everybody what their jobs are.
- 25. a. Many times I feel that I have little influence over the things that happen to me.
 - b. It is impossible for me to believe that chance or luck plays an important role in my life.
- 26. a. People are lonely because they don't try to be friendly.
 - b. There's not much use in trying too hard to please people, if they like you, they like you.
- 27. a. There is too much emphasis on athletics in high school.
 - b. Team sports are an excellent way to build character.
- 28. a. What happens to me is my own doing.
 - b. Sometimes I feel that I don't have enough control over the direction my life is taking.

- 29. a. Most of the time I can't understand why politicians behave the way they do.
 - b. In the long run the people are responsible for bad government on a national as well as on a local level.

Name	
Class	
Instructor	

ANSWER SHEET

I.	others	I.	others
1.a	1.a b	16.a b	16.a
2.a.	2.a	17.a.	17.a.
b	b	b	b
3.a	3.a.	18.a	18.a.
b	b	b	b
4.a	4.a.	19.a.	19.a.
b	b	b	b
5.a	5.a	20.a	20.a
b	b	b	b
6.a	6.a	21.a	21.a.
	b	b	b
7.a.	7.a.	22.a	22.a.
b	b	b	b
8.a	8.a	23.a.	23.a
b	b	b	b
9.a	9.a.	24.a	24.a
b	b	b	b
10.a	10.a.	25.a	25.a
b	b	b	
11.a	11.a.	26.a	26.a
	b	b	b
12.a	12.a.	27.a.	27.a.
b	b	b	b
13.a	13.a.	28.a.	28.a.
b	b	b	b
14.a	14.a	29.a. b	29.a. b
15.a	15.a. b.		

APPENDIX B

INCOMPLETE SENTENCES BLANK - COLLEGE FORM

Nan	me	SexA	eMarit	al	Sta	tus	3	
	hool_							
Сол	mplete these sentences to exp Be sure to m	ress <u>your</u> <u>rea</u> ake a complet		ry	to	do	every	one
1.	I like							
	The happiest time							
	I want to know							
	Back home							
	I regret							
	At bedtime							
	Boys							
	The best							
	What annoys me							
	People							
	A mother							
	I feel							
13.	My greatest fear		· · · · · · · · · · · · · · · · · · ·					
14.	In high school							
15.	I can't							
16.	Sports						-	
17.	When I was a child							
18.	My nerves		-					
19.	Other people							
20.	I suffer							

APPENDIX C

BIOGRAPHICAL DATA SHEET

NAME							
AGE_							
SEX	M	F					
What	was your	High Sch	ool grade poi	nt average	?		
PRES	ENT CLASS	IFICATION	Fr Sc	oph	Jr	Sr.	Grad
Ноч	far do you	ı plan to	go in your ed	lucation?			
2-yr	. College	1	Bachelor's De	egree	Maste	r's Degree	
Ph.D	•						
Are :	you preser	ntly a re	gistered voter	? Yes _	No		
What	is your]	political	party prefere	ence?			
R	epublican]	Democrat	Other	(State)		
What	do you co	onsider y	ourself? Libe	eral	Moderate _	Conserv	ative
If y	ou were to	vote to	lay, would you	vote for			
	Nixon	Mc	Govern	Other (N	ame)		

APPENDIX D

POLITICAL ACTIVITY SCALE

Instructions - check yes or no for each question.

