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Effects of Race of Examiner on a Projective Test

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EFFECTS OF RACE OF EXAMINER ON A PROJECTIVE TEST

by

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VITA

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CHAPTER I

INTRODUCTION

Does the examiner's race influence the results of psychological testing and research? Many researchers say yes and have closely examined this variable in relation to task performance, physiological responsiveness, intelligence testing, personality tests, attitude and preference studies, phonetic variation studies, interviews, and psychotherapy (Sattler, 1970). The results have been contradictory.

On the basis of the studies reviewed no unidirectional generalization can be made with regard to the effect of the race of the examiner on the performance of subjects. When experimenter effects are shown, there is some question as to whether other variables may have affected the results or differences. Such other variables could be sex of examiner, socioeconomic background, age, attitude, and even geographical location of both examiner and subject.

Many of the studies utilized different dependent measures and different methodologies, which makes it difficult to compare and generalize.

In the areas of attitudinal studies, interviewing, personality, and psychotherapy, it appears that blacks tend

to perform more adequately and are less inhibited when the examiner is also black (Sattler, 1970).

Findings in the area of intelligence and performance tasks remain contradictory (Sattler, 1970).

The data is also contradictory on how blacks express aggression when the examiner is white. Earlier studies showed blacks as being inhibited, while later studies suggest that blacks are capable of outward expressions of hostility in the presence of whites (Yarrow, 1958; Gentry, 1972). One study demonstrated that the geographical location of blacks may make a difference in how they express hostility in the presence of whites (McCary, 1956).

A perusal of the literature indicated that there is a substantial concern about how blacks are affected in a number of areas by white examiners, experimenters, therapists, and interviewers. The area which has been given the least amount of attention is the area of projective testing. A more thorough review of the literature is presented in the following chapter. This study is addressing itself to the problem of the effect of an experimenter's race on subject responses to a projective technique. The review of the litearture also showed concern as to how black examiners may affect the performance of white subjects (Allen, Dubanoski and Stevenson, 1966; Freedman, 1967). This study also addresses this issue. The purpose of this study is to provide additional and new information as to what effect, if any, the race of examiner may have on the responses of black and white subjects to a projective test.

Statement of the Problem

The primary purpose of this study is to investigate the possible effects of the race of examiner on subject responses to a projective test. Special attention is given to the relationship between the examiner and hostility and/or anxiety responses in subjects of the opposite race. This study utilized white and black subjects and one white and one black examiner. The following hypotheses are proposed:

H1: Subjects will show less hostility to examiners of the same race as measured by extrapunitive and intropunitive responses scored in the Rosenzweig Picture Frustration Test.

H2: Subjects will show less anxiety to examiners of the same race as measured by the Spielberger State-Trait Anxiety Scale.

The scales used to investigate the problem were the: (1) Rosenzweig Picture Frustration Test (PFT); (2) Spielberger State-Trait Anxiety Inventory (STAI); (3) Bogardus Social Distance Scale (Bogardus SDS); (4) Shipley Institute of Living Scale for Measuring Intellectual Impairment; and (5) a short demographic questionnaire.

The PFT was used to measure levels of hostility and to explore differences in those levels when the examiner and subject were of the opposite race. The STAI was used to investigate if subjects' level of anxiety increased when the examiner was of a different race. The Borgardus SDS was used to determine subjects' attitudes toward other racial and ethnic

groups. Marked social distance toward other groups can be presumed to be related to attitudes toward examiners from other groups.

The Shipley intelligence scale and the demographic questionnaire were administered to compare the background of subjects.

CHAPTER II

REVIEW OF THE RELATED LITERATURE

Experimenter Effects

It has been of interest to researchers that different experimenters obtain significantly different results from similar subjects (Rosenthal, 1966; Masling, 1966). Although this study, and the studies to be reviewed, are more concerned with investigating whether a particular type of response by an experimental subject is associated with the race of the experimenter, many other studies have sought to attribute differences in results not only to the difference in the race of the experimenter, but also to the experimenter's sex, age, religion, intelligence, anxiety, need for approval, birth order, hostility, dominance, status, authoritarianism, experience, prior acquaintanceship with the subject, relationship to the principal investigator, and attitude toward the research.

In considering the many and varied experimenter characteristics which may be operating to influence subject behaviors, Silverman (1974) was moved to ask the question: "What, then, is indicated about the validity of psychological results when experimenter effects are not analyzed and controlled?" (p. 260).

With regard to the effects of experimenter characteristics upon research, McQuigan (1963) formulated the following alternatives:

> (1) There are no influences of experimenter characteristics upon the dependent variables of the study.
>
> (2) Experimenter characteristics do affect the dependent variables, but in the same way for all subjects in all treatments.
>
> (3) Experimenter characteristics interact with the dependent variables to differentially affect the dependent variables for different subject and/or treatment groups (p. 423).

With respect to the first alternative, the author stated that the experimenter characteristics will not influence the results of the study.

Concerning the second alternative, it is stated that while experimenter characteristics do act on the dependent variables, they will influence differences between treatment groups in a constant manner. The effects cannot be assessed without varying the experimenters and analyzing the results.

The third alternative implied that the experimenter may differentially effect differences between treatment groups or subjects in the same study.

McQuigan (1963) found that, despite the findings about experimenter effects on psychological research, in 37 recently published research articles, not one mentioned

an analysis of, or attempt to control, experimenter variables.

Silverman (1974) surveyed all articles published between October 1968 and September 1969, in the Journal of Abnormal Psychology, Journal of Personality and Social Psychology, and Journal of Experimental Psychology. He found that in 594 articles 11 percent reported the number of experimenters. Silverman (1974) concluded:

> More than one experimenter or experimenter group was used in 20 percent of 300 studies. For about one-third of these, the use of multiple experimenters seemed to be solely for convenience, with no attention to counter-balanced assignments across conditions. In these cases, not only were potential effects not systematically varied but they were not treated as constants, that is, different conditions may have been conducted by different experimenters. In the majority of the remaining two-thirds, experimenter subject assignments were counter-balanced for conditions but not for sex. In just 21 (7%) of the 300 studies were any measures taken of experimenter effects (p. 267).

Kintz, Delprato, Mette, Persons and Schappe (1965), in their review of the literature on experimenter effects, stated that future research should counterbalance experimenters and design studies with the experimenter as a major independent variable.

Although he did not cite statistics, Sattler (1970) stated that few of the studies he reviewed described the racial characteristics of the experimenters or subjects.

Projective Tests, Anxiety, Aggression and Hostility Studies

In the area of personality or projective tests, few studies have been conducted which varied the race of the experimenter.

Thompson (1949) created a black version of the Thematic Apperception Test (TAT). He felt that blacks would give longer stories to TAT cards which had blacks as stimulus persons and that longer and richer TAT protocols would provide more reliable diagnostic material. Thompson gave his version of the TAT and Murray's original TAT cards to 26 black Army veterans, aged 19-31. Thompson's results showed that black subjects gave longer stories to the black TAT. Riess, Schwartz and Cottingham (1950) tested Thompson's hypothesis, among others, by using 60 black and white female college students from the upper class population of Hunter College in New York City, and employing the TAT and Thompson's black version of the TAT. The subjects were tested by a black examiner and a white examiner (though not counterbalanced). They found that, in comparing their data to data from Thompson's southern sample, southern blacks produced shorter stories than northern blacks and whites, regardless of the race of the examiner. It was also found that blacks and whites in the North produced stories that did not differ significantly in length, regardless whether the stimulus person (in the test card) was black or not, and regardless

of the race of the examiner. Northern whites had a tendency to give longer stories to black examiners when tested with the black version of the TAT. Schwartz et al. (1951) used the material produced in the Riess et al. (1950) study, but looked at the number of ideas rather than at story length. They found that northern whites gave more ideas with the white examiner than with a black examiner. Northern whites also had more ideas on black cards than white cards when the examiner was black. Both blacks and whites in the North produced no significant differences in number of ideas, regardless of material or examiner.

Baratz (1967), using 120 eastern black college students, and one white male and one black male experimenter, found that black subjects tested by the black examiner reported less anxiety on the Test Anxiety Questionnaire than when tested by the white examiner. This occurred even when the four different groups received varied instructions. Instructions presented it as an intelligence test to be compared against white scores, while for another group it was to be compared against black scores. Other instructions presented the tests as a non-intellectual task.

Abel (1945) had two white female examiners obtain Thematic Apperception Test stories from mentally retarded black and white adolescent boys and girls. When he discovered that black boys used fewer words per story than any

of the other groups, he attributed it to the white examiner, although the white examiners did not appear to hinder the performance of the black girls.

Katz, Robinson, Epps, and Waly (1964) postulated that emotional conflict involving the need to control hostility may be disruptive to the performance of black students when their intelligence was being evaluated by a white examiner. They stated findings by Sarason, Davidson, Lighthall, Waite, and Ruebush (1960) who described the test-anxious child, whether black or white, as one who commonly reacts with strong unconscious hostility to the adult examiner, who, the subject feels, will in some way pass judgment on his adequacy. It is supposed that the hostility is not openly expressed by repressed, turned inward against the self, and is manifested in the form of self-derogatory attitudes. This is felt to intensify the child's expectation to fail and desire to escape from the situation. He is, thus, distracted from the task at hand by his fear of failure and his impulse to escape. Katz et al. (1964) stated:

> With respect to Negroes, it is known that segregation engenders a feeling of intellectual inadequacy (cf. Dreger and Miller's 1960 review of empirical evidence), hence they should be prone to experience test situations as threatening. Hostility would tend to arise against the adult authority figure from whom an unfavorable evaluation was expected. The Negro student's hostility might perhaps be stronger against a white tester than against a Negro tester, since the former might be expected to compare him invidiously with members of the

> advantaged white group. However, previous research suggests that aggressive impulses against a white person will usually be strongly inhibited. . . . There is also evidence . . . that when there are strong restraints operating against openly aggressive behaviour, even its expression on projective tests will be blocked to some extent (p. 55).

Katz et al. (1964) found that 72 black male junior high and high school students in Nashville manifested equal levels of hostile expression in situations where they were given neutral instructions in both black-tester and white-tester groups. Subjects were given the Hostility Scale by the assistant principal and the next day were divided into four groups and either tested by a white or a black examiner. When intelligence test instructions were given, hostility scores increased with the black examiner and decreased when the examiner was white. Katz et al. (1964) concluded from an analysis of the data that:

> Both task administrators instigated hostility in subjects when they announced that they were testing intelligence. When the experimenter was Negro, students resolved their annoyance by forming aggressive concepts; but when he was white, the need to control hostile feelings resulted in avoidance of aggressive words (p. 58).

Sappington and Grizzard (1975) found similar results. Their interpretations of the data implied that blacks may perceive whites as having more of a right to demand work than blacks. They further stated:

> The finding of greater hostility when black experimenters demanded performance on a task described as an IQ test than when white experi-

> menters made the same demand may not reflect greater defensiveness in the presence of whites but simply anger that a black would overstep his perceived legitimacy (p. 231).

Solkoff (1974) used the Wechsler Intelligence Scale for Children and the Sarason Test Anxiety Scale to investigate the effect of the race of the examiner on black and white children's IQ scores and anxiety level. The scales were administered to 26 black boys, 28 black girls, 26 white boys, and 28 white girls by two black and two white examiners. He found that there was virtually no relationship between the race of the examiner and the race of the subject. There was also no significant relationship between the Sarason score and the performance part of the WISC.

