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THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

RELIABILITY AND VALIDITY OF THE TIMED MULTIPLE RESPONSE METHOD
OF ADMINISTERING THE ROSENZWEIG PICTURE-FRUSTRATION STUDY

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

DOCTOR OF PHILOSOPHY

BY

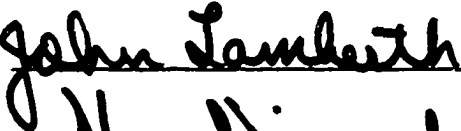
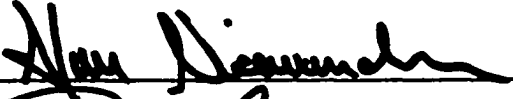


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Norman, Oklahoma

1971

RELIABILITY AND VALIDITY OF THE TIMED MULTIPLE RESPONSE METHOD
OF ADMINISTERING THE ROSENZWEIG PICTURE-FRUSTRATION STUDY

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I wish to acknowledge and thank the following people for many different kinds of experiences I have had with them.

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RELIABILITY AND VALIDITY OF THE TIMED MULTIPLE RESPONSE METHOD
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INTRODUCTION

The Rosenzweig Picture-Frustration Study (P-F) has been the subject of considerable controversy. An impressive body of research has been completed which questions Rosenzweig's (1950) basic assumption that the P-F can predict overt behavior in a frustrating situation. A number of investigators have concluded that the P-F does not function as a predictor of overt (Level II) behavior (Albee, 1950; Albee and Goldman, 1950; Brown and Lacey, 1954; Ellis, 1953; Elsher, 1951; Fry, 1949; Holzberg and Hahn, 1952; Holzberg and Posner, 1951; Lindzey and Goldwin, 1954; Mausner, 1961; Melhman and Whiteman, 1955; Mercer, 1962; Mitchell, 1967; Silverstein, 1957; Sweetland, 1954; Vane, 1954; Weinberg, 1952).

Rosenzweig (1934) assumed that three levels of personality can be tapped by various measurement methods. Level I is the subjective level of personality which may be tapped by adjective checklist self-rating scales. Level II is the overt level and the P-F is assumed to provide data upon which predictions of overt behavior may be made, while Level III is the projective level which may be measured by projective techniques. The issue presently being investigated is whether the P-F does measure Level II.

Rosenzweig (1934) postulated three apperceptive types of conscious reactions to frustration. The extrapunitive (E) type of reaction included

anger, indignation, and judgments which blame others. The intro-punitive (I) type was associated with emotions of humiliation, guilt, and judgments of self-blame. Impunitive (M) behavior indicated feelings of embarrassment and shame, leading to a glossing over of the event. It would be expected that if the P-F were tapping Level II, delinquents, criminals and paranoids should show E tendencies. However, results with the P-F have shown: 1) no significant E differences between psychopathic adolescent delinquents and normals (Holzberg & Hahn, 1952), and between physically assaultive mental patients and controls (Mercer, 1962); 2) E scores for paranoids were significantly lower than E scores for alcoholics and normals (Brown & Lacey, 1954) and 3) paranoid subjects demonstrated lower E scores than suicidal subjects. Such a poor empirical history calls into question either the P-F, the current theoretical conceptions of frustration or both. Our present investigation concentrates on possible defects in the P-F rather than reformulating the theory.

A possible flaw in the P-F may be self-censorship of response. Rosenzweig (1950) assumed that the P-F was not subject to self-censorship. However, results reported by Ellis (1953) and Silverstein (1957) indicate that self-censorship is operative in the P-F. If this is the case, the usefulness of the P-F would be enhanced if self-censorship could be eliminated. Ferguson (1954) suggested that rapid pacing of subjects can prevent excessive reflection in responding. Schwartzburd (1968) has devised a Timed Multiple Response Method of P-F administration to minimize self-censorship. Schwartzburd's initial investigation of the Timed Multiple Response (TMR) Method of administering the P-F compared two groups of adolescent boys classified as juvenile delinquents. The subjects were 54

adolescent boys committed by adjudication to a State Training School for delinquents. The institution staff was asked to nominate as subjects only those boys whose behavior corresponded to a behavioral description of an extrapunitive boy (see Appendix). Thirty of the boys nominated were given the P-F by the Timed Multiple Response Method of administration. Twenty-four of the boys nominated were given the standard form of the P-F as a control group. The experimental group had significantly higher E scores and significantly lower I and M scores than did the control group.