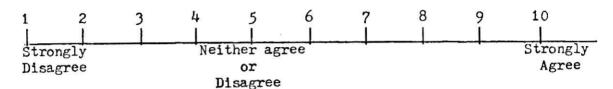
Yes ___ No ___ 1. Have you ever signed (or would you be willing to sign) a petition in support of the present political policies of any party or to change the present political policies of any governmental unit, (i. e. School, Local, State, or National). Yes ___ No ___ 2. Have you ever initiated (or would you be willing to initiate) what you considered necessary change, by way of petition or by seeking out signatures for a petition. Yes No 3. Have you ever worked (or would you be willing to work) for a political candidate or political party? Yes ___ No ___ 4. Have you ever participated (or would you be willing to participate) in a demonstration or rally whose purpose was to affect local or national political policy? Yes ___ No ___ 5. Are you now, have you been, (or are you willing to be) an active member of a group such as Young Democrats, Young Republicans, SDS, John Birch Society, etc.? Yes ___ No ___ 6. Have you ever run for any office as high school president, student council, etc.? (or are you planning to run for an office in student government in college?) Yes ___ No ___ 7. Do you make it a point to keep abreast of political happenings by reading magazines and newspapers? 8. Have you ever worn (or would you be willing to Yes No ___ wear) a political button? Yes ___ No __ 9. Have you ever displayed (or would you be willing to display) a bumper sticker for either a political candidate or a political issue? Yes ___ No ___ 10. Have you ever represented (or would you be willing to represent) a group, whose purpose was social change?

APPENDIX E

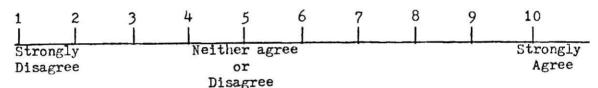
CONSERVATIVE/LIBERAL SCALE

Please circle the number which best describes your beliefs.

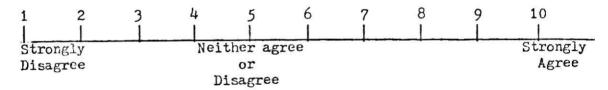
1. By pouring money into poverty programs, we are destroying the very thing that made this a great and prosperous country: "Competition".



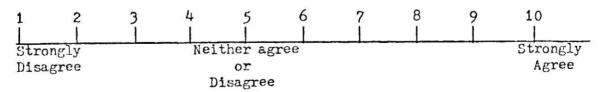
2. Though I know that their condition is not always their own fault, I find poor people unpleasant to be around.



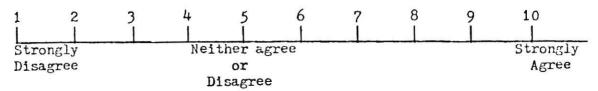
3. I can't understand why some people make such a fuss over the disadvantaged state of the poor. Most of them could improve their condition if they only tried.



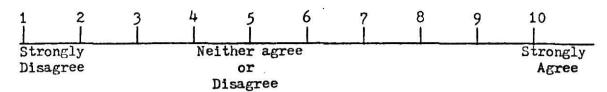
4. Some people feel that extreme poverty in this country is largely the fault of the poor. In other words, being on welfare is usually one's own fault. What is your opinion about this?



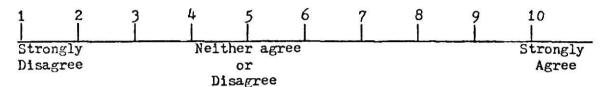
5. Although we don't like to face it, most people on welfare are lazy.



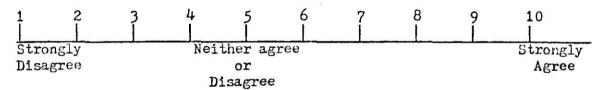
6. Pouring money into poverty programs is crippling the national economy and is asking too much of people who have worked hard to get what they have.



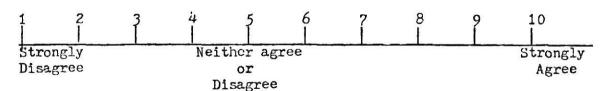
7. To solve the population problem and to make life more pleasant for the poor, they should not be permitted to have more than a couple of children per family -- that is, there should be compulsory birth control based on income level.



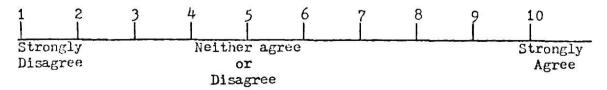
8. I am not in favor of a government-guaranteed minimum annual income -that is, nobody should be guaranteed that he would receive less than
a certain income per year.



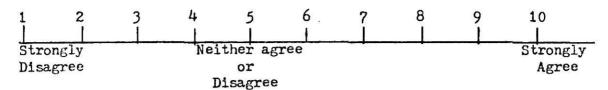
9. By having American troops in Viet Nam, we have aided the South Vietnamese in forming and maintaining a democratic society. A sudden and total troop withdrawal would greatly endanger the South Vietnamese people.