Paretti (1974) examined the variables, sex, race of the examiner, and anxiety, in relation to test-taking in 268 black children. He utilized 12 examiners (3 black males, 3 black females, 3 white males, and 3 white females). The children were given the Test Anxiety Scale for Children and the Comprehensive Test of Basic Skills. They found that the sex of examiner and anxiety affected test performance, but that the race of examiner was non-significant.

Various studies have demonstrated that blacks exhibit less outward-directed aggression when the frustrating agent is white. Winslow and Brainerd (1950), using the Picture Frustration Test (PFT) and a black modification of it, found that "with the Negro subjects . . . , the extrapunitive res-

ponse was given more frequently if the frustrating agent was a Negro than if he was white. More impunitive responses occurred when the frustrating agent was white" (p. 297). Yarrow (1958) also found that black children of various ages, when subjected to hostility by white children, rarely expressed hostility, except towards other blacks.

McCary (1956) had the Rosenzweig Picture Frustration Test administered to 631 black and white junior and high school age children from the North and South. He found that northern blacks were more extrapunitive (expressed more outward aggression) than southern blacks. He further stated:

> . . . The northern Negroes (both males and females) reacted with more extrapunitiveness and less impunitiveness than did the northern whites, and the same was true with the southern Negro women when compared with southern white women. The southern Negro men, however, were more passive and blame-avoiding than the southern white men (p. 195).

Gentry (1972) used a sample of 28 male and female black college students to investigate aggression in a biracial situation using whites (one male and one female) as instigators and blacks as victims. He found that when black subjects were presented with a real-life threat, such as an experimental face-to-face biracial encounter, the resulting behavior did not support findings from other studies and the speculation that blacks are reluctant to express anger or

aggression after white provocation. Interestingly, it was also found that the insulting behavior of the experimenters was attacked with more hostility by black females.

Donnerstein and Donnerstein (1971), in studying "black aggression", used 24 northern black high school students. Subjects were given the opportunity to give shocks to either a black or white confederate. There was also the opportunity for retaliation by the confederates. It was found that "blacks seemed unaffected by possible retaliation with respect to their aggression, and were equally unaffected by the race of their target" (p. 15).

In sum, very little attention has been given to examiner-subject interaction effects on projective tests, including aggression, hostility and anxiety. Evaluating and comparing studies is difficult not only because of age and sex differences, but also because personality tests lack normative data and because of the difficulty of scoring in projective tests. The findings are contradictory. Some studies on aggression and hostility show blacks to be more outwardly aggressive toward members of their own race. Other studies show blacks to be capable of expressing their aggression and hostility toward whites. It is interesting to note that the earlier studies reflect a passive or inward expression of aggression by blacks in the presence of whites. It can also be seen that black college students showed more

hostility when the examiner was black, but less anxiety. Black children were not affected by the race of examiner in tests of anxiety.

Intelligence and Performance Tests

In the area of intelligence and performance tests, a number of studies have been reported. Sappington and Grizzard (1975) utilized two white and two black experimenters. It was expected that blacks would be more defensive in the presence of white experimenters and their performance on the digit-symbol task would be inhibited. It was found that on the digit symbol tests black junior high school students performed better in the presence of the white experimenters. There was also no evidence of significant differences in the other dependent measures of incentive, hostility, anxiety, or expectancy. The authors attribute the results, that black subjects with white experimenters performed better on the digit-symbol tasks than did black subjects with a black experimenter, to blacks being more defensive around other blacks. They stated that, "The data do point up the danger of assuming that manipulation of race of experimenter on task labeling produces the effects often logically attributed to them" (p. 231).

Barneby (1972) hypothesized that the race of the experimenter could in some way influence the responses of subjects with examiners of a different race. The examiners,

10 black and 10 white, administered the Peabody Picture Vocabulary Test and the Wechsler Intelligence Scale for Children (WISC) to 40 black and 40 white third grade children. Results showed that the race of the examiner did not influence the responses of the children tested. It was concluded that white examiners do not have a negative influence on the intelligence test performance of black children. The author of the above study suggested that future investigators should examine other experimenter characteristics as a source of variance in test scores. A criticism of this study was that the experimenters were naive, non-professionally trained females, whereas, professionally trained male and female examiners usually test the children in the public schools. The author stated that the findings are limited in their generalizability.

Katz and Greenbaum (1963) found that, when presented with a visual-motor test, black college students from both northern and southern schools scored higher on the digit-symbol test with the white examiner (N = 2 males) than with the black examiner under threat of a mild electric shock. When the same test was presented under threat of severe electric shock, the examiner's race was not a significant factor.

Canady (1936) utilized 23 white examiners and 1 black examiner to investigate "the effect of rapport on the IQ".

Forty-eight black and 25 white children from elementary schools in Evanston, Illinois were used as subjects. Canady found that the performance of blacks and whites on the Stanford Revision of the Binet-Simon Measuring Scale failed to show any differences that may be interpreted as being "due to the personal equation of examiner" (p. 219).

Solkoff (1972) studied 112 black and 112 white children, using 8 female examiners -- four black and four white. He found that, on the Wechsler Intelligence Scale for Children, there were significant effects on some of the sub-tests, but the overall findings indicated that white examiners do not depress the IQ scores of black children. Solkoff concluded that other variables, such as congruence in class identity between subject and examiner, subjects' experiences with black and white evaluators, or examiner's racial attitudes, may be just as significant in research as the effects of interacting examiner-examinee racial characteristics.

Gould and Klein (1971) entertained three hypotheses for their study. The first stated that, when tested by a white examiner, black high school students would perform less well on intellectual measures than when tested by a black examiner. Secondly, under timed conditions, black students would perform less well on intellectual tasks, and this will be more pronounced when the examiner is white. Lastly, black students would present themselves more positively when tested

by a white examiner than when tested by a black examiner on personality, social, and attitudinal measures. Using four examiners -- two white and two black -- the first two hypotheses were not supported, while the third hypothesis was.

La Cross (1964) used the Stanford-Binet and three white and two black female examiners to test the intelligence of black children. She utilized only one white examiner in the re-test and found that this white examiner did not significantly depress the performance of the black children after prior examination by a black examiner.

Wellbarn, Reid, and Reichard (1973) used three black and three white female experimenters in a study with 96 black and white elementary school children. They found there was no significant difference in test scores which could be attributed to the race of the examiner. Phillips (1966) and Pelosi (1968) found that the race of the examiner did not significantly affect intelligence test scores of black and white children.

Moore and Retish (1974) had three black and three white examiners test 28 black male and 14 black female Head Start students. The evidence indicated that the examiner's race did influence the test scores of the subjects. The experimenters attribute their results to black subjects having negative feelings toward white examiners, resulting in a depression of their test scores.

Pasamanick and Knobloch (1955) attributed lowered language scores of black children to an early awareness of racial differences and a lack of rapport between them and the white examiner. They felt that this has serious implications, particularly in view of the fact that verbal items are a major part of intelligence tests.

Siegal (1965) found a significant relationship between the race of the examiner and the race of the child in marble-dropping tasks. The four black female examiners obtained significantly higher marble-dropping rates from white boys than from black boys, whereas the four white female examiners obtained similar results from both groups.

Allen, Dubanoski and Stevenson (1966) wanted to gain additional information about the performance of black and white children when statements of praise or criticism are presented by black or white adults. They found that the marble-dropping rate was approximately equal for black and white boys when tested by white adults. Black boys had a lower base rate of responses than white boys when the adult was black. The writers attribute this to the white boys being unfamiliar with black adults, whereas all the boys had white teachers in school. When praised, both black and white boys responded with an increased rate when the tester was black. When no comment was made about the child's performance, black children increased their rate of marble-

dropping to a greater degree when they were tested by black than by white adults and white children responded at a more rapid rate with white than with black adults. Previous studies have suggested that:

> . . . The rate of response in a control condition has been found to be higher for children of the same sex as the adult than for children of the opposite sex. It has been assumed that being tested by an adult of their own sex in a situation that is potentially evaluative but, in fact, produces no feedback, results in a higher level of anxiety or tension than being tested by an adult of the opposite sex (p. 255).

When adult testers criticized the child's performance, the only significant effect was a greater rate of marble-dropping for older children.

Kennedy and Vega (1965) found that 324 black children responded differentially to the race of the examiner under conditions of praise, blame, and control. The only significant finding was in the blame condition. With white examiners, black students responded similarly to white students with a decrement in performance. With black examiners, black subjects reacted to blame with an increase in performance, similar to conditions of praise and no incentive.

Katz, Hency and Allen (1968) studied 148 northern black boys and assumed that black boys from northern slum areas would be more positively oriented toward black adults than toward white adults. Therefore, the child who holds these attitudes will make a greater effort to please the black adult

who gives him a sign of disapproval, whereas disapproval from a white adult would confirm expectations of failure and rejection. Consequently, in an experimental situation, black examiners would have a more positive effect upon performance than white examiners. The results showed that black boys performed better on a verbal learning task with black examiners than with white examiners, substantially better with approval than with disapproval.

In a verbal conditioning task, Smith and Dixon (1968) found that highly prejudiced white females were conditioned by two white experimenters but not by two black experimenters. Low prejudiced subjects did not condition with any experimental group. One of their conclusions was that:

> Subjects who obtained high scores on the Negro items of the California E Scale behave as if they perceive a Negro experimenter in terms of stereotyped imagery, and a white experimenter in terms of stereotyped positive imagery (pp. 299-300).

In a study reported by Whittaker, Gilchrist and Fisher (1952), it was found that nine of fifteen black subjects, in a word recognition task, withheld responses when the words were derogatory to the color black, but not to other words. Of the three groups of subjects, a group of high prejudiced white subjects, a group of low prejudiced white subjects, and a group of black subjects, only the black group with a black female examiner withheld responses.

The studies reviewed in this section are contradictory. Children are sometimes affected by the race of examiner and sometimes not. College students and high school aged children are not as affected as younger children are, and black children may show better performance in some areas when the examiner is white. The majority of these studies were conducted with children, used many different measures of intelligence and performance tasks, employed different methodologies, and different numbers of examiners, ranging from two to as many as 23 white and one black examiner. This multiplicity limits comparability and generalization of findings. It appears that the race of the examiner affects performance measures more than it does intelligence measures.

Interview and Opinion Polls

In a study examining the effects of race in interviewing sessions, Pettigrew (1964) found that black male and female adults responded to white interviewers by showing less militancy toward them and by reporting fewer feelings of racial victimization than when they responded to black interviewers.

Athey, Coleman, Rectman and Tang (1960) found that interviewers belonging to different ethnic groups would elicit significantly different responses to questions involving racial issues and the effects blacks will have on property values if they moved into their neighborhood. When the experi-

menters were of a minority race (Oriental and black females), white subjects gave more prejudiced replies to the white interviewer than to the minority interviewer.

In opinion poll research on urban and rural blacks, Price and Searles (1961) and Williams (1964, 1968) found that, when the interviewer was white, black respondents stated they had lower educational aspirations for their children, less need for change in the way the country was run, less approval of sit-ins, and less preference for integrated schooling, than when the interviewer was black. Stouffer, Guttman, Suchman, Lazarsfeld, Star and Clausen (1950) found a similar phenomenon with black male solders with reference to racial protest, attitudes about the war, and post-war conditions. Conversely, Bryant, Gardner and Goldman (1966), Williams and Cantril (1945), and Womack and Wagner (1967), found no significant interviewer effects in topics on interracial social relationships, opinions about World War II and politics, and a variety of personal and political topics.

The majority of studies reviewed show that the interviewer's race affects the interviewee's responses. Black and white interviewees will inhibit their responses when in the presence of opposite race interviewers.