The TMR Method of administration appeared to show promise as a predictor of the subjects' direction of aggression when responding to a frustration producing situation. However, the reliability and validity of the TMR P-F were not estimated in Schwartzburd's original investigation. The present study was designed to investigate both the reliability and validity of the TMR Method of administration of the P-F.

Theoretically, the classic manifestation of intropunitive behavior is suicide, while aggressiveness or violence toward others typifies extrapunitive behavior. The standard administration of the P-F did not identify suicidal persons as highly I and delinquents and assaultive mental patients as highly E. It was hypothesized that the TMR version of the P-F would accomplish the following (if valid): 1) Ss who had been selected for E behavior would exhibit higher E scores than suicidal Ss, 2) suicidal Ss would exhibit higher I scores than those selected for E behavior and 3) E and I scores would be negatively correlated within subjects.

METHOD

Subjects. The subjects were 40 adolescents between the ages of 14

and 17 years. Sixteen of the Ss had attempted suicide, 24 of the subjects were nominated as behaving in an extrapunitive manner (Groups S and E respectively). The S group was composed of 10 girls committed to a State Training School, and 3 boys and 3 girls who were self committed to a locked ward in a University Medical Center Mental Hospital. The hospitalized subjects were volunteers in accord with ward regulations; all subjects from State Training Schools were simply asked to take the test. State Training School subjects who strongly objected were excused (there were two). The E group was composed of 24 boys independently nominated by 2 out of 3 institution staff members as behaving in accord with a description of E-type behavior (see Appendix II). I.Q. scores were obtained for all subjects using the WISC, WAIS, or Otis. The mean I.Q. across all subjects was 99.56.

Apparatus. A 35mm transparency was made for each of 24 P-F items. A booklet was prepared for the subjects' responses. The booklet consisted of 24 pages, each page (see Appendix III for sample page) contained 12 empty cartoon "bubbles" of the same size used in the original (Rosenzweig, 1947) test booklet. The subjects could record up to 12 responses for each of the P-F items. A neutral example was presented to familiarize Ss with the procedure (see Appendix IV).

Procedure. Subjects were tested in groups of eight or nine. The subjects were seated and given the following tape recorded instructions:

You are going to be shown some pictures. In each picture two people are shown talking to each other. The words said by one person are always given. Imagine as many different things the other person could say, and write them on the answer sheet. Each picture will be read to you before you start to write. As soon as the picture has been read to you write as many different answers as you can think of. You will have only 1½ minutes to write answers for each picture, so work as fast as you can. You can write anything you want. Do not call out any answers during the test. Are there any questions?

In reality the subjects were allowed two minutes for each item. The purpose of the instructions was to motivate the subjects to work faster and hence record more answers. The TMR-version of the P-F is slightly more complex than Rosenzweig's original; therefore, additional instructions were required for each group. A sample item was used to clarify procedural questions. Questions about content were answered by repeating; "You can write anything you want."

As each item was projected on the screen a tape recording repeated what was written in the completed cartoon bubble. A male or female voice, recorded by persons ignorant of the purpose of the study, corresponded to the sex of the cartoon figure which was speaking. As soon as the reading of an item was complete the examiner said, "start writing", and timing was started with a stop watch prominently displayed. The picture remained on the screen for the two minute period. When the two minutes had elapsed, the examiner said, "Finish the one you are on then stop." When each subject stopped writing, the next item was displayed and the procedure was repeated. The 24 items were given in the same order as they appear in the standard test. As a measure of reliability, the 24 subjects in the E group were retested six days after the first test was administered.

