

**THE EFFECT OF INTERNAL-EXTERNAL
CONTROL ON TIME UTILIZATION IN LEARNING**

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THE EFFECT OF INTERNAL-EXTERNAL CONTROL
ON TIME UTILIZATION IN LEARNING

An Abstract
Presented to
the Graduate Council of
Austin Peay State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Donna Hunt Dickinson

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ABSTRACT

The effect of the internal-external control factor on time utilization in a learning task, both before and after experiencing failure, was investigated. Two locus of control measures, the Rotter Internal-External Locus of Control Scale (Rotter, 1966) and the Reid-Ware Multidimensional Locus of Control Scale (Reid & Ware, 1974), were used to determine which was the better predictor of the dependent variable. In addition, the concept of multidimensionality as presented by Reid and Ware (1973, 1974) was discussed in relation to the present study.

There was a high correlation between locus of control and inspection time after failure, with internals spending more time. Partial correlations indicated that locus of control accounted for approximately 80% of the total variance in time utilization after failure. The Rotter I-E Scale proved to be the better predictor.

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To the Graduate Council:

I am submitting herewith a Thesis written by Donna Hunt Dickinson entitled "The Effect of Internal-External Control on Time Utilization in Learning." I recommend that it be accepted in partial fulfillment of the requirement for the degree of Master of Arts, with a major in Psychology.

Garland E. Blair
Major Professor

We have read this thesis and
recommend its acceptance:

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Second Committee Member

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The Effect of Internal-External Control
on Time Utilization in Learning

Studies by Rotter (1954, 1966) and Rotter, Seeman, and Liverant (1962), which introduced and explored the concept of internal versus external control of reinforcement as related to Social Learning Theory, have resulted in a diversified quantity of research linking numerous variables of human performance to locus of control. Many of these studies have shown significant correlations with various aspects of cognitive functioning. Lefcourt (1976) effectively summarized the indications of major research in this area by stating that while internal-external differences have depended on combination with other variables and the type of task involved, "an internal locus of control seems to be a sine qua non of being able to steer one's self more clearly and appropriately through the vagaries and confusions of different situations" (p. 60).

Specifically, an internal locus of control has been related to achievement (Coleman, 1966; Gozali, Cleary, Walster, & Gozali, 1973; Hersch & Scheibe, 1967; Rotter, 1966), attentiveness (Wolk & DuCette, 1974), problem solving (Lefcourt, 1976; Phares, 1968), and information retention (Seeman & Evans, 1962).

By examining the elements involved in studies considering information processing, it is evident that perseverance is often indicated as a significant factor in the

subject's cognitive style. Time spent in a learning task has been defined by Carroll (1963) as including only the time in which the subject is attentive and trying to learn. He divides time spent into the elements determined either within the individual or by the external conditions affecting the individual; that is, perseverance as differentiated from opportunity.

Many investigations have focused on the effect of skill related tasks on the amount of attention given the task by internals and externals (Lefcourt, 1976). Rotter and Mulry (1965) obtained significant results concerning time utilization in decision making. The most significant factor indicated in this study was that internals who believed the task to be skill oriented deliberated longer on their decisions. Internals who thought the task to be chance oriented spent less time in the decision process. Externals deliberated longer in the chance situation than they did in the skill situation; however, the difference was not significant.

A study by Julian and Katz (1968) varied the degree of difficulty in the decision making task to examine the effect on time spent. While internals increased the time spent in decision making respective to an increased degree of difficulty, externals exhibited little variance in their treatment of both simple and difficult material.

A third related study (Lefcourt, Lewis, & Silverman,

1968), intended to examine decision time, did not initially obtain supportive data. However, it was found that attempts to convince subjects that the role of chance was involved did not have the desired effect. Although the information was accepted by externals, some internals apparently doubted the veracity of the instructions. The subjects' perceptions of the degree of skill or chance involved in the task were examined and used to differentiate subject groups. A reanalysis of data indicated that internals who thought the task was skill related were more attentive than those who believed it to be chance related. Results from externals reflected an opposite effect. These studies indicate that internals are more greatly influenced by their perception of the task than externals and may show increased impulsivity as well as other changes in cognitive style, when skill does not seem relative to success (Lefcourt, 1976).