Psychotherapy and Counseling

Much has been written about blacks in psychotherapy, though little empirical research has been done to assess how

the race of the psychotherapist may affect therapy outcome. Gardner (1971) reviewed the literature up to 1970 and gives us insight into therapist and client variables. When the therapist is white and the client is black, there are certain therapist variables which will influence the treatment process. When the therapist is white, the most persuasive factor will be that of possible unconscious racial biases. When the therapist is white and the client is black, it is felt by Gardner that the black client brings a considerable amount of anxiety into psychotherapy. The anxiety is a result of the black client's concern about racial differences. Because of these anxieties, invariably the working alliance between the black client and white therapist is delayed longer, than in the intraracial situation. The delay in developing a working alliance has led many therapists to believe that it is difficult to establish rapport and a benefitting therapeutic relationship with black clients.

Melnick (1972) studied patient idenfitication with the therapist and found (as measured by semantic differential ratings) that increased similarity moderately correlated with more successful therapy outcome. Banks (1972) found the rapport ratings of clients who saw a counselor of the same race to be significantly higher than those clients who saw a racially different counselor. Fiedler (1951) described a theory of assumed similarity that provides a base for the

findings that racial differences of the client and the therapist retard the development of a counseling relationship. Fiedler felt that white counselors assumed that white clients have had experiences and beliefs similar to their own. The assumed similarity is said to be translated into a higher degree of demonstrated empathy. If the client is black, then the demonstrated empathy is lower because of the likelihood that blacks will have different attitudes and experiences. Vontress (1971) stated that:

> Self-disclosure, or the willingness to let another person know what you think, feel, or want, is basic to the counseling process. . . . Self-disclosure occurs most readily in context of trust. Moreover, counselees tend to disclose themselves to the degree to which the other person resembles them in various ways. Self-disclosure is a byproduct of the perception or belief that the other person, the person to whom one discloses himself, is similar to oneself (pp. 9-10).

Other researchers have also found that there is strong evidence that the more a client is attracted to the therapist the greater are his chances for success in psychotherapy (Boulware and Holmes, 1970; Gardner, 1964; Heller and Goldstein, 1961). Researchers explain this, in part, by findings that suggest that "positive interpersonal attractiveness increases receptivity to interpersonal influence" (Boulware et al., 1970, p. 269). Studies showing the interrelation between attraction and influence have been demonstrated in overt behavior (Beck, 1951; Sapolsky, 1960) and in attitude

change (Mills, 1966; Mills and Aronson, 1966). In a school counseling situation, Gardner (1972) has gone as far as to state:

> . . . Individuals who are similar to black college students in background orientation and experience should be recruited actively and trained to work in the helping professions with these students. It also should be noted that individuals who are not similar in background but have the potential to influence felt similarity, that is, who can generate facilitative conditions sufficient to command black student confidence, should be encouraged in this area (p. 89).

As evidenced by the literature, it has been found that positive identification by the client with the therapist can lead to a more successful outcome in therapy. But, even though the client is black and the therapist is black, there may not be any felt identification or similarity. This has been observed by Gardner (1971) and Calnek (1970).

Because identification is thought to play such an important part in the therapeutic relationship between client and therapist, it is thought that it would undoubtedly influence the therapist's handling of transference and countertransference, particularly when the client is black.

Vontress (1971) feels that if the therapist is white and the client is black, the transference will almost always be negative. Negative transference occurs when the patient associates the therapist with those he has once hated, feared, or disliked. He also feels that, in countertransference, a

white therapist will unconsciously perceive the black client as he has always seen other blacks. In handling counter-transference, the white therapist may be excessively warm-hearted and indulgent or, even worse, he may be patronizing toward his black clients. Many other researchers have found that transference and countertransference complicate the therapeutic relationship when the therapist is white and the client is black (Curr, 1964; St. Clair, 1951; Adams, 1950).

In sum, the literature on psychotherapy suggests that there may be more positive results when the client and therapist are of the same race.

Physiological Tests

Perry (1972) attempted to assess aggressive and autonomic reactions to stress in a group of 32 white and 32 black inmates as a function of the race of the examiner and the race of the subject. Two white and two black Florida State graduate psychology students served as examiners. The data suggested that subjects reported higher degrees of anger when stressed by examiners of a different race, as opposed to the same provocations by examiners of the same race. It was also found that the race of the examiner affected the level of anxiety. Autonomic data did not show any significant difference across race-subject combinations.

Rankin and Campbell (1955) had 40 white male college students take a word association test along with having their

galvanic skin responses recorded. While adjusting a dummy apparatus attached to the subjects' wrists, there was a higher galvanic skin response from the white subjects when the experimenter was black, than when the experimenter was white. It was also found that there was a tendency for students with negative attitudes toward blacks to have a higher galvanic skin response to the black examiner than to the white examiner.

Porier and Lott (1967) replicated the above study, using a larger sample of black (N = 12 males) and white (N = 21 males) experimenters, and what they considered an improved methodology. They found that the experimenter's race did not significantly affect the galvanic skin responses of the white male subjects.

Bernstein (1965) utilized one black and one white male examiner and found that measures of basal impedance level and spontaneous electrodermal fluctuation in black and white subjects did not show racial differences.

In sum, the literature is contradictory. Two studies showed an effect of the race of examiner, while the other two showed no effect. Methodological differences and problems may account for the differences in results.

Doll Preference Studies

Greenwald and Oppenheim (1968) studied doll preferences and contrasted their data, using themselves as experimenters

(who are both white), with earlier data collected by Clark and Clark (1947) (who are both black). Their results were consistent with the former study: black children preferred white dolls. Greenwald and Oppenheim concluded that the experimenter's race was not significant in affecting the doll preference of black children. A more recent study by Hraba and Grant (1970) demonstrated that black children preferred the black doll regardless of the race of the examiner.

Again, results across all studies are not consistent. Although the majority of the studies reviewed showed no race of examiner effect, the latest study, Hraba and Grant (1970), did show a preference by black children for black dolls regarldess of the race of the examiner. This suggests that the black pride awareness of the late 60's and into the 70's is beginning to have some positive effect on the development of the self-concept of black children.

Other Related Studies

Summers and Hammonds (1966) found that a black-white male investigative team obtained lower prejudice scores on a questionnaire measuring prejudice than an all-white male investigative team. Subjects were male and female white college students attending a southern university.

Freedman (1967) reported that white female college students responded more favorably to an appeal made by a black male professor than by a white male professor. It was felt

that both race and the middle class background of subjects accounted for the results.

Trent (1954) discovered that the experimenter's race was significant in affecting black and white kindergarten children's preferences for pictures, cooperativeness, and spontaneity of remarks. Trent found that white children selected a dark-skinned mother as their's more often when the experimenter was black, than when the experimenter was white. This was vice-versa for black children; they selected a white mother more often than when the experimenter was white.

Morland (1966) found in a study of racial preference, in which photographs were used as the stimuli, that the experimenter's race (four black females and five white females) was not a significant variable in affecting the responses of black preschoolers.

The studies reviewed, though contradictory, do show that subjects are influenced by the race of the examiner. The degree of influence is dependent on many other factors, such as the nature of the task, the socioeconomic level of the subject and the examiner, the age of subject, the geographical location of the study, and the sex of the subject and the examiner.

Of the studies reviewed, it is obvious that the area of personality assessment has been neglected, while consider-

able research has been done in the area of intelligence and performance tests. It is evident that considerable research is needed in this area to clarify the effects of the race of the examiner on personality measures -- psychometric and projective.

CHAPTER III

METHOD

This chapter discusses four major categories: (1) subjects, (2) examiners, (3) psychological instruments, and (4) procedures.

Subjects

The subjects for this study were 105 Caucasian and black, male and female, college students who volunteered for the experiment at California State University at Los Angeles and Long Beach. The subjects were randomly assigned to four groups, as follows:

Group 1: Blacks who first saw a black examiner (14 males, 11 females);

Group 2: Blacks who first saw a white examiner (10 males, 13 females);

Group 3: Whites who first saw a black examiner (20 males, 12 females); and

Group 4: Whites who saw a white examiner first (9 males, 16 females).

The average age of all subjects was 22 years. The median standard IQ of all subjects was 117. The average educational level was the sophomore year. Additional data are grouped in Table 1 (see Appendix B).

Examiners

One black male and one white male, both with Master's degrees in psychology, were used for the experiment. They were approximately the same size and age; one was 23 years of age, the other 24. Both examiners were trained by the experimenter in the use of the test instruments.

Psychological Instruments

To measure levels of anxiety, the Spielberger State-Trait Anxiety Inventory (STAI) was used. The STAI was administered four times, on the first and second administration before and after the Rosenzweig Picture Frustration Test (PFT). The difference before and after anxiety state measures was used to evaluate the effect of the testing situation. If the difference is not significant, it would be reasonable to conclude that the testing situation itself does not generate anxiety. It was also important to determine if the change of the race of examiner increased or decreased anxiety. Also of interest was whether or not the groups were similar in terms of trait anxiety. The STAI was developed by Spielberger, Gorsuch and Lushene (1970) to measure anxiety on two dimensions: as a personality trait and as a transitory state. To further differentiate the two, state anxiety was described as consisting of feelings of apprehension and heightened autonomic nervous system activity which are assumed to vary in intensity and fluctuate over time. Trait anxiety referred to

a more enduring characteristic within the individual and described the tendency to respond to threatening stimuli with a given elevation of state anxiety. The scale consisted of two separate 20-item self-report scales for measuring the two concepts. The A-Trait scale was given with instructions which required the subject to report his feelings at a given moment ("Indicate how you feel right now").

Previous research had found the A-State scale to be a sensitive indicator of the level of transitory anxiety experienced by persons in situations involving varying degrees of stress (Spielberger et al. 1970). In his review of anxiety measures, Leavitt (1967) reported that "the STAI is the most carefully developed instrument, from both theoretical and methodological standpoints, of those presented" (p. 71).

Subjects for this study were re-tested one week later. Spielberger et al. (1970) reported the test-retest reliability given below for college undergraduates. They found test-retest reliability coefficients ranging from .73 (after 104 days) to .84 (after one hour) for males and .76 and .77, respectively, for females.

The Bogardus Social Distance Scale was used to measure social distance in order to determine to what extent pre-existing racial attitudes may be related to the subject's feelings of hostility. On the Bogardus scale, the subject

was required to place various ethnic groups in one of seven categories with regard to degree of physical social distance which the individual is willing to accept: (1) would marry into the group; (2) would have as close friends; (3) would have as next door neighbors; (4) would work in the same office; (5) would have as a speaking acquaintance; (6) would have as visitors to my nation; or (7) would have as members of another nation. Each subject was asked to check as many items as apply to him for several ethnic groups. The responses formed the basis of a social distance score which may be presumed to be indicative of level of prejudice. Although much empirical work has not been done with the Bogardus Scales, Buros (1953) reported three independent findings that showed split-half reliabilities ranging from .94 to .97, comparing 21 to 32 social groups.

The projective test used to obtain a measure of hostility was the Rosenzweig Picture Frustration Test. The PFT is a projective test consisting of 24 cartoon-like pictures depicting two persons who are involved in a mildly frustrating situation. The figure at the left of each picture is shown saying certain words which are designed to describe the frustration of the other individual or what is frustrating to himself. The person on the right always has a blank caption box above. Subjects were instructed to study the situations one at a time and to write in the blank box the

first reply which enters the subject's mind. For purposes of this study the adult form was administered in groups.

Mirmow (1952) reported on differing methods of administration. She stated:

> . . . The findings provide empirical justification for the common practice of undifferentiated combination of results obtained under group and individual methods of administration, but indicate that the oral card-by-card approach may significantly modify responses, especially in the direction of decreased expression of direct hostility (p. 210).