Each response in each item was scored either E, I, M or U (unscorable). The U responses were thrown out. To control for individual differences in number of total responses (R) the sum of E, I, and M responses across the 24 P-F item was calculated for each S. The percentage of responses in each of the three scoring categories was derived for each subject by dividing the number of responses in a category by R, the sum of responses in all three categories.

RESULTS

The means, standard deviations and results of significance tests are presented in Table 1. As predicted, the E group scored significantly higher on E than did the S group ($t=2.44$, $df=38$, $p>.01$), the S group scored higher on I than did the E group ($t=2.592$, $df=38$, $p>.01$). Additionally, it should be noted that the E group gave more responses (R) than did the S group ($t=2.598$, $df=38$, $p>.005$).

The intercorrelation of the subscales, number of responses and I.Q. are given in Table 2. As predicted, the correlation between I and E is substantial and negative ($r= -.88$, $p>.01$). Test-retest reliability data for the subscales are presented in Table 3.

DISCUSSION

The present results are encouraging. Each group (E and S) responded to the Timed Multiple Response Method of P-F administration in a manner which was congruent with their observed responses to frustration. It appears that this is a combined function of exerting time pressure which forces reliance on characteristic modes of behavior, and of shifting the focus from what the subjects write, to how much they write. Possibly their attention was diverted from guardedness to productiveness. Previous studies with the P-F have demonstrated that the test may be subject to self-censorship. The Timed Multiple Response Method appears to reduce the effects of self-censorships. Regardless of whether self-censorship was a factor in the low E scores from Ss showing overt E behavior obtained in most P-F research, the modified method of administration appears to measure Level II E and I behavior of individuals in a manner which is consonant with their observed behavior.

The test-retest results, across the E, I, M and R scales, suggest moderate reliability. Reliabilities lower than the present ones are not uncommon with personality measures (Mischel, 1968) and more importantly further refining of the present instrument may increase reliability coefficients. One further possibility exists for the moderate reliability. The subjects' remarks and general behavior clearly suggested that they resented having to repeat the test within a six day period. Their resentment quite possibly may have attenuated the test-retest reliabilities. Indirect evidence for this assumption is contained in the increased percentage of E responses, decreased percentage of I responses and decreased number of total responses. In future research on reliability it may be appropriate to allow a longer period to elapse between test and retest.

The highly significant difference in the productivity of the intro-punitive and extrapunitive groups is interesting in light of Beck's (1945) finding that low productivity (R) on the Rorschach is associated with depression. The classical psychoanalytic view of depression is that it results from aggression turned inward onto the self, (Abraham, 1911). Thus, the low productivity of the suicide group, which should be more intro-punitive than the E group, may be interpreted as a diagnostic indicator of depression.

The analysis of the I.Q. data suggests that it is not a significant variable in modified P-F administration. It should be noted that 13 of the 16 suicidal subjects were female, while all E group subjects were male. Despite the fact that prior research by Spache (1951) revealed no sex differences with conventional P-F administration, further investigation of this area with the modified method of administration may be warranted.

The Timed Multiple Response Method of test administration shows promise in correcting defects in Rosenzweig's original method. It may be possible to adapt other tests into a format similar to that used in our modification of the P-F, and thereby reduce self-censorship of response.

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APPENDICES

Appendix I

Dissertation Prospectus

The Rosenzweig Picture-Frustration Study (P-F) which is supposed to measure the direction of a subject's aggression in response to frustration, has been the subject of a considerable body of research which has questioned Rosenzweig's (1950) basic assumption: that is, unless there is evidence to the contrary, the P-F can be assumed to serve as a predictor of the subject's overt behavior in a frustrating situation. In general the evidence indicates that the degree of confidence with which this assumption can be made is low, particularly with institutionalized groups, delinquent youths, and adult criminals.

The traditional view of delinquents and criminals has been that they are persons who directly express aggressive feelings. If Rosenzweig's assumption that the test taps the level of overt behavior (Level II) is correct, then criminals and delinquents should score heavily in the extra-punitive (E) category on the P-F. The bulk of evidence from many studies demonstrates that they score less E and more intro-punitive (I) and impunitive (M) than control subjects. These findings would suggest that the P-F taps Level I (self description) rather than Level II.