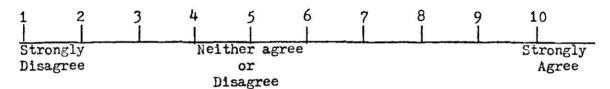
10. Those who have chosen to leave the country rather than serve in the armed forces should not be granted amnesty upon return, but made to face the results of their actions.



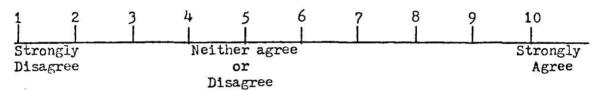
11. President Nixon's present programs attempting to control the nation's economy are what are needed at this time.



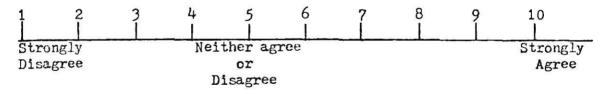
12. To bus children of different races clear across town simply to have equal numbers of each is not in accord with the spirit of the Constitution.



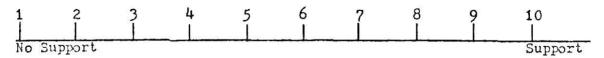
13. The best way of social change is through our present form of government by representation, not through marches, demonstrations and riots.



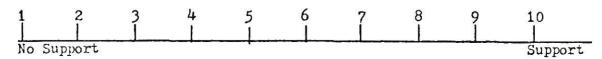
14. Since marijuana is an intoxicant and often leads to use of stronger, more harmful drugs, its control and use should be strictly regulated and enforced.



15. My present amount of support for President Nixon, his policies, programs and goals is:



16. My present amount of support for Senator McGovern, his policies, proposed programs and goals is:



APPENDIX F

EDWARDS PERSONAL PREFERENCE SCALE (NEED ACHIEVEMENT ITEMS)

Darken the circle following A or B on the Answer Sheet for each set of statements. Choose the one you most nearly agree with or least disagree with. Make one choice for each set of statements.

- A. I like to solve puzzles and problems that other people have difficulty with.
 - B. I like to follow instructions and to do what is expected of me.
- 2. A. I like to be successful in things undertaken.
 - B. I like to form new friendships.
- 3. A. I like to be able to do things better than other people can.
 - B. I like to tell amusing stories and jokes at parties.
- 4. A. I would like to be a recognized authority in some job, profession, or field of specialization.
 - B. I feel guilty whenever I have done something I know is wrong.
- 5. A. I would like to accomplish something of great significance.
 - B. I like to kiss attractive persons of the opposite sex.
- 6. A. I like to be one of the leaders in the organization and groups to which I belong.
 - B. I like to be able to do things better than other people can.
- 7. A. I like to go out with attractive people of the opposite sex.
 - B. I like to be successful in things undertaken.
- 8. A. Any written work that I do, I like to have precise, neat, and well organized.
 - B. I would like to be a recognized authority in some job, profession, or field of specialization.
- 9. A. I would like to be a recognized authority in some job, profession, or field of specialization.
 - B. I like to have my work organized and planned before beginning it.

- A. I like to accomplish tasks that others recognize as requiring skill and effort.
 - B. I like my friends to encourage me when I meet with failure.
- 11. A. I like to be able to say that I have done a difficult job well.
 - B. I like to work hard at any job I undertake.
- 12. A. I like to be loyal to my friends.
 - B. I like to do my very best in whatever I undertake.
- 13. A. When things go wrong for me, I feel that I am more to blame than anyone else.
 - B. I like to solve puzzles and problems that other people have difficulty with.
- 14. A. I like to travel and to see the country.
 - B. I like to accomplish tasks that others recognize as requiring skill and effort.
- 15. A. I like to read newspaper accounts of murders and other forms of violence.
 - B. I would like to write a great novel or play.
- 16. A. I would like to find out what great men have thought about various problems in which I am interested.
 - B. I would like to accomplish something of great significance.
- 17. A. I like to be able to come and go as I want to.
 - B. I like to be able to say that I have done a difficult job well.
- 18. A. I like to solve puzzles and problems that other people have difficulty with.
 - B. I like to judge people by why they do something--not by what they actually do.
- 19. A. I would like to write a great novel or play.
 - B. When serving on a committee, I like to be appointed or elected chairman.