All scoring categories as defined in the Revised Scoring Manual for the Rosenzweig Picture-Frustration Study Form for Adults (1949) were used. The categories are defined as follows:

E' = The presence of the frustrating obstacle is insistently pointed out.

I' = The frustrating obstacle is construed as not frustrating or as in some way beneficial; or, in some instances, the subject emphasizes the extent of his embarrassment at being involved in instigating another's frustration.

M' = The obstacle in the frustrating situation is minimized almost to the point of denying its presence.

E = Blame, hostility, etc., are turned against some person or thing in the environment.

<u>E</u> = In this varient of E, the subject aggressively denies that he is responsible for some offense with which he is charged.

I = Blame, censure, etc., are directed by the subject upon himself.

I = A variant of I in which the subject admits his guilt but denies any essential fault by referring to unavoidable circumstances.

M = Blame for the frustration is evaded altogether, the situation being regarded as unavoidable; in particular, the "frustrating" individual is absolved.

e = A solution for the frustrating situation is emphatically expected of someone else.

i = Amends are offered by the subject, usually from a sense of guilt, to solve the problem.

m = Expression is given to the hope that time or normally expected circumstances will bring about a solution of the problem; patience and conformity are characteristic (p. 2).

Rosenzweig stated that "the scoring of most responses requires only one factor. Two distinct phrases or sentences are usually required for scores of more than an E factor" (p. 3). When there was a need to score an E (extrapunitiveness), I (intropunitiveness), or M (impunitive) response with another response, the major category (E, M, I) took precedence and was scored as such. Scoring which contained both E and I was viewed as negating one another (e.g., /E;I/). While E and I both reflect hostility, they are qualitative different, and, therefore, were treated separately in the analysis of the data. As in the Holzberg and Hahn (1952) study, all extrapunitive (E, E, E', e/E; M/,/E; e/,/E; i/,E; m/,/E'/M), impunitive (M, M, m,/M; m/,/M; i/,/M; e/), and intropunitive (I, I', i, I, /i; i/,/I; m/, etc.) scores were grouped together. This study was more interested in the direction of

aggression rather than the type of reactions. Rosenzweig (1949) defined extrapunitiveness as ". . . aggression is turned onto the environment;" intropunitiveness as ". . . aggression is turned by the subject upon himself;" and impunitiveness, ". . . aggression is evaded in an attempt to gloss over the frustration" (p. 2).

Holzberg and Hahn (1952) used the sume of E (E), or all extrapunitive responses, to assess the level of his subjects' hostility. Holzberg and Hahn found no differences in hostility or aggressiveness between a group of aggressive psychopaths and nonaggressive normals. But the authors did modify the test. They gave many reasons why their results did not fit any of their hypotheses. Of particular interest is their assertion that the scoring system is not sensitive. However, they also stated:

> Related to the problem of scoring is also the sequence of aggression within a response. It was noted that certain subjects tended to qualify their aggressive reactions, which resulted in a double score, i.e., "It's my fauth but you're not without blame" (I,E). Others reversed the sequence, giving a response such as, "You shouldn't have done it. I'm sorry for my part" (E,I). . . . It is possible that careful scrutiny of such responses may yield differences not otherwise apparent (p. 794).

On test-retest reliability, a recent study of Rosenzweig et al. (1975) concluded that the PFT "demonstrates a comparatively high degree of retest reliability for the adult, adolescent and children's forms" (p. 11). This was based on his review of the literature of several independent studies that showed reliability coefficients averaging between .54 and

.57 at one-month intervals. Rosenzweig felt that this was good reliability for a projective test.

French (1950) and Lindzey (1950) have both reported validity findings which support the validity of the PFT. Mirmow (1962) has stated that consistency (across studies) which reveals some increase in overtly expressed hostility (extrapunitiveness) following experimentally induced stress, and being in agreement with "independently-formulated hypotheses concerning the relation of frustration and hostility" (p. 216), does indeed support the validity of the PFT.

The Shipley Institute of Living Scale for Measuring Intellectual Impairment was the instrument used to assess the intellectual level of the subjects. The test provided a gross indication of IQ based on a short vocabulary test and a short test which measures one's ability to do abstract thinking. The manual stated that:

> The scale was designed as an aid in detecting mild degrees of intellectual impairment in individuals of normal original intelligence. It is not for use with the following:
>
> (1) Very obviously deteriorated or confused cases;
>
> (2) Intellectual abnormals . . . , individuals with language handicaps.
>
> It may be used as a test of intelligence as well as of impairment (p. 2).

Bartz and Loy (1970) demonstrated from a review of the literature that the correlations between total Shipley scores and Full-Scale WAIS IQs have been rather high, ranging from .73 to .90.

Paulson and Lin (1970), using 290 psychiatric patients, also found a high correlation (.78) between the Shipley and the WAIS. Subjects were of both sexes and of diverse socio-economic backgrounds.

Other researchers have found similar high correlations with the WAIS (Sines and Simmons, 1959; Wiens and Baraka, 1960; Stone and Ramer, 1965).

Lastly, a short demographic questionnaire was used to ascertain the subjects' age, sex, educational level, and family income.

Procedure

A sign-up sheet was placed on the Psychology Department's bulletin board at California State University, Los Angeles and Long Beach. As part of the course requirement, students in Psychology 150 are asked to participate in one psychology experiment during the quarter. The students could select participation in five different experiments. The sign-up sheet for this experiment can be found in Appendix A.

All materials were kept in manila folders and passed out by the examiner when needed. Instructions were first given for the Spielberger State-Trait Anxiety Inventory, then the Shipley Institute of Living Scale for Measuring Intellectual Impairment, and the Bogardus Social Distance Scale. After these scales were completed, the subjects were adminis-

tered the Rosenzweig Picture Frustration Test, Adult Form; the Spielberger State-Trait Anxiety Inventory was given again; and, lastly, a demographic questionnaire was filled out. All instructions for the various scales were read verbatim from a written list (Appendix A). Examiners were told to interact minimally with the subjects and to remain as neutral as possible. It was reported by both examiners that this was done. The examiners kept the material in manila folders and coded them for first examiner seen, sex, and race. This was done to enable the test materials to be scored and interpreted without knowledge of the above information. Subjects were then asked to return one week later. They were not told that there would be a different examiner. Upon retesting, the same procedure was followed, except that the Shipley Institute of Living Scale for Measuring Intellectual Impairment and the demographic questionnaire were omitted.

Subjects were retested in order to counterbalance the order of the examiner. Before scoring the Rosenzweig Picture Frustration Test, a sample of 25 subjects was randomly selected and scored by the experimenter and another psychologist familiar with the scoring procedures of the Rosenzweig. There was 95 percent inter-score agreement. Differences in scoring were discussed until both scorers agreed on the appropriate scoring category. Clark, Rosenzweig and Fleming (1947), ". . . showed that the P-F scoring principles may be applied

by two independent workers with approximately 85 percent agreement" (p. 370).

In accordance with Loyola University's policies and procedures for the protection of human subjects, participants were de-briefed and allowed the opportunity to question the examiners about the nature of the experiment. The experiment was deemed to present no risks and neither subjects nor re-examiners reported any evidence of physical or psychological trauma as a result of this study. Prior to the administration of the test materials, subjects were told that findings would be confidential and their privacy would be respected. Subjects were also told that they could withdraw from the experiment at any time. Their only penalty would be the receipt of no credit for their psychology class, as outlined in their course and on the sign-up sheet.

CHAPTER IV

RESULTS

This study focused on the effect of the race of examiner on subjects' anxiety and hostility level as measured by the Spielberger State-Trait Anxiety Scale and the Rosenzweig Picture Frustration Test. In addition, the Bogardus Social Distance Scale and the Shipley Institute of Living Scale were used to examine what effect, if any, social distance and intelligence have on tested anxiety and hostility. Two- and three-way analyses of variance were utilized to examine differences between groups. A two-way analysis of variance (Race of Subject x Sex of Subject) was utilized for all difference scores (black examiner minus white examiner); in other instances, a three-way analysis of variance (Race of Subject x Sex of Subject x Race of Examiner) was used. A correlational study was done to examine relationships among the dependent variables.[1]

One hundred and five black and white subjects, both male and female, volunteered for this experiment and were randomly assigned to examiner and condition. There were four groups of subjects: Group 1 -- blacks who first saw a black

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[1]A correlational study showed no significant relationships among the following variables: age, income, IQ, extrapunitive, impunitive, intropunitive, social distance scores, and state and trait anxiety scores.

examiner; Group 2--blacks who first saw a white examiner; Group 3--whites who saw a black examiner first; and Group 4--whites who saw a white examiner first. The data were also grouped into four other types of groups. These groups were: blacks who saw a black examiner, first or second administration (BBE); blacks who saw a white examiner, first or second administration (BWE); whites who saw a black examiner, first or second administration (WBE); and whites who saw a white examiner, first or second administration (WWE).

Demographics. Table 1 (see Appendix B) provides demographic information on the groups, including average income, level of education, IQ, and age.

The educational level was classified as follows:

Classification	Education
13	One year of college.
14	Two years of college.
15	Three years of college.
16	Four years of college.
17	First year graduate school.
18	Second year graduate school.

Family income was classified in the following manner:

Classification	Income Level
1	Under $5,000 per year.
2	$ 5,001 - $10,000 per year.
3	$10,001 - $15,000 per year
4	$15,001 - $20,000 per year, etc.

Table 1 also indicates that female subjects were younger than male subjects and have less education, income and IQ, except that black females have a significantly higher IQ than

black males. Analyses of variance for age, income, education, and IQ are reported in Tables 2-5 (see Appendix B).

Table 2 shows significant age differences, $F(1,101) = 8.05$, $p<.01$, based on sex, female subjects being younger than males. Table 3 demonstrates significant differences in family income based on the race, $F(1,101) = 11.15$, $p<.01$, of the subject with blacks having lower incomes. Table 4 shows significant differences in educational level with blacks reporting fewer years, $F(1,101) = 5.50$, $p<.05$, and sex, $F(1,101) = 3.87$, $p<.05$ with females having fewer years.

Table 5 shows a significant difference in IQ with blacks scoring lower than whites $F(1,101) = 39.98$, $p<.001$, and on the interaction between the race of subjects and the sex of subjects, $F(1,101) = 4.87$, $p<.05$, black males being significantly lower than all groups.

Rosenzweig Picture Frustration Test. In order to examine the data relevant to the first hypothesis, i.e., that subjects show less hostility to examiners of the same race as the subject, the three scores obtained on the Rosenzweig Picture Frustration Test were analyzed. The means and standard deviations for all groups are shown in Tables 6 & 7 and the results of the three analyses of variance are reported in Tables 8-10 (see Appendix B).