Mercer (1962) found no significant difference between the E scores of physically assaultive mental patients housed in a hospital security unit, and the controls. Brown and Lacey (1954) found the E scores of paranoids to be lower than the scores of alcoholics and normals. Fisher (1951) found that the E scores of paranoids were lower than those of suicidal subjects.

Fisher concludes that the P-F "largely samples surface or peripheral responses" (p. 11). Further, he found no correlation between the findings of the Rorschach and TAT on the one hand, and the P-F on the other. Quay and Sweetland (1954) found a negative correlation between the paranoia scale of the MMPI, and E scores on the P-F. Holzberg and Hahn (1952) found no significant difference between the E, I, and M scores of a group of adolescent delinquents and controls with no history of E type behavior. A number of other investigators (Holzberg and Posner, 1951; Albee and Goldman, 1950; Albee, 1950; Melhman and Whiteman, 1955; Weinberg, 1952) have concluded that P-F scores do not predict overt behavior.

A study by Lindzey and Goldwin (1954) found a negative relationship between E scores and overt behavior, when using delinquents and normal controls as subjects. These findings are supported by Vane (1954) with delinquent girls, and by Fry (1949) with the inmates of a state prison. Vane concluded that her subjects were trying to make a favorable impression. Lindzey and Goldwin suggest that their subjects' low E scores may have been due to the institutional program which punished E type behavior. Miller et al. (1941) support the Lindzey and Goldwin conclusion: "In our society punishment of acts of aggression is a frequent source of instigation to acts incompatible with aggression." (p. 339). In a study which supports the above conclusion, Peizer (1956) found that inmates of a state prison made fewer E responses at the end of three years of imprisonment than inmates who had been incarcerated for only one year.

It may be that the social setting in which the test is administered influences the result, with E scores increasing as the freedom within the setting increases. Zuk (1956) found, that when a group of pre-adolescents

were tested in school they scored significantly lower on E than when tested several months later in a summer camp setting.

Shill and Black (1969) found that subjects, who were rated as non-defensive on the Crown-Marlow Scale, had significantly higher E scores than subjects rated as defensive. Shill and Black (1967) found that subjects with high need for approval, on the Crown-Marlow Social Desirability Scale, scored significantly less E than subjects with low need for approval. Mitchell (1967) found with three groups of incarcerated delinquents categorized as to parole evaluation status that those being evaluated for parole gave significantly fewer E responses than those not being considered for parole.

It seems that subjects are able to grasp the meaning of the P-F quite easily and tend to give answers which they regard as acceptable. This conclusion is supported by the findings of Ellis (1953) and Silverstein (1957). Silverstein found that by instructing two groups of subjects to make either their "best" or "worst" impression, and using a control group under standard administration conditions, the "best" group had a mean E score of 25%, the "worst" group had a mean E score of 95%, and the standard group had a mean E score of 51%. Silverstein concludes that faking is possible for subjects motivated to make a bad or good impression. Mausner (1961) found that a group of engineers and accountants who took the test anonymously showed a significantly higher number of E responses than a like group whose members were identified.

There have been a few studies which resulted in positive correlations between P-F scores and other measures of behavior and other test scores. Lindzey and Tejessy (1956) found that the TAT variables of aggressive terms, violence, and forceful language correlates positively with E scores and

negatively with I scores. Levitt and Lyle (1955) found that using the children's form of the P-F, their fifth grade subjects made E scores which correlated significantly with scores of punitiveness on the PST, a verbal measure of punitiveness in children. Kaswan et al. (1960) found that the P-F has some relation to other measures of aggression; however, it was not found to tap any particular level or aspect of aggression. Lindzey (1950) found that subjects' E scores increased significantly when the subjects were tested following a frustrating experience. However, in this study unlike the study made with Tejessy, E and I on the P-F failed to correlate with the same dimensions on the TAT. Finally Lindzey and Goldwin (1954) conclude that P-F scores tend to be related to Rosenzweig's Level II, when their subjects were 20 college students. However, the judges' ratings were based solely on autobiographies and a brief interview and are, therefore, questionable. It should also be noted that most studies, which may be regarded as supportive of the hypothesis that the P-F reveals aggressiveness, tend to correlate the findings of verbal tests which provide scant evidence that the P-F can predict overt behavior. It would be expected that subjects' verbal responses to one test would correspond to their verbal responses to the same dimension on another test.