In light of the evidence produced by the above studies, Gozali et al. (1973) investigated the relationship of time utilization, locus of control, and achievement. Although the sense of control factor is unrelated to ability, it is a predictor of achievement test scores (Hersch & Scheibe, 1967; Rotter, 1966). Gozali et al. suspected this might be due to strategies used by internals, such as time utilization, which improve test performance. The hypothesis that internals would use time in a manner appropriate to item difficulty was supported. They also hypothesized that

there would be more variance in time spent on each item (all levels of difficulty) among externals; however, the opposite was indicated. Using the results of the Julian and Katz (1968) study, where externals showed little variance in time utilization on both simple and difficult material, it might be reasoned that they may see the task as chance determined and therefore have no reason to spend varying degrees of time on each item. Internals, on the other hand, attend to more difficult items for a longer period of time, thus producing greater variability.

Gozali et al suggest that their study supports previous evidence that not only intellect-related factors are measured by achievement tests. "Most achievement tests have a time limit, and good use of time is important to test performance. Two individuals of equal achievement level may obtain different achievement test scores as a function of their I-E dispositions" (pp. 12, 13).

A study (Phares, 1957) using skill and chance as independent variables, while manipulating locus of control, indicated perceptual learning varied according to the type (skill or chance) of conditions. Phares (1976) noted that the 1957 study supports the idea that "every behavior is not inevitable strengthened through reinforcement" (p. 27). Having been told the results of one trial, subjects in the skill situation exhibited greater variance in the number of chips they would bet on the results of the next trial.

This is in line with the results of Gozali's study, where internals showed greater variance in the time they were willing to spend on each item of a learning task.

Further explanation for differences in time utilization may be inferred from findings which conclude that internals attend to relevant cues more often and actually seek out such information. Studies by Davis and Phares (1967), Lefcourt and Wine (1969), Seeman (1967), and Williams and Stack (1972) support this conclusion.

The previously cited studies which involved time utilization manipulated either skill-chance perception or degree of difficulty as independent variables. Rotter (1954) explained, via expectancy theory, that it is not only the significance of reinforcements which determine how a person will behave, but it also involves the "expectancy that the goals will occur" (p. 102). Previous experience (success or failure) will determine the individual's expectancy concerning the result of a particular behavior (Phares, 1976) and therefore affect the manner in which he cognitively processes it. Phares states,

When people feel they control the situation, they are more likely to exhibit perceptual behavior that will enable them to cope with potentially threatening situations than are subjects who feel that chance or other uncontrollable forces determine whether their behavior will be successful. (p. 27)

One concern of the present study was to determine the effect of initial failure on the time utilization variable. It was reasoned that internals would perceive the task as

skill related and, upon failure, would spend more time due to increased attentiveness. Externals, who theoretically are less likely to accept the blame, were expected to justify their failure by reasoning the task to be chance related and, therefore, exhibit less perseverance.

Moursund (1976) suggested that since externals are not as likely to attribute their success or failure to their own ability, they would not be as strongly influenced by either situation as would an internal. That is, there would be a lesser degree of encouragement felt following a success situation or of discouragement following failure.

The previously cited studies used the Rotter I-E Scale as a locus of control measure. While most studies using this instrument have applied it as unidimensional, considerable doubt has been raised as to the soundness of this approach (Reid & Ware, 1974).

Phares suggests that since the purpose of the I-E Scale is to predict behavior over a wide range of situations, "perhaps the wisest strategy is to develop several measures of I-E - some broad, others rather specific to situations of particular interest or relevance, and others somewhere in between" (p. 48). Phares, however, warns that I-E scales constructed to predict behavior in specific situations must not only be isolated but should be proved to have predictive power.

Among the considerable number of researchers who have investigated the dimensionality of the I-E Scale, Reid and

Ware (1973) were the first who "attempted to refine the meaning and measurement through either the modification on the development of new items of these independent components of the I-E construct" (p. 268). Indicating the Hamsher, Geller, and Rotter (1968) study, which obtained low correlation coefficients between the I-E Scale and belief-disbelief of the Warren Commission Report on President John F. Kennedy's assassination, Reid and Ware (1973) suggested that the use of a Social System Control (SSC) factor might have yielded higher coefficients. They advocated the use of "multiple regression predictions based on a series of reliable subscales of I-E" (p. 268).