The analysis for Extrapunitive (E) scores showed significant main effects for race of subjects, $F(1,97) = 4.81$, $p<.05$, and race of examiner, $F(1,97) = 6.14$, $p<.05$. As indicated by Figure 1, these differences reflected the fact that black sub-

Table 6

Mean and Standard Deviation of Extrapunitive, Impunitive and Intropunitive Scores of Experimental Groups for All Administrations

Group	Administration		Extrapunitive (E)			Impunitive (M)			Intropunitive (I)		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	First:	M	10.57	12.64	11.48	6.07	5.00	5.60	6.36	5.91	6.16
		SD	2.85	3.53	3.15	2.34	2.05	2.21	1.91	1.87	1.89
	Second:	M	12.07	12.45	12.24	5.50	4.45	5.04	4.93	6.64	5.58
		SD	2.20	3.01	2.56	1.95	2.20	1.98	1.64	1.75	1.68
2	First:	M	14.20	13.38	13.73	4.00	3.38	3.65	3.50	5.77	4.78
		SD	4.10	2.43	3.16	2.62	1.45	1.96	1.51	2.45	2.40
	Second:	M	13.80	11.38	12.43	5.30	5.46	5.40	3.00	5.54	4.44
		SD	3.19	3.25	3.22	2.54	2.70	2.63	0.94	2.47	1.80
3	First:	M	11.60	10.50	11.18	5.65	5.75	5.69	5.80	7.00	6.25
		SD	2.19	3.06	2.52	1.63	1.91	1.74	1.91	2.52	2.14
	Second:	M	13.10	9.58	11.78	4.90	6.17	5.38	5.35	7.19	6.16
		SD	3.55	3.48	3.54	2.29	1.90	2.14	2.39	2.86	2.57
4	First:	M	13.67	9.88	11.24	4.78	6.06	5.60	4.67	7.19	6.69
			3.54	2.33	2.76	1.48	1.88	1.74	1.94	2.04	2.00
	Second:	M	14.00	11.31	12.28	5.56	6.13	5.92	3.78	5.94	5.16
		SD	5.36	2.80	3.72	2.19	2.03	2.09	2.73	1.73	2.09

Table 7

Mean and Standard Deviation of Extrapunitive, Impunitive and Intropunitive Scores of Experimental Groups by Race of Examiner

Group	Index	Extrapunitive (E)			Impunitive (M)			Intropunitive (I)		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
BBE	M	11.92	11.96	11.94	5.57	5.25	5.50	4.96	5.71	5.34
	SD	2.99	3.38	3.18	2.42	2.40	2.41	1.51	2.20	1.85
BWE	M	12.96	12.95	12.95	4.88	3.80	4.37	4.34	6.17	5.25
	SD	2.99	2.70	2.85	2.23	1.71	1.97	1.59	2.13	1.85
WBE	M	12.34	10.96	11.66	5.62	5.97	5.79	5.17	6.39	5.77
	SD	3.17	2.91	3.04	1.80	1.99	1.89	2.32	2.07	2.12
WWE	M	13.28	9.75	11.54	4.86	6.11	5.48	5.14	7.55	6.39
	SD	3.55	2.82	3.20	2.04	1.89	1.96	2.25	2.39	2.22

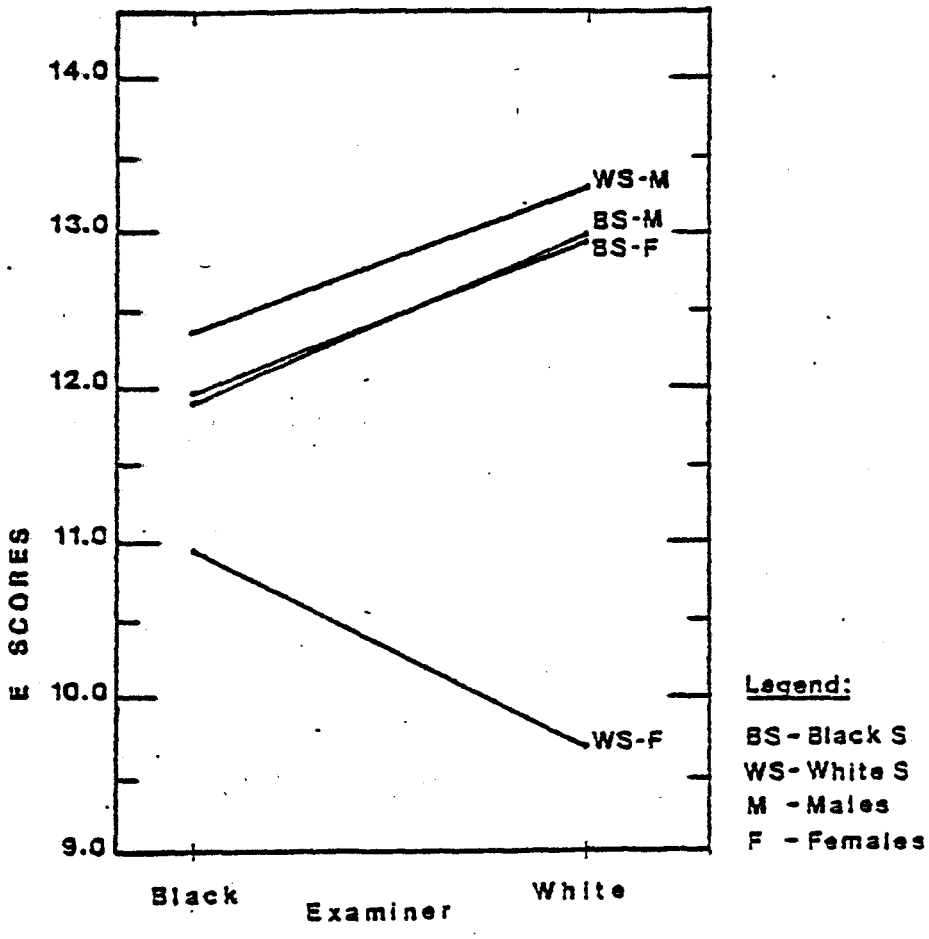

Figure 1. Mean extrapunitive scores of black and white subjects.

jects were more hostile than white subjects and that all subjects tended to obtain higher E scores when tested by the wnite examiner. In addition, the Race of Subject x Sex of Subject interaction was significant, $F(1,97) = 6.84$, $p<.01$, and is attributable to the higher E scores obtained by both groups of males and black females in contrast to the lower scores for white females. The remaining significant interaction involving Sex of Subject x Race of Examiner, $F(1,97) = 5.13$, $p<.05$, indicates that these sex differences were also associated with race of examiner in that three groups (black females and black and white males) obtained lower E scores when tested by the black examiner and higher E scores with the white examiner, while this finding was reversed for the white females.

On the basis of E scores, it is apparent that the hypothesized relationship between the subjects' expression of hostility for the black and white examiners received only indirect support. That is, the interaction for Race of Subject x Race of Examiner, which is crucial in testing this hypothesis, was not significant. However, the interactions obtained involving race of examiner and sex of subject did suggest both male and female black subjects and white female subjects did respond as hypothesized while white male subjects did not.

The second Rosenzweig variable of interest in testing the first hypothesis involved scores for Intropunitiveness (I).

There was a significant main effect for sex of subject, $F(1,97) = 11.34$, $p<.001$, which, when considered in conjunction with Figure 2, indicated that females scored higher in Intropunitiveness than males. The significant main effect for race of examiner, $F(1,97) = 5.74$, $p<.02$, is attributable to the higher I scores for subjects tested by the white examiner. The hypothesized interaction between race of subject and race of examiner was not obtained. However, as in the case of the E scores, there was a significant interaction for Sex of Subject x Race of Examiner, $F(1,97) = 6.02$, $p<.02$. This interaction, as illustrated in Figure 2, indicates that both groups of females gave more intropunitive responses when tested by the white rather than the black examiner with this trend being particularly evident for the white females. In contrast, the white males responded similarly to both examiners and the black males reversed the direction shown by the females. In summarizing the findings for the I scores, there was essentially no support for the hypothesis with only black female subjects showing a non-significant tendency to give fewer I responses when tested by the black examiner than by the white examiner.

The analysis of the scores for Impunitiveness (M) was not directly relevant to the hypothesis but is included for the sake of completeness. As indicated by the results of the analysis of variance shown in Table 10 of Appendix B and Figure 3, the findings again reflected a complex set of effects.

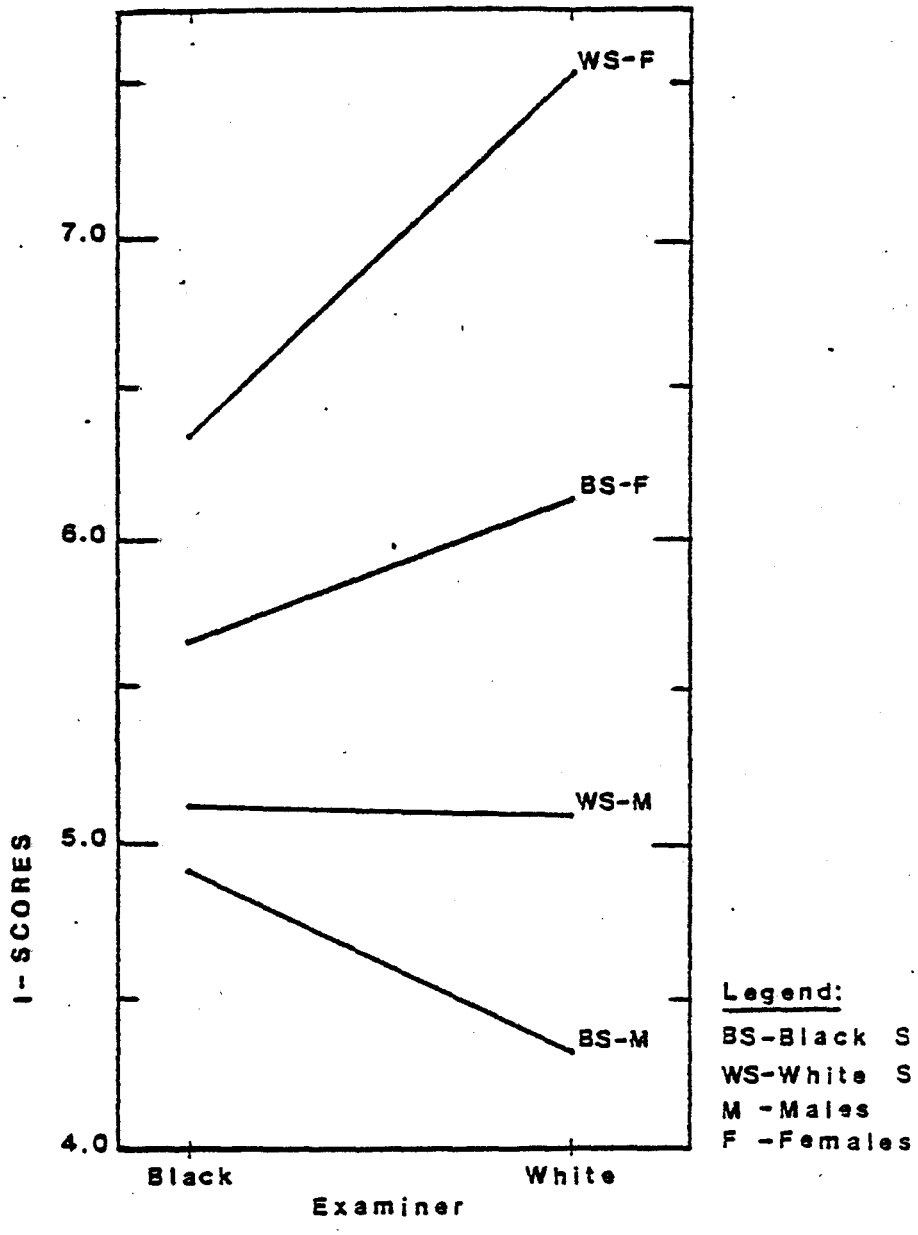

Figure 2. Mean intropunitive scores of black and white subjects.