It appears that P-F scores tend to tap Level I rather than Level II. That is, the P-F taps the level of self-description rather than the level of overt behavior. Rosenzweig (1963), in writing on the validity of the P-F with felons and delinquents, in relation to the levels of testing, states:

These levels must obviously be taken into account in research with criminals and indeed, quite generally. Assaultive delinquents may be well versed in the denial of their hostile tendencies, and, if so, would, at the opinion level, obtain normal or even 'better than normal' E scores ... (p. 31)

Schwartzburd (1968) devised a method of P-F administration to control for the self-censorship variable. The method requires subjects to furnish as many responses as they can to each item under time pressure. Thus, the focus of attention was shifted from what was written to how much was written. It may also be that the requirement of furnishing many different responses under time pressure forced subjects to rely on characteristic modes of behavior. Schwartzburd used institutionalized delinquents, identified by staff as behaving in an E manner, as subjects. One group was administered the P-F with the Timed Multiple Response Method, and the other group received the conventional administration. The group receiving the test by the new method had significantly greater E scores than the conventional group.

Reynolds (1971) used the modified method as the dependent variable in a study measuring the effect of a training program on aides in a state institution for the retarded. He used a type of response rather than direction of response, and found a significant increase in the need persistence responses, and a decrease in the ego-defensive responses.

Thus, it appears that when the P-F study is used with the Timed Multiple Response method it may prove to be a useful diagnostic and research instrument for predicting Level II behavior in response to frustration.