Another study by Reid and Ware (1974) yielded evidence indicating a third dimension of I-E in addition to the SSC and Fatalism dimensions of their 1973 study:

"Self-Control of one's impulses, desires, and emotions" (p. 131). This scale was designed to indicate the following:

Whether subjects can meaningfully distinguish items referring to chance determinants of their own behavior from chance determinants of other's behavior while at the same time distinguishing SSC effects on their own behavior from SSC effects on other's behavior. (p. 133)

The above study also attempted to determine if the concept of being in control of oneself is built into the Rotter I-E Scale or if it constitutes a dimension independent of this and other I-E measures. Based on a statement by Phares (1976) concerning studies which construct

tailor-made scales, it might be suggested that the Reid and Ware study only fulfilled its expectations by indicating each of the three scales to be independent of each other. However, Reid and Ware argued that their research showed that while the Rotter I-E Scale does appear to be measuring criteria similar to the dimensions of Fatalism and SSC, it does not seem as sensitive to the dimension of Self-Control.

The primary intention of the present study was to investigate the relationship between inspection time in a learning task and the subject's perceived locus of control as measured by two different instruments of the internal-external control construct. It was reasoned that I-E orientation would be more closely related to inspection time after failure than before failure on a verbal learning task in which no clues were given as to difficulty or chance level before the initial failure. In addition, evidence of the predictability of the Reid-Ware Scale was sought.

Method

Subjects

The subjects were 20 females and 17 males drawn from a junior-level educational psychology class at Austin Peay State University. Participation in the research was one of two alternatives given each student as a course requirement. The participants indicated their time preference on

a schedule sheet and reported to the experiment location at the designated time.

Procedure

All subjects were tested as a group in advance of the experiment. The two I-E measures used were the Rotter Internal-External Locus of Control Scale (1966) and the Reid-Ware Multidimensional Locus of Control Scale (1974). Subjects were scheduled at hourly intervals according to the schedule sheet. The experiment was conducted over a three-week period. The learning task phase of the experiment was conducted at the Austin Peay State University Counseling and Testing Center. Upon arrival each subject was asked to wash his or her hands (to assure proper functioning of the equipment) and was seated at a desk facing a square projection screen, each side of which measured 47.5 cm. The subject was given instructions concerning the purpose and procedure of the experiment. The experimenter then fastened one transducer to the middle finger of the subject's left hand and another to the subject's forehead to measure blood flow. A grounding device was attached to the small finger of the left hand. The experimenter was obscured from the subject for the remainder of the procedure by the wooden structure which held the screen. A Kodak Model 850 H carousel slide projector was used to present 25 slides which included 15 slides of reading material and 10 slides of test questions pertaining to the

reading. The reading selection concerned hemisphere dominance in musicians and non-musicians and was rated as college-level reading material. Leads from an Offner Model R Six-Channel Chart Recorder were connected to the subject's transducers. This apparatus was used to provide physiological data for experiments conducted concurrently with the present one.

A digital stopwatch, triggered by the operation of the projector, measured the time-lapse (in 100ths of seconds) of each slide on the screen. By pressing any one of five response buttons, the subject automatically advanced each of the first 15 slides. Responses to the 10 questions which followed performed the above function also.

At the end of the first trial, the subject was advised whether all questions were correctly answered or one or more had been incorrect. Since no subject answered all 10 questions correctly the first time, all subjects experienced failure and were required to repeat the learning task (Trial 2) in the same manner as before. Upon completion of the second trial, the subject was disconnected from the apparatus.

Instruments

The Rotter Internal-External Locus of Control Scale (1966) consists of 29 question pairs, 23 of which are forced-choice items and 6 which are fillers. The possible range of scores is from 0 to 23, one point being given for

each external statement selected. The test was designed to sample locus of control beliefs relative to a wide range of situations and therefore is considered a measure of generalized expectancy (Phares, 1976). The internal consistency estimates (Rotter, 1966) ranged from .65 to .79, and test-retest reliability was reported as varying from .49 to .83 for several samples.

The Reid-Ware Multidimensional Locus of Control Scale (1974) includes 45 forced-choice items which comprise three subscales. The dimensions of SSC and Fatalism are measured by 12 questions each. The third dimension, Self-Control, is measured by eight questions, and the remaining 13 items are filler questions. Reid and Ware (1974) reported intercorrelations between the three dimensions as follows: Self-Control and Fatalism, $r = 0.27$; Self-Control and SSC, $r = 0.30$; SSC and Fatalism, $r = 0.39$. They noted that the low intercorrelations and high internal consistency indicate independence of one another.

Results

The Rotter I-E Scale and each dimension of the Reid-Ware Scale were intercorrelated (all possible pairs). Both scales were also correlated with the inspection time measure of the first 15 slides of each of the two trials. Partial correlations between each locus of control measure (subscales being treated as individual measures) and the second trial inspection time were computed by partialing

out the basic reading speed of each subject as measured by inspection time on the first trial.