- 20. A. I like to be able to do things better than other people can.
 - B. I like to eat in new and strange restaurants.
- 21. A. I would like to write a great novel or play.
 - B. I like to attack points of view that are contrary to mine.
- 22. A. I like to work hard at any job I undertake.
 - B. I would like to accomplish something of great significance.
- 23. A. I like to tell amusing stories and jokes at parties.
 - B. I would like to write a great novel or play.
- 24. A. I like to accomplish tasks that others recognize as requiring skill and effort.
 - B. I like to be able to come and go as I want to.
- 25. A. I like to do my very best in whatever I undertake.
 - B. I like to help other people who are less fortunate than I am.
- 26. A. I like to observe how another individual feels in a given situation.
 - B. I like to be able to say that I have done a difficult job well.
- 27. A. I like to help my friends when they are in trouble.
 - B. I like to do my best in whatever I undertake.
- 28. A. I like my friends to encourage me when I meet with failure.
 - B. I like to be successful in things undertaken.

NAME	

ANSWER SHEET

Darken whichever one you choose, A or B.

1	A O	ВО	15	A O	ВО
2	A O	ВО	16	A O	ВО
3	A O	ВО	17	A O	ВО
4	A O	ВО	18	A O	ВО
5	A O	ВО	19	A O	ВО
6	A O	ВО	20	A O	ВО
7	A O	ВО	21	A O	ВО
8	A O	ВО	22	A O	ВО
9	A O	ВО	23	A O	ВО
10	A O	ВО	24	A O	ВО
11	A O	ВО	25	A O	ВО
12	A O	ВО	26	A O	ВО
13	A O	ВО	27	A O	ВО
14	A O	ВО	28	A O	ВО

APPENDIX G ROTATED FACTOR ANALYSIS OF 23 IE ITEMS PLUS 6 FILLERS (MALES)

SELF OTHER

Item No.	Factor I	Factor II	Factor I	Factor II
1 C	.32*	.08	.01	.01
2	14	.04	06	.08
3	02	.08	11	15
4	73*	.26	09	.17
5 A	08	.08	.14	.66*
6	.00	13	03	.14
7	.01	02	06	.14
8 C	.12	.05	12	08
9	.50*	03	.12	09
10 A	43*	02	16	.76*
11 A 12 B 13 14 C 15 A	13 26 .01 08 .04	.16 .62* .18 06	03 44* 00 09 .04	.52* .02 .26 17 .29
16 A 17 B 18 A 19 C 20	04 12 .03 06 .14	.05 .76* .17 .05	01 70* 09 .04 .12	.19 .05 .01 .09 01
21	.16	.06	02	24
22 B	02	.74*	72*	.02
23 A	.01	.07	40*	.36*
24 C	13	19	01	.04
25 A	.16	.18	34*	12
26	34*	21	.02	.00
27 C	.23	.12	12	.05
28 A	03	.07	03	.07
29 B	.19	.52*	48*	.06

Note: A = Mirels' Factor I Item
B = Mirels' Factor II Item

C = Filler Item

* = Items used to define the Factor: Item $\pm .30$

APPENDIX H

Raw Data

Ss No.	EPPS	Pol Act.	Tot. 7 Pov. Items	Tot. 7 added Lib/Conserv.
007	14	9	30	47
016+	15	9	38	38
021*	12	6	36	50
024	12	10	36	38
025	12	9	35	51
027	11	5	21	48
032	24	7	11	31
034	17	7	37	66
039	19	7	19	26
040	10	2	31	46
043	16	8	32	57
044+	9	5	12	31
049	22	6	21	56
051	15	8	43	52
054	10	6	48	55
062+	12	6	38	46
063+	13	3	25	52
074	15	7	20	39
079*+	22	8	32	45
082	13	7	21	41
089	16	8	23	21
090*+	11	3	31	49
092*	10	9	57	49
097	20	8	28	38
101*	18	8	19	16
104	11	7	42	51
114	11	7	38	56
118	16	10	58	53
122	6	7	21	32
126**	11	9	7	17