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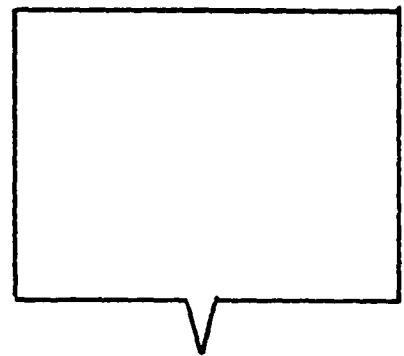
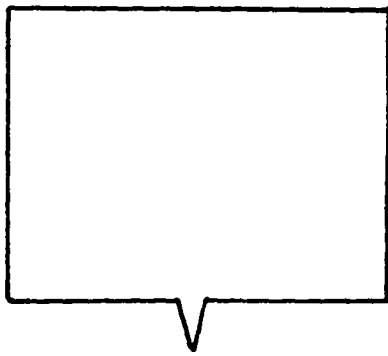
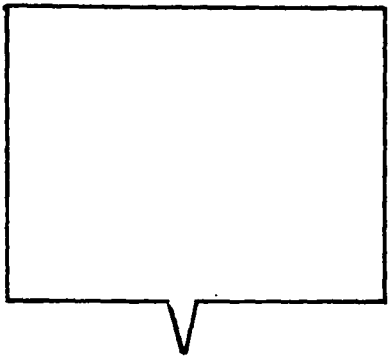
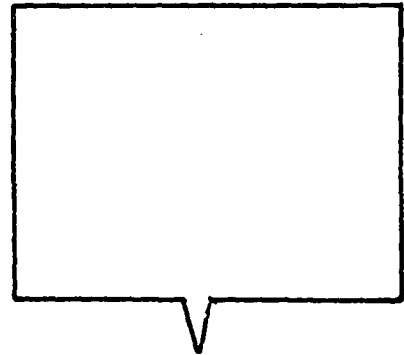
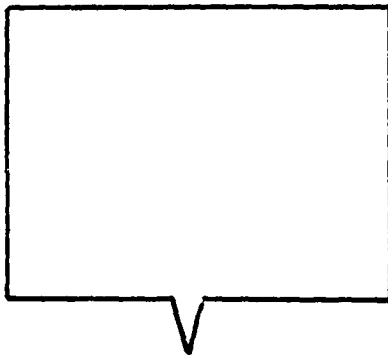
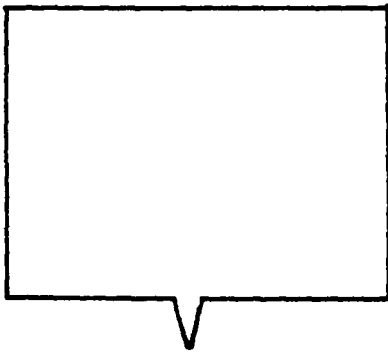
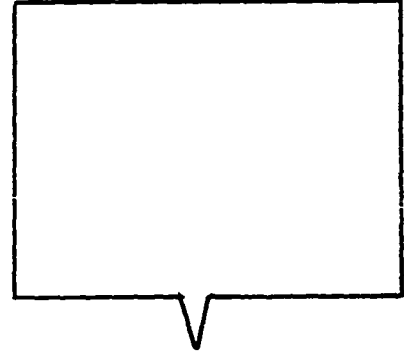
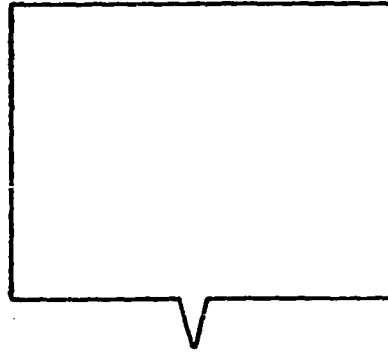
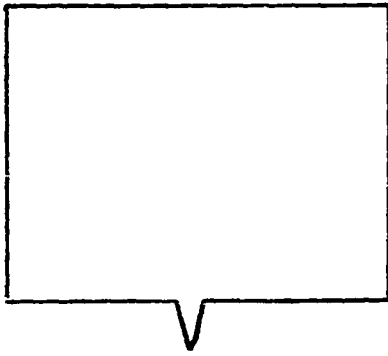
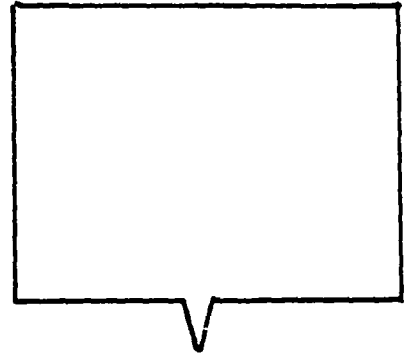
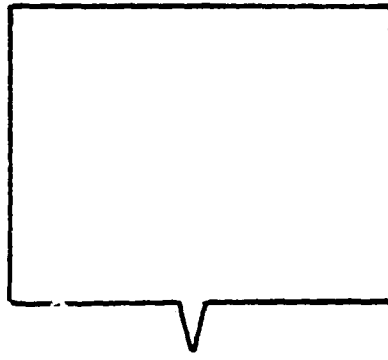
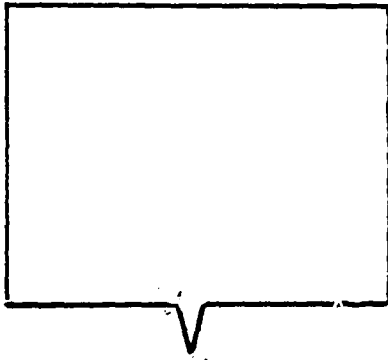
Appendix II

Selection of E Subjects

Please select and list the boys in the institutions who are most like the boy in the following description.