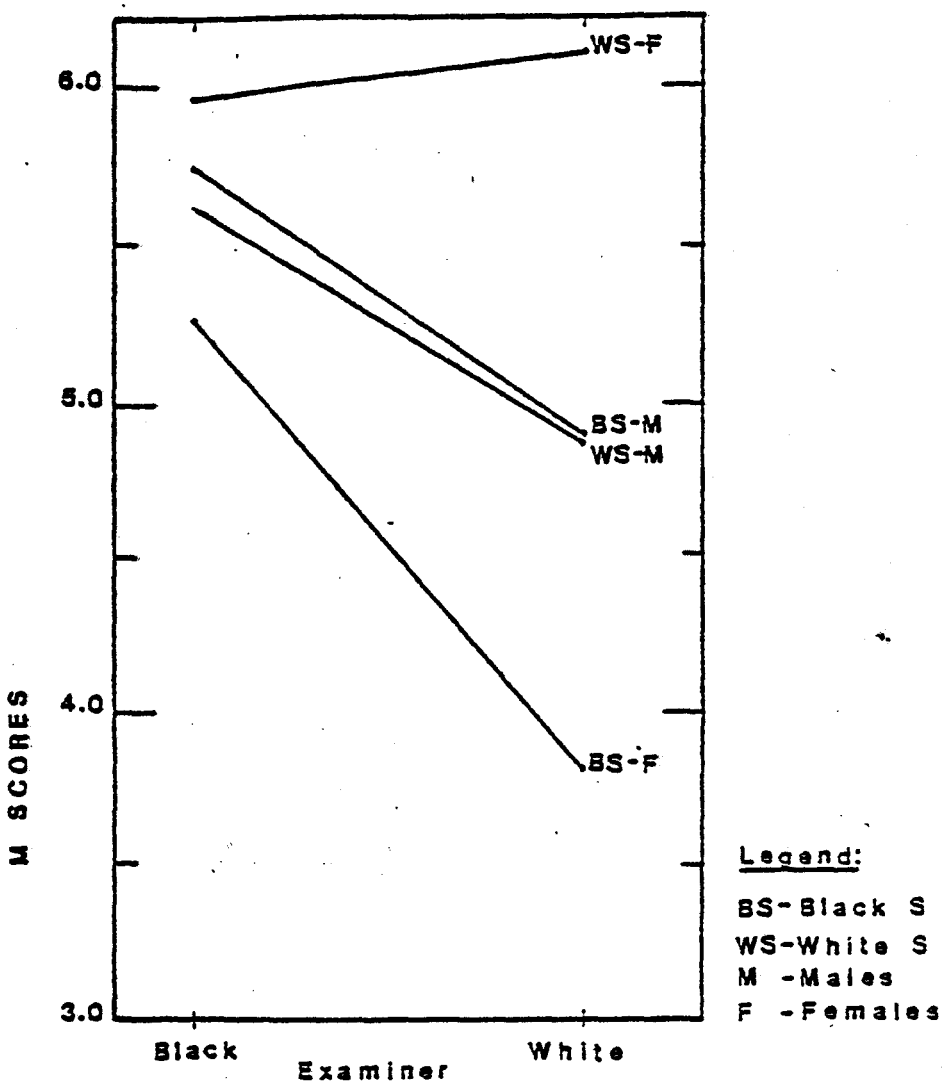

Figure 3. Mean impunitive scores of black and white subjects.

As in the case of the E scores, the main effect for race of subject $F(1,97) = 5.95$, $p<.05$, was significant with white subjects scoring higher than black subjects. The significant main effect for race of examiner, $F(1,97) = 7.49$, $p<.01$, further indicated that subjects' M scores were higher when tested by a black examiner. In addition, the two significant interactions involving Race of Subject x Sex of Subject, $F(1,97) = 3.92$, $p<.05$, and Race of Subject x Race of Examiner, $F(1,97) = 4.06$, $p<.05$, partially mirrored the effects obtained for the Extrapunitive scores. That is, all groups with the exception of the white female subjects were higher on impunitiveness with the black examiner than with the white examiner. Further, the differences in M scores were particularly marked when the test was administered by the white examiner with the white females scoring highest, the black females scoring lowest, and both groups of males being intermediate. To the extent that the M scores reflect lower levels of hostility, the hypothesis for hostility and race of examiner implies that in this instance, subjects should obtain higher M scores when being tested by examiners of the same race. Similar to the findings for E scores, the findings for impunitiveness are consistent with the hypothesis for black subjects of both sexes. As before, the white female subjects showed the clearest divergence from the hypothesis in terms of responding in the same directions as the black subjects while the white male subjects obtained similar scores for both examiners.

Table 11 presents difference scores for the E, M, and I scales. Difference scores were obtained by subtracting the scores obtained with the white examiner from the scores obtained with the black examiner for each subject (BE - WE). Since order of presentation was counterbalanced, the difference scores represent a relatively pure measure of examiner effect; in this study, a measure of the effect of the race of the examiner. If the race of the examiner has no effect upon subject performance, then mean difference scores should depart from zero in a chance fashion. Significant effects due to the black examiner will be reflected in positive mean scores, while the effects due to the white examiner will be reflected in negative mean scores. Thus, in the analysis of variance, a main effect with the race of examiner also represents an interaction, since the race of examiner is measured by the dependent variable, namely, the difference score (BE - WE). The difference scores also provide confirmation of the earlier analysis of variance for first administrations of the Rosenzweig.

Tables 12 to 14 (see Appendix B) show the analyses of variance of the difference scores. Table 12 presents the analysis of variance of difference scores on the E + I scale. There was a significant main effect for sex of subject. Since the dependent variable was based on a difference score between the two examiners there is an implied significant interaction

Table 11

Mean Differences (BE - WE) on E, M, and I Scores

Group	Index	E (BE - WE)			M (BE - WE)			I (BE - WE)		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	M	-1.50	0.18	-0.76	0.57	0.55	0.56	1.43	-0.73	0.48
2	M	-0.40	-2.00	-1.30	1.30	2.08	1.75	-0.50	-0.23	-0.34
3	M	-1.50	0.92	-0.60	0.75	-0.42	0.45	0.45	-0.833	-0.03
4	M	0.33	1.44	1.04	0.78	0.06	0.32	-0.89	-1.25	-1.12
All black Ss	M	-1.04	-1.00	1.02	0.88	1.38	1.13	0.63	-0.46	0.09
All white Ss	M	-0.93	1.21	0.20	0.76	-0.14	0.25	0.03	-1.07	-0.50

between race of examiner and sex of subject, $F(1,101) = 4.06$, $p<.05$. This finding is consistent with the first administration analysis of variance, black females and black and white males obtained lower E scores when tested by the black examiner and higher E scores with the white examiner while this finding was reversed for the white females. The differences are graphically presented in Figure 1.

Table 13 (see Appendix B) shows the results of the analysis of variance for the mean differences scores on the M scale. There was a significant main effect for race of subject. Again, there is an implied significant interaction between race of examiner and race of subject, $F(1,101) = 3.75$, $p<.05$. This finding is consistent with the first administration. The differences are graphically represented in Figure 2. Table 14 (Appendix B) presents the results of the analysis of variances for the difference scores of the I scale. Mean difference scores are based on the Race of Subject x Sex of Subject interaction, this implies a three-way interaction with the race of examiner, $F(1,101) = 8.56$, $p<.01$. The Race of Subject x Sex of Subject interaction is based on white females being significantly different than black males and white males, $t(50) = 3.18$, $p<.01$; and $t(55) = 2.42$, $p<.05$. The sex of subject differences are consistent in this analysis as well as the first administration analysis. Although black females scored lower than all males, the differences were not

significant. The nature of the interactions are graphically presented in Figure 3.

Intropunitive scores represent hostility directed inwardly while extrapunitive scores represent hostility directed toward other people. By combining extrapunitive (E) and intropunitive (I) scores into one score (E + I), one obtains an estimate of overall hostility. The results of the data analysis are graphically portrayed in Figure 4. It is observable that black females and white males responded differentially but not black males and white females. Black female and white male subjects showed more hostile reactions with the white examiner, and white female subjects were slightly hostile with the black examiner.

Tables 15 and 16 present the mean hostility (E + I) scores and Table 17 the difference scores. Tables 18 and 19 (see Appendix B) provide the results of the analysis of variance of the hostility scores on the first administration. The significant interaction between the race of the subject and the sex of the subjects, $F(1,97) = 5.58$, $p<.02$, reflected the fact that black female and white male subjects averaged higher hostility scores (E + I) than white females and black males. Table 19 presents the results of the analysis of variance of the mean difference scores (BE - WE) on total hostility (E + I). Significant interactions in the mean difference scores are between the race and sex of subject and there

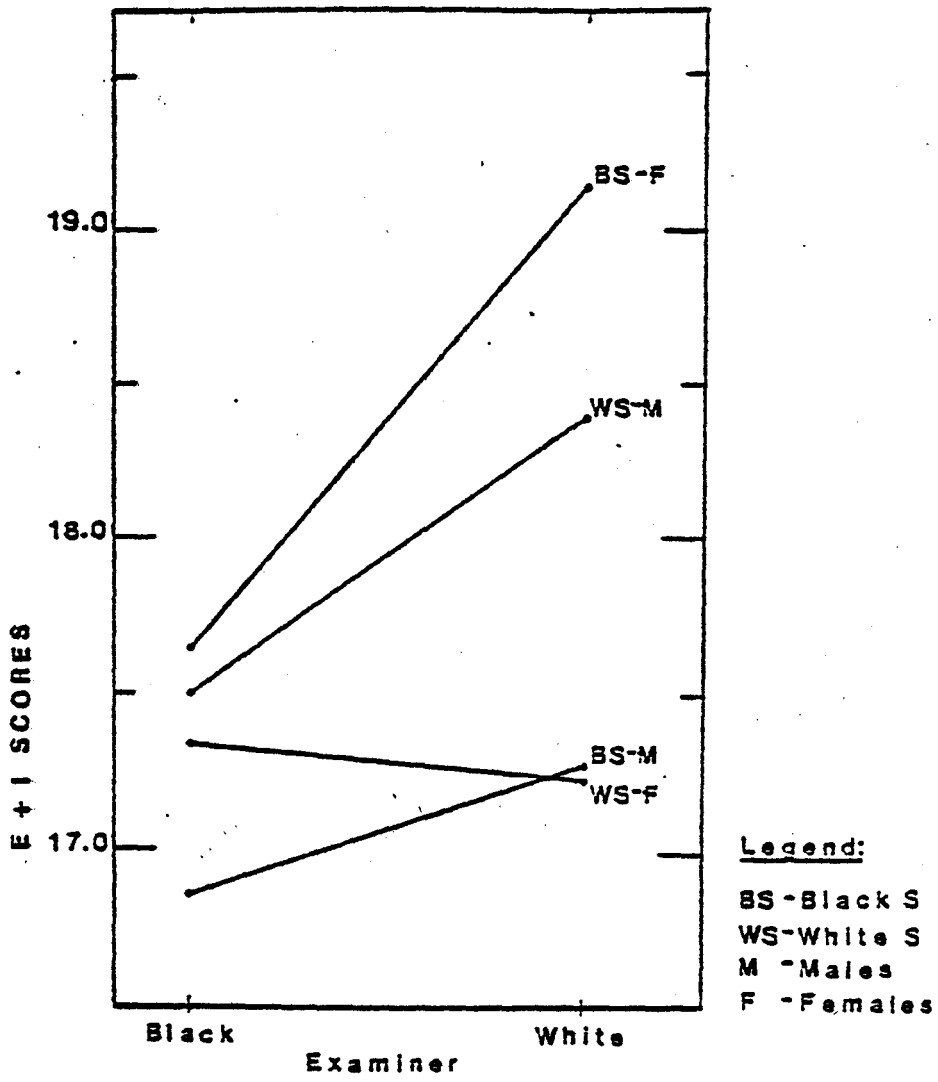

Figure 4 Mean hostility scores [extrapunitive and intropunitive combined] of black and white subjects.