^{*} Removed on Total I-E Removal

⁺ Removed on Political I-E Removal

^{**} Removed on ISB

Ss No.	EPPS	Pol. Act.	Tot. 7 Pov. Items	Tot. 7 added Lib/Conserv.
146	13	10	24	35
147	8	10	13	24
149*+	11	8	43	30
151	15	7	27	42
152	23	3	21	42
154*+	13	9	24	44
160	16	6	17	28
163*	10	5	37	36
170*+	24	1	49	55
175*+	14	8	27	39
178*	8	4	45	58
180	20	8	25	30
188	11	9	48	65
191+	21	8	25	21
193	18	6	34	61
194	17	4	22	41
195	11	6	20	47
204+	14	6	34	41
205	10	5	52	40
211	9	9	15	13
220	6	6	38	35
222	7	8	34	54
224	12	7	48	56
228+	8	10	42	54
229*	22	10	26	23
237	17	10	60	60
239	7	2	22	22
243*	13	9	37	46
244	16	6	21	27
245*	14	7	46	41

^{*} Removed on Total I-E Removal + Removed on Political I-E Removal

Ss No.	EPPS	Pol. Act.	Tot. 7 Pov. Items	Tot. 7 Added Lib/Conserv.
247*+	16	9	8	20
255	6	6	26	45
256	8	9	25	23
263	13	9	47	54
266	14	7	25	49
268+	9	8	26	18
270	24	9	41	61
275	21	5	38	61
278*	12	9	20	50
309*	12	5	36	47
310*+ 311 312+ 313 314+	14 12 8 13 8	6 5 9 9	26 38 43 16 41	45 49 42 13 50
315	9	9	44	56
316+	7	3	49	52
317	12	6	36	49
318	11	8	37	44
319*	9	4	39	49

^{*} Removed on Total I-E Removal

⁺ Removed on Political I-E Removal

Ss No.	Nix/McG	Gr. Tot. Lib/Con.	ISB	Total Self/ Other	Pol. Self/ Other
007 016+ 021* 024 025	8 (9)2 2 (5)6 9 (9)2 2 (2)9 8 (6)5	94 83 104 78 100	42 56 47 54 73	II EE IE IE EI	II IE IE EI
027 032 034 039 040	6 (10)1 4 (3)8 9 (9)2 1 (3)8 8 (7)4	84 49 122 49 92	62 65 73 57 57	EE II IE EI II	EE II IE EI II
043 044+ 049 051 054	10 (10)1 3 (10)1 9 (8)3 9 (10)1 9 (8)3	109 56 94 114 120	65 81 65 75 60	EE II IE EE	EE EI II IE EE
062+ 063+ 074 079*+ 082	2 (3)8 7 (10)1 7 (3)8 8 (8)3 4 (5)6	89 94 69 93 71	61 64 82 54 62	II EI EI II	EE EI II II
089 090*+ 092* 097 101*	3 (4)7 8 (9)2 4 (4)7 6 (5)6 2 (3)8	51 97 114 76 40	72 60 73 79 66	EI IE IE EE	EI EE II IE
104 114 118 122 126**	9 (8)3 9 (7)4 8 (8)3 3 (1)10 1 (4)7	110 110 127 57 29	60 83 46 73 106	EE EI II EE	EE EI IE IE
146 147 149*+ 151 152	7 (6)5 1 (1)10 7 (10)1 8 (7)4 9 (10)1	72 39 90 84 82	66 65 53 51 63	EE IE EE II	EE EI EE II II
154*+ 160 163* 170*+ 175*+	2 (2)9 3 (5)6 8 (6)5 6 (10)1 9 (10)1	72 53 87 12 0 85	58 65 40 73 55	EE EE EI EE	II EE EE EI