Jack is a boy with a chip on his shoulder. He feels that everything which happens to him is somebody else's fault. According to Jack the whole world is wrong and only he is right. He gets angry often and blames others for his troubles, both big troubles and small troubles. He is often sarcastic and is quite willing to fight when he feels that someone is wronging him. Jack is the type of boy who always seems to be striking out at the world in some way or another.

Appendix III



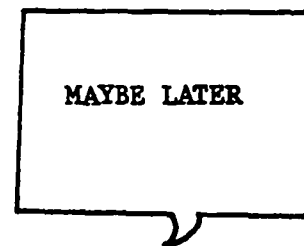
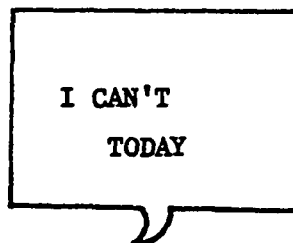
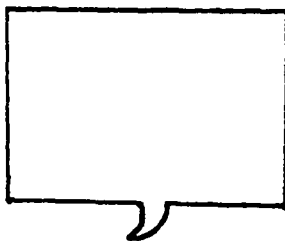
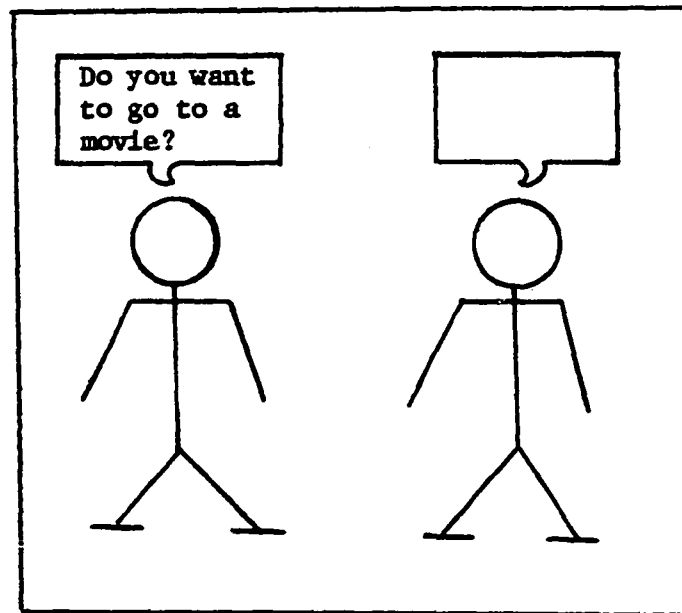
Appendix IV

Table i

Means, Standard Deviations, and Results of Significance
Tests for P-F Subscales Between Groups

	E Group	S Group	t
Scales			
E	$\bar{X}=61.02\%$ SD=12.83	$\bar{X}=50.82\%$ SD=13.12	2.440*
I	$\bar{X}=21.09\%$ SD=8.12	$\bar{X}=27.84\%$ SD=7.99	2.592*
M	$\bar{X}=17.76\%$ SD=7.28	$\bar{X}=21.15\%$ SD=7.21	1.448**
R	$\bar{X}=174.67$ SD=59.71	$\bar{X}=122.50$ SD=45.80	2.598***

* $p < .01$

** $p < .09$

*** $p < .005$

Table 2

Intercorrelation Matrix for P-F Subscales, Number
of Total Responses and Intelligence

	E	I	M	R	IQ
E	1.00	-.880	-.830	.285	-.130
I		1.00	.468	-.265	.106
M			1.00	-.218	.118
R				1.00	-.116
IQ					1.00

Table 3

Reliability for Subscales Test-Retest for the E Group

	First Test	Retest	Pearsons r
Scales			
E	$\bar{X}=61.02\%$ SD=12.83	$\bar{X}=74.67\%$ SD=16.79	0.541
I	$\bar{X}=21.09\%$ SD=8.12	$\bar{X}=13.25\%$ SD=9.24	0.368
M	$\bar{X}=17.76\%$ SD=7.26	$\bar{X}=11.89\%$ SD=8.27	0.567
R	$\bar{X}=174.67$ SD=59.71	$\bar{X}=127.17$ SD=66.67	0.266