Table 15

Mean and Standard Deviation of Combined Extrapunitive and Intropunitive Scores for Experimental Groups for All Administrations

Group	Index	(E + I)		
		Male	Female	Total
1	First Administration			
	M	16.93	18.54	17.64
	SD	2.23	2.73	2.45
	Second Administration			
	M	17.00	19.09	17.92
	SD	2.08	2.38	2.21
2	First Administration			
	M	17.70	19.15	18.52
	SD	3.59	1.63	2.55
	Second Administration			
	M	16.79	16.92	16.86
	SD	2.78	2.43	2.58
3	First Administration			
	M	17.40	17.50	17.44
	SD	2.06	1.31	1.78
	Second Administration			
	M	18.45	17.41	18.06
	SD	2.52	1.73	2.22
4	First Administration			
	M	18.33	17.06	17.52
	SD	2.69	1.61	1.99
	Second Administration			
	M	17.25	17.25	17.44
	SD	2.99	1.88	2.28

Table 16

Mean and Standard Deviation of Combined Extrapunitive and Intropunitive Scores for Experimental Groups by Race of Examiner

Group	Index	(E + I)		
		Male	Female	Total
BBE	M	16.87	17.66	17.27
	SD	2.46	2.57	2.51
BWE	M	17.29	19.12	18.21
	SD	2.71	1.97	2.37
WBE	M	17.52	17.36	17.44
	SD	2.35	1.64	2.00
WWE	M	18.41	17.25	17.74
	SD	2.57	1.66	2.25

Table 17

Mean Difference Hostility Scores (E + I)

for Experimental Groups

Group	Index	Mean Difference Hostility Score		
		Male	Female	Total
1	M	-0.07	-0.55	-0.28
2	M	-0.91	-2.23	-1.66
3	M	-1.05	0.09	-0.62
4	M	-1.15	0.19	-0.08
All black Ss	M	-0.42	-1.46	-0.94
All white Ss	M	-1.08	0.15	0.39
(BS - WS)	M	0.66	-1.61	-1.33

is an implied three-way interaction with the race of examiner, $F(1,97) = 4.90$, $p = .05$. The interaction is based on black females being significantly different than white females, $t(50) = 2.97$, $p<.01$.

Bogardus Social Distance Scale

Tables 20 to 29 (see Appendix C) and Figure 5 show the results of the data analysis of social distance, as measured by the Bogardus scale. In viewing the data, it should be kept in mind that a score of 1.0 represents a willingness or readiness to intermarry; a score of 2.0, a willingness or readiness to co-exist and interact in all respects, except intermarriage; and a score of 3.0 or more, a readiness to interact on an increasingly restricted basis. A social distance score does not, ipso facto, indicate prejudice or its absence. A score of 2.0, for example, may simply indicate a desire to maintain one's identity. Scores of 3.0 or more, however, may, increasingly, become a factor of prejudice.

Tables 20 to 22 show the means and standard deviations of social distance scores toward blacks, whites, and others. Figure 5 portrays the mean analysis in graphic form. It indicates that males entertain less feelings of social distance than females, and that the difference in attitude between black males and white females is substantially less than between white males and black females. It also depicts black females

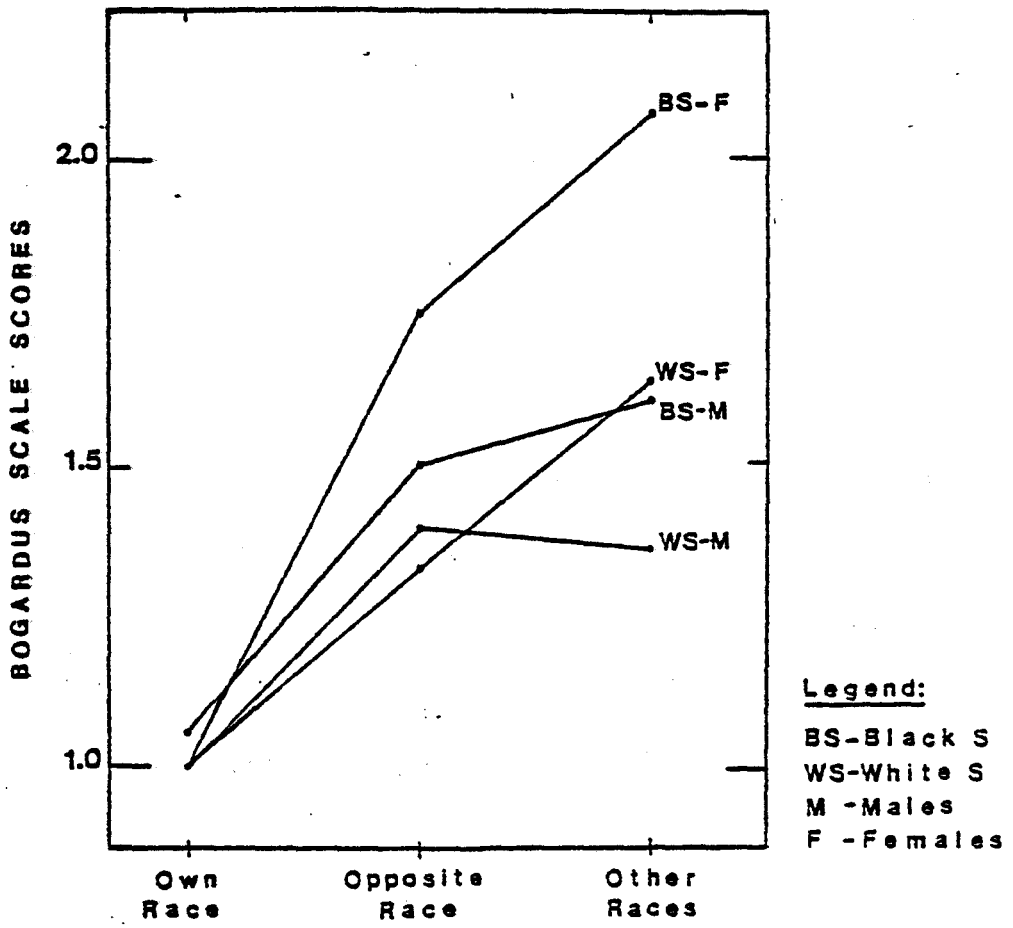

Figure 5. Mean social distance scores of black and white subjects.

as having greater social distance to people not of their own race. It is also interesting to note that blacks appear to accommodate whites more than they do other racial groups.

Tables 23 to 25 (Appendix C) present the results of the analyses of variance on the Bogardus scale scores obtained during the first administration. The analysis showed significant main effects for race of subject, $F(1,97) = 23.72$, $p<.001$; $F(1,97) = 58.48$, $p<.001$; and $F(1,97) = 5.15$, $p<.03$. In general, blacks expressed greater social distance toward people not of their own race than did whites.

Table 26 (Appendix C) shows mean difference Bogardus scale scores (scores obtained by the white examiner) to indicate the effect of the race of the examiner on subjects' responses. Scores which depart from zero in a chance fashion indicate that the race of the examiner has no effect on performance, positive scores indicate an effect due to the black examiner, and negative scores an effect due to the white examiner. Tables 27 to 29 (Appendix C) present the results of the analyses of variance of those difference scores. None of the F tests were significant, indicating that the race of the examiner has no effect on the subjects' performance on the Bogardus scale.

Spielberger State-Trait Anxiety Scales

To examine the data relevant to the second hypothesis, i.e., that subjects show less anxiety to examiners of the same race as the subject, the scores on the State and Trait Anxiety scales were analyzed. Tables 30 to 42, and Figures 6 and 7, present the data on the Spileberger Trait Anxiety and State Anxiety scales. While the Rosenzweig Picture Frustration Test (PFT) was administered twice, the Spielberger scales were administered four times, in two administration sessions. The PFT was administered once by each examiner; the Spielberger anxiety scales were given at the beginning of the sssion, and this testing is referred to as the Before testing, and were given again toward the end of the session, and this testing is referred to as the After testing. Since Before and After were administered by the same examiner, mean differences between Before and After represent an independent and direct measure of the order effect on the performance on these scales.

Tables 30 and 31 show the means and standard deviations on all administrations of the Trait Anxiety and State Anxiety scales. On the State Anxiety scale, a marked order effect can be observed during the first administration. The mean difference between the Before and After is 3.63 for black subjects and 2.29 for white subjects. On the second administration, which represents the third and fourth time the tests

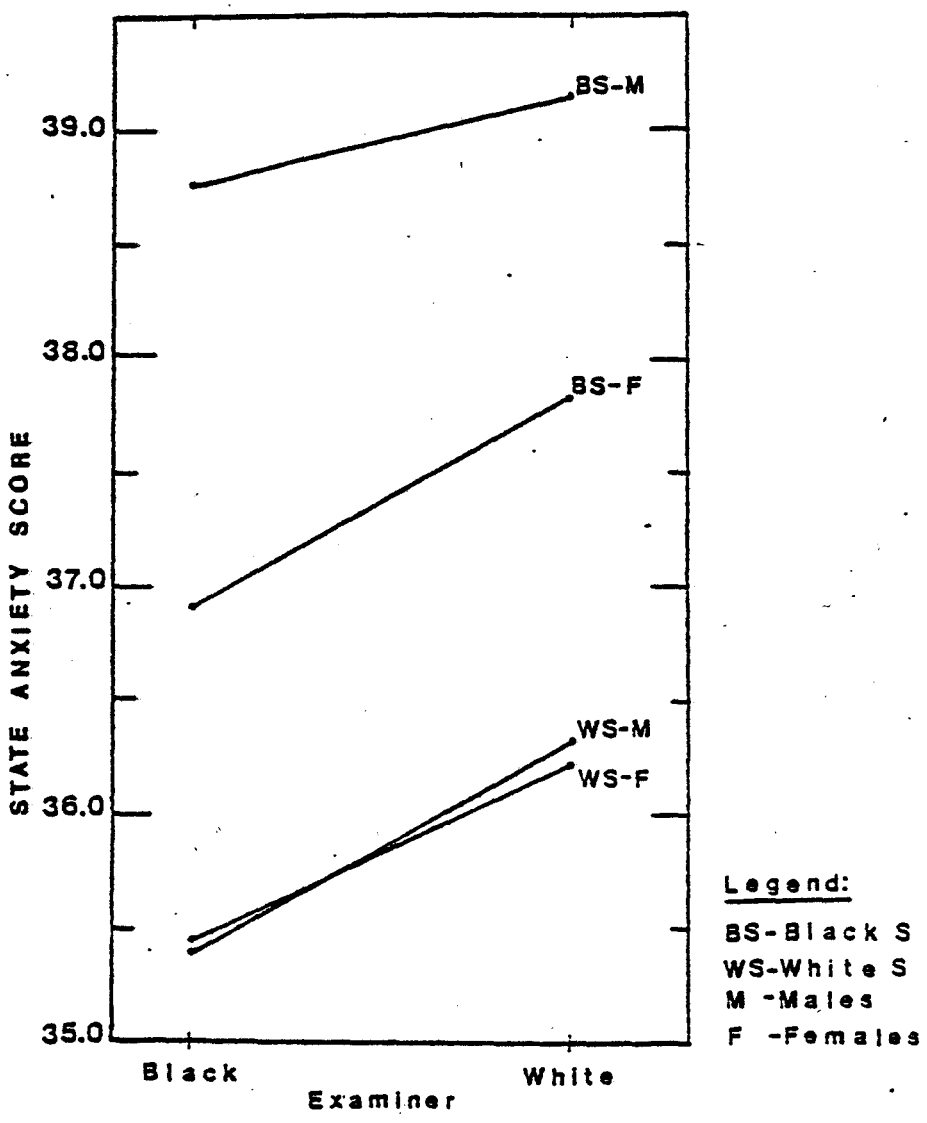

Figure 6. Mean [all administrations] state anxiety of black and white subjects.