As shown in Table 1, the Rotter I-E Scale correlated positively and significantly with the SSC, Self-Control, and Fatalism subscales of the Reid-Ware Scale. There was a significant negative correlation between the Rotter and the second trial inspection time, although the first trial correlation was not significant. The SSC and Fatalism subscales showed significant positive correlations with each other and the Fatalism subscale correlated positively and significantly with the first trial inspection time. The only subscale which correlated significantly with the second trial inspection time was Self-Control, and the correlation was negative, indicating the same trend in inspection time as the Rotter. A correlation between both trials was significant ($r = .554$, $df = 35$, $p < .001$).

As shown in Table 2, the Rotter I-E Scale and Trial 2 partial correlation was $-.895$ ($df = 34$, $p < .001$), accounting for approximately 80% of the variance in inspection time in Trial 2 when controlling for basic reading speed. Partial correlations between Trial 2 inspection time and both SSC and SC, although lower than that of the Rotter, were negative and significant ($r = -.405$, $df = 34$, $p < .05$ and $r = .415$, $df = 34$, $p < .05$ respectively). The partial correlation with Fatalism did not reach significance.

TABLE 1
Correlations Among Locus of Control Measures
and Inspection Time Variables

Measure	Product-moment Correlation					
	1	2	3	4	5	6
1. Rotter I-E		.603***	.438**	.801***	.206	-.615***
2. SSC			.260	.515**	.094	-.284
3. Self-Control			.	.200	-.228	-.463**
4. Fatalism					.347*	-.019
5. Trial 1 time						.554***
6. Trial 2 time						

*p < .05 **p < .01 ***p < .001

TABLE 2
Partial Correlations Between Locus of Control Measures
and Trial 2 Inspection Time Results

Measure	M	SD	Correlation trial 1 effects partialled out
Rotter I-E	9.30	4.36	-.895***
SSC	6.14	2.66	-.405*
Self-Control	4.51	2.01	-.415*
Fatalism	4.03	2.94	-.271
Trial 1 time	51.21	17.02	
Trial 2 time	47.00	11.94	

*p < .05 ***p < .001

Discussion

Intercorrelations between locus of control measures and inspection times for Trial 1 were low, the only significance occurring between Fatalism and Trial 1 ($r = .347$, $df = 35$, $p < .05$). This would indicate that there was a slight tendency for subjects with more fatalistic attitudes to spend more time reading material which is merely assigned with no definite instructions to learn. There seems to be no other evidence from the literature which would help to explain this finding. Further research in this area would be useful.

The correlation of $-.615$ ($df = 35$, $p < .001$) indicates that the Rotter I-E Scale was a powerful correlate of inspection time after failure (Trial 2), but it was of little importance in inspection time before failure (Trial 1). This finding indicates that I-E orientation is of most importance in determining persistence in situations in which the expected behavior has not been reinforced. In such situations internals would persist longer than externals. This position is supported even more strongly by the $-.895$ ($df = 34$, $p < .001$) correlation between the Rotter I-E Scale and inspection time on Trial 2 with the effects of Trial 1 partialled out. This would indicate that if subjects were equated on basic reading speed, most of the differences in inspection time after failure can be attributed to I-E orientation. This line of reasoning is also supported by the significant negative correlations between

both the Self-Control and SSC subscales and the Trial 2 inspection time with the effects of Trial 1 partialled out.

The fact that two I-E measures correlate significantly with Trial 2 but not with Trial 1 may be explained in relation to Phares' (1976) previously quoted statement (refer to pp. 5-6 in text). Failure on Trial 1 may have strengthened the externals' feelings of being controlled, while it motivated the internals, who felt in control and accepted blame, to better apply their problem solving abilities. The present study, unlike others mentioned investigating time utilization, did not identify the learning task as skill or chance related, nor was it concerned with varied degree of difficulty. Therefore, it may be reasoned that the effect of perceived locus of control on Trial 1 was flattened by the undefined nature of the task. Lefcourt (1976) stated that the professed qualities of the task sometimes account for variance in internal-external differences.

By including a success/failure situation in the design of future research investigating locus of control, relationships to other variables may be more adequately examined. Rotter (1971) has suggested that our basic educational principles of reward and punishment may be applicable only to those who feel responsible for the initiation of that result. If, as indicated in the present results, externals do not respond to failure by the increased effort evidenced by internals, we may be missing the boat by utilizing the

same reinforcement tactics with all students.