Ss No.	Nix/McG	Gr. Tot. Lib/Con.	ISB	Total Self/ Other	Pol. Self/ Other
178* 180 188 191+ 193	10 (10)1 7 (9)2 8 (10)1 2 (2)9 9 (10)1	123 71 131 50 114	50 67 63 54 61	II IE IE IE	II IE II EI
194 195 204+ 205 211	5 (8)3 9 (10)1 7 (8)3 8 (8)3 1 (2)9	76 86 90 108 31	67 64 80 68 74	EE EI EE II	EI II EE IE
220 222 224 228+ 229*	2 (5)6 9 (9)2 8 (10)1 9 (10)1 3 (2)9	80 106 122 115 <i>5</i> 4	70 78 71 51 77	EI IE EI II	II EE II II
237 239 243* 244 245*	5 (10)1 3 (2)9 9 (10)1 9 (9)2 3 (4)7	135 49 102 66 94	53 64 64 61 64	EI EI II EI	EE EI EE IE
247*+ 255 256 263 266	2 (1)10 5 (8)3 3 (3)8 3 (3)8 4 (5)6	31 85 54 107 83	80 76 79 64 59	EE EI IE II	EE EE IE II
268+ 270 275 278* 309*	1 (8)3 8 (10)1 8 (9)2 7 (9)2 2 (9)2	53 120 115 86 93	74 59 72 67 81	IE II IE II II	EE IE IE EI
31 0*+ 31 1 31 2+ 31 3 31 4+	5 (6)5 9 (9)2 5 (10)1 1 (2)9 10 (9)2	82 103 100 32 110	66 56 51 73 50	IE II EE EI II	IE II EE EI II
315 316+ 317 318 319*	9 (10)1 9 (10)1 8 (10)1 8 (7)4 8 (7)4	119 120 103 96 103	63 63 73 61 63	EI IE IE IE	II II EE EE EI

TNTERNAL-EXTERNAL LOCUS OF CONTROL: A LOOK AT POLITICAL FACTORS AND BEHAVIOR

by

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Subjects were given Rotter's (1966) Social Reaction Inventory (I-E Scale) and asked to answer it from their own personal point of view and as they believed it applied to other people's lives. They were divided into four groups on the basis of whether they scored internally or externally on the Self Scale and the Other Scale.

80 subjects, 20 from each group, participated in an additional part of the experiment. Measures of political orientation and activity, need for achievement, and maladjustment were acquired from these subjects.

It was predicted that: 1) When a factor analysis was carried out with the Self and Other Scales, one general factor would emerge on each scale rather than two as in previous work: 2) Those scoring internally on the Self Scale would be more active in political and campus activities than those scoring externally on the Self Scale. 3) Those scoring internally on the Self Scale but differing on the Others Scale would be expected to support different causes politically. The Internal Self/Internal Other group would be conservative supporters: the Internal Self/External Other group would be more liberal supporters. 4) Those scoring internally on both the Self and Others Scales would have a higher need for achievement than those scoring externally on both the Self and Others Scales. 5) Those scoring externally on the Self Scale but internally on the Others Scale would show higher maladjustment scores than those scoring internally on both scales.

In the case of all the hypotheses except the second, there was some support observed for the hypotheses, but seldom was the strength as great as that expected. Two factors emerged on the Self I-E Scale: chance-fate composed Factor I and political items Factor II: however, on the

Other Scale, the Political Items showed up as the first factor. Because of the strength of the Political I-E factor, these items were used to generate a Political I-E score which became the source of an additional analysis for the other four hypotheses.

There was no support observed for the second hypothesis.

The third hypothesis was only partially supported. Instead of the Internal Self/Internal Other subjects being the most conservative supporters, the External Self/Internal Other group was the most conservative. The most liberal were those who scored either internally or externally on both the Self and Other Scales. This consistency in generalized expectancies of reinforcement between Self and Others showed up again in the maladjustment measures as the groups being the least maladjusted while the Internal Self/External Others being the most maladjusted. The differences were not large, however. The concept of consistency between the way a subject views himself and the way he views others as viewing the world was discussed.

The Self Scale proved to be the best predictor of need for achievement. The internals had a significantly higher need for achievement than the externals. This supports the present literature.