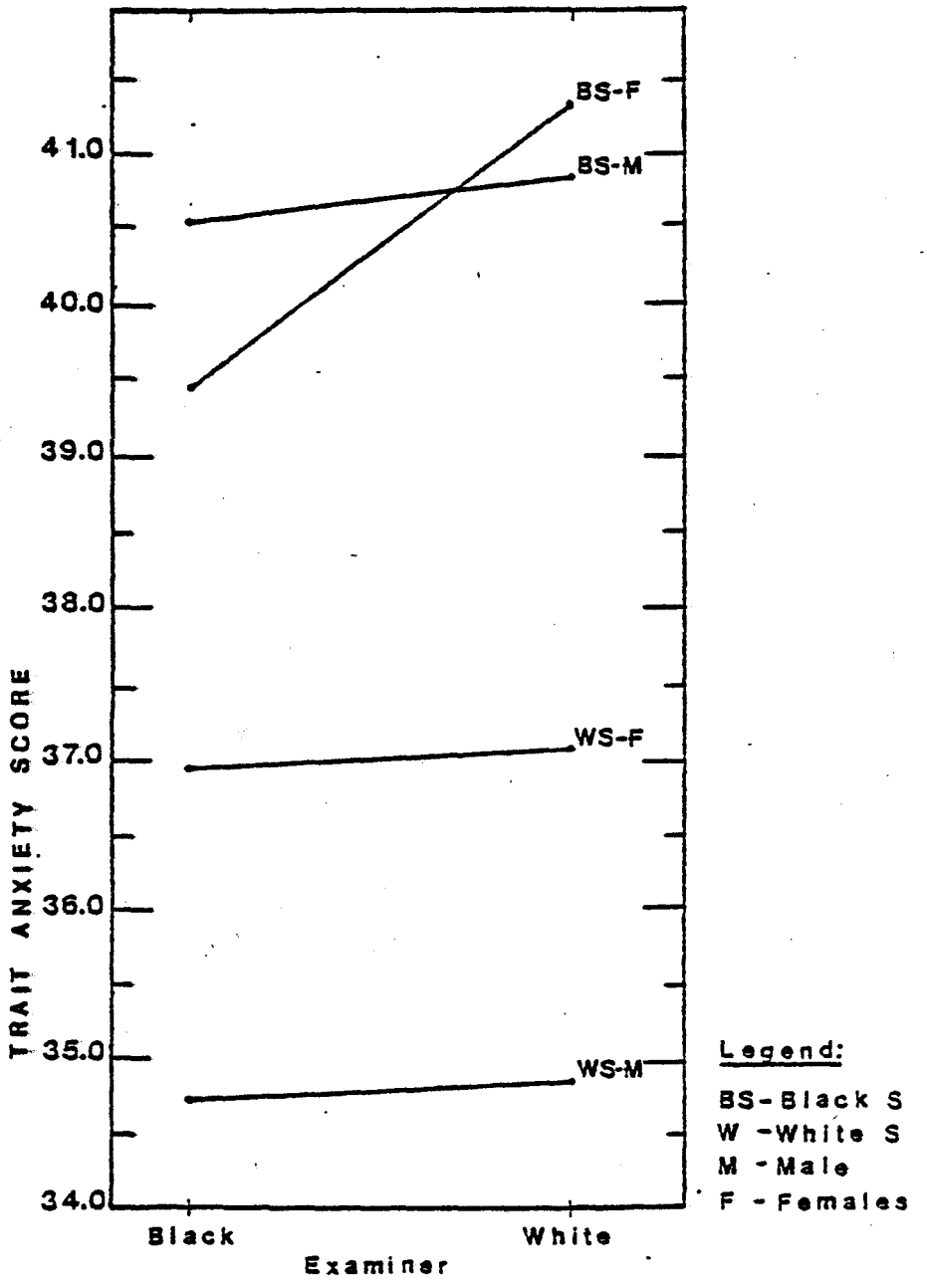

Figure 7. Mean [all administrations] trait anxiety of black and white subjects.

Table 30

Mean and Standard Deviation of State Anxiety Scores

for All Administrations by Experimental Groups

Group	Index	First Administration						Second Administration					
		Before			After			Before			After		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	M	42.00	42.09	42.04	39.21	37.18	38.32	37.86	38.54	38.16	39.00	36.82	38.04
	SD	6.46	10.53	8.25	4.96	10.09	7.22	7.95	7.46	7.73	10.29	10.35	10.32
2	M	42.50	39.31	40.70	37.80	36.62	37.13	37.20	34.46	35.65	35.30	34.77	35.00
	SD	6.95	13.39	10.59	6.51	13.84	10.65	6.83	7.79	7.37	6.38	7.07	6.77
3	M	36.20	32.42	34.78	32.75	32.50	32.66	34.75	29.25	32.69	34.50	29.92	32.78
	SD	7.88	7.65	7.79	8.45	7.51	8.09	12.31	5.94	9.92	14.16	8.03	11.86
4	M	40.89	42.69	42.04	39.22	39.75	39.56	37.11	37.86	37.69	38.00	37.50	37.68
	SD	4.91	7.21	6.38	2.99	8.39	6.45	7.98	8.66	8.42	6.91	8.22	7.75
All black Ss	M	42.21	40.58	41.39	38.63	36.88	37.76	37.58	36.33	36.96	37.46	35.71	36.59
	SD	6.52	11.99	9.26	5.57	12.01	8.79	7.35	7.76	7.55	8.90	8.59	8.25
All white Ss	M	37.66	38.29	37.97	34.76	36.64	35.68	35.49	34.18	34.84	35.59	34.25	34.93
	SD	7.34	8.91	8.11	7.76	8.68	8.21	11.06	8.66	9.89	12.34	8.86	10.01

Table 31

Mean and Standard Deviation of Trait Anxiety Scores

for All Administrations by Experimental Groups

Group	Index	First Administration						Second Administration					
		Before			After			Before			After		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	M	42.21	42.27	42.24	42.93	41.91	42.48	41.00	42.82	41.80	42.00	41.00	41.45
	SD	4.04	7.59	5.60	3.75	7.94	5.59	5.01	7.72	6.20	5.67	9.12	7.19
2	M	40.70	41.77	41.30	39.10	39.85	39.52	37.70	37.31	37.48	37.90	37.23	37.52
	SD	9.15	12.19	10.87	8.17	12.46	10.59	6.86	10.31	8.81	7.53	11.63	9.85
3	M	33.45	34.83	33.97	33.40	34.00	33.38	32.55	33.25	32.81	34.30	32.92	33.78
	SD	9.23	6.94	8.37	10.02	7.27	8.99	10.90	5.50	8.88	13.53	5.73	10.61
4	M	38.33	39.94	39.36	37.78	40.00	39.20	37.11	39.63	38.72	38.22	38.13	38.16
	SD	5.27	4.99	5.09	3.56	3.81	3.72	1.76	4.18	3.31	3.27	4.98	4.36
All black Ss	M	41.58	42.00	41.79	41.33	40.79	41.06	39.63	39.83	39.73	40.29	38.96	39.63
	SD	6.53	10.13	8.33	6.15	10.47	8.31	5.95	9.45	7.70	6.68	10.51	8.60
All white Ss	M	34.97	37.75	36.35	34.76	37.43	36.07	33.96	36.89	35.40	35.52	35.89	35.70
	SD	8.43	6.33	7.40	8.72	6.23	7.50	9.28	5.69	7.52	11.43	5.83	8.68

were given, the differences between Before and After are not significant. On the Trait Anxiety scale, the order effect on the first administration is minimal. The mean difference between Before and After is .73 for black subjects and .28 for white subjects. On the second administration, differences between Before and After were not significant. Thus, on the Spielberger State Anxiety scale, a marked order effect must be taken into consideration when it is first considered. Upon repeated administration, the order effect tends to dissipate. On the Spielberger Trait Anxiety scale, the order effect is minimal. It dissipates completely upon repeated administrations. Tables 32 to 35 further clarify the problem. Tables 32 and 33 present the mean differences between Before and After, and Tables 34 and 35 (see Appendix B) present the results of the analyses of variance of these differences. None of the differences were statistically significant. Thus, the order effect can be assumed to be of the same magnitude for black and white subjects and for male and female subjects. Consequently, when counterbalanced, as in this study, the order effect cannot differentially affect the results.

Since the Spielberger Anxiety scales were given twice by each examiner, mean scores were computed, so that one mean value would be associated with each examiner. This mean value is represented by the average of the Before and After

Table 32

Difference Mean Scores for Before and After State Anxiety for All Administrations

Group	Index	First Administration			Second Administration		
		Male	Female	Total	Male	Female	Total
1	M	2.79	4.91	3.72	-1.14	1.73	0.12
2	M	4.70	2.69	3.56	1.90	-0.31	0.65
3	M	3.45	-0.08	2.13	0.25	-0.67	-0.09
4	M	1.67	2.94	2.48	-0.89	0.38	0.01
All black Ss	M	3.58	3.70	3.63	0.12	0.62	0.37
All white Ss	M	2.90	1.65	2.29	-0.10	-0.07	-0.09

Table 33

Difference Mean Scores for Before and After Trait Anxiety for All Administrations

Group	Index	First Administration			Second Administration		
		Male	Female	Total	Male	Female	Total
1	M	-0.72	0.36	-0.24	-1.00	1.82	0.24
2	M	1.60	1.92	1.78	-0.20	0.08	-0.04
3	M	0.05	0.83	0.34	-1.75	0.33	-0.97
4	M	0.55	-0.06	0.16	-1.11	1.50	0.56
All black Ss	M	0.25	1.21	0.73	-0.66	0.87	0.10
All white Ss	M	0.21	0.32	0.28	-1.56	1.00	-0.30

measures. These average values then served as a basis for comparing performance in assessing the possible effect of the race of the examiner on performance. The average means for all administrations for State Anxiety and Trait Anxiety are presented in Tables 36-39. Tables 40 and 41 (see Appendix B) present the results of the analyses of variance of these measures.

Figures 6 and 7 (see Pages 66-67) present, in graphic form, the results of the data analysis presented in Tables 36 and 37. Figure 6 portrays the data for State Anxiety, Figure 7 for Trait Anxiety. It is evident from the figures that black subjects obtained higher scores than white subjects on both scales, although Table 40 (see Appendix B) indicates these differences are not statistically significant for State Anxiety. Table 41 (see Appendix B) shows a significant race of subject main effect for first administration mean Trait Anxiety scores, blacks averaged higher Trait Anxiety scores than white subjects, $F(1,97) = 9.86$, $p<.01$. Using an average of all scores as a basis for computing differences between subjects, the results show significantly higher scores for black subjects, whether the examiner is black or white, $t(55) = 2.27$, $p<.03$; $t(53) = 2.60$, $p<.01$; $t(55) = 2.00$, $p<.05$; and $t(53) = 2.34$, $p<.02$. The figures also indicate that all subjects scored higher when the white examiner administered the tests. However, Tables 40 and 41 indicate that these differ-

Table 36

Average Before and After State Anxiety Scores with Standard Deviations of Experimental Groups for All Administrations