The Rotter I-E Scale correlated more highly with inspection time than did any of the three dimensions proposed by Reid and Ware (1974). Reid and Ware (1973) produced multiple correlations with Rotter's I-E Scale which indicated that it and the dimensions of Fatalism and SSC were measuring similar criteria. Their 1974 study suggested that Self-Control measured less similar criteria and therefore might produce higher correlations than other I-E measures with particular variables. It was therefore not surprising that although the Rotter correlated significantly with all three Reid-Ware subscales, the lowest correlation was Self-Control. However, Self-Control proved to be the best predictor of the behavior predicted by the Rotter since it correlated negatively with both Trial 2 and the inspection time with Trial 1 effects partialled out.

These results may indicate that despite the less significant correlation between Self-Control and the Rotter, the specific situation in which the subjects were involved (initial failure) introduced a variable which was more relevant to the Self-Control subscale than those of SSC or Fatalism. Reid and Ware (1974) suggested that there are situations in which "criteria may have high relevance to Self-Control although they may have little or no association with Fatalism and SSC" (p. 140).

The significant partial correlations between Trial 2

and SSC and Self-Control were much lower than that of the Rotter I-E Scale and Trial 2. It can only be concluded that according to the present study, the Rotter I-E Scale, as opposed to the Reid-Ware Scale, is the superior predictor of time utilization by externals and internals.

Suggestions for Further Research

The inclusion of an initial success or failure situation in other research designs investigating the internal-external construct may produce more significant correlations than have been previously attained. Although the Reid-Ware Multidimensional Locus of Control Scale did not prove the better predictor in this experiment, it is possible that other variables would evidence greater differentiation among the three dimensions. The results of the studies by Reid and Ware (1973, 1974) warrant further investigation with other variables.

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Appendix A

Reid-Ware Multidimensional Locus of Control Scale

Belief Survey

This questionnaire is a measure of personal belief: obviously there are no right or wrong answers. Each item consists of a pair of alternatives lettered (A) or (B). Please select the one statement of each pair (and only one) which you more strongly believe to be more true rather than the one you think you should choose or the one you would like to be true.

Please answer these items carefully, but do not spend too much time on any one item. Be sure to find an answer for every choice. Circle the letter of the statement (A or B) which you choose.

In some cases 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.

1. (A) Various sports activities in the community help increase solidarity amongst people in the community.
(B) Various sports activities in the community can lead to rivalry detrimental to solidarity in the community.
2. (A) War brings out the worst aspects of men.
(B) Although war is terrible, it can have some value.
3. (A) There will always be wars no matter how hard people try to prevent them.
(B) One of the major reasons we have wars is because people do not take enough interest in politics.
4. (A) Even when there was nothing forcing me, I have found that I will sometimes do things I really did not want to do.
(B) I always feel in control of what I am doing.

5. (A) There are institutions in our society that have considerable control over me.
(B) Little in this world controls me, I usually can do what I decide to do.
6. (A) I would like to live in a small town or a rural environment.
(B) I would like to live in a large city.
7. (A) For the average citizen becoming a success is a matter of hard work, luck has little or nothing to do with it.
(B) For the average guy getting a good job depends mainly on being in the right place at the right time.
8. (A) Patriotism demands that the citizens of a nation participate in any war.
(B) To be a patriot for one's country does not necessarily mean he must go to war for his country.
9. (A) In my case getting what I want has little or nothing to do with luck.
(B) It is not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
10. (A) Sometimes I impulsively do things which at other times I definitely would not let myself do.
(B) I find that I can keep my impulses in control.
11. (A) In many situations what happens to people seems to be determined by fate.
(B) People do not realize how much they personally determine their own outcomes.
12. (A) College students should be trained in times of peace to assume military duties.
(B) The ills of war are greater than any possible benefits.
13. (A) Most people do not realize the extent to which their lives are controlled by accidental happenings.

- (B) For any guy, there is no such thing as luck.
14. (A) If I put my mind to it I could have an important influence on what a politician does in office.
- (B) When I look at it carefully I realize it is impossible for me to have any really important influence over what politicians do.
15. (A) With fate the way it is, 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.
16. (A) When I put my mind to it I can constrain my emotions.
- (B) There are moments when I cannot subdue my emotions and keep them in check.
17. (A) Every person should give some of his time for the good of his town or country.
- (B) People would be a lot better off if they could live far away from other people and never have to do anything for them.
18. (A) As far as the affairs of our country are concerned, most people are the victims of forces they do not control and frequently do not even understand.
- (B) By taking part in political and social events the people can directly control much of the country's affairs.
19. (A) People cannot always hold back their personal desires; they will behave out of impulse.
- (B) If they want to, people can always control their immediate wishes and not let these motives determine their total behavior.
20. (A) Many times I feel I might just as well decide what to do by flipping a coin.
- (B) In most cases I do not depend on luck when I decide to do something.

21. (A) Our federal government should promote the mass production of low rental apartment buildings to reduce the housing shortage.
- (B) The best way for our government to reduce the housing shortage is to make low interest mortgages available and stimulate the building of low cost houses.
22. (A) I do not know why politicians make the decisions they do.
- (B) It is easy for me to understand why politicians do the things they do.
23. (A) Although sometimes it is difficult, I can always willfully restrain my immediate behavior.
- (B) Something I cannot do is have complete mastery over all my behavioral tendencies.
24. (A) In the long run people receive the respect and good outcomes they worked for.
- (B) Unfortunately, because of misfortune or bad luck, the average guy's worth often passes unrecognized no matter how hard he tries.
25. (A) With enough effort people can wipe out political corruption.
- (B) It is difficult for people to have much control over the things politicians do in office.
26. (A) Letting your friends down is not so bad because you cannot do good all the time for everybody.
- (B) I feel very bad when I have failed to finish a job I promised I would do.
27. (A) By active participation in the appropriate political organizations people can do a lot to keep the cost of living from going higher.
- (B) There is very little people can do to keep the cost of living from going higher.
28. (A) It is possible for me to behave in a manner very different from the way I would want to behave.
- (B) It would be very difficult for me to not have mastery over the way I behave.

29. (A) In this world I am affected by social forces which I neither control nor understand.
- (B) It is easy for me to avoid and function independently of any social forces that may attempt to have control over me.
30. (A) It hurts more to lose money than to lose a friend.
- (B) The people are the most important thing in this world of ours.
31. (A) What people get out of life is always a function of how much effort they put into it.
- (B) Quite often one finds that what happens to people has no relation to what they do, what happens just happens.
32. (A) Generally speaking, my behavior is not governed by others.
- (B) My behavior is frequently determined by other influential people.
33. (A) People can and should do what they want to do both now and in the future.
- (B) There is no point in people planning their lives too far in advance because other groups of people in our society will inevitably upset their plans.
34. (A) Happiness is having your own house and car.
- (B) Happiness to most people is having their own close friends.
35. (A) There is no such thing as luck, what happens to me is a result of my own behavior.
- (B) Sometimes I do not understand how I can have such poor luck.
36. (A) More emphasis should be placed on teaching the principles of Christianity in the public schools.
- (B) Christianity should not be included in a school curriculum; it can be taught in church.
37. (A) Many of the unhappy things in people's lives are at least partly due to bad luck.

38. (A) Self-regulation of one's behavior is always possible.
- (B) I frequently find that when certain things happen to me I cannot restrain my reactions.
39. (A) The average man can have an influence in government decisions.
- (B) This world is run by a few people in power and there is not much the little guy can do about it.
40. (A) When I make up my mind, I can always resist temptation and keep control of my behavior.
- (B) Even if I try not to submit, I often find I cannot control myself from some of the enticements in life such as overeating or drinking.
41. (A) My getting a good job or promotion in the future will depend a lot on my getting the right turn of fate.
- (B) When I get a good job, it is always a direct result of my own ability and/or motivation.
42. (A) Successful people are mostly honest and good.
- (B) One should not always associate achievement with integrity and honor.
43. (A) Most people do not understand why politicians behave in the way they do.
- (B) In the long run people are responsible for bad government on a national as well as on a local level.
44. (A) I often realize that despite my best efforts some outcomes seem to happen as if fate planned it that way.
- (B) The misfortunes and successes I have had were the direct result of my own behavior.
45. (A) Most people are kind and good.
- (B) People will not help others unless circumstances force them to.

Appendix B

Rotter Internal-External Locus of Control Scale

There are no right or wrong choices among the following statements. This is a pre-test for further research. All scores will be kept confidential and if you are not used in further research your test and scores will be destroyed. Please be sure to answer all items.

Each item is designated by a number. Put a check in front of the statement under that number you most agree with. On some items you may not agree with either statement and on others you may agree with both. In either case, choose the statement you most agree with. Please be sure to choose only one statement for each item and to answer all (29) items.

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

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

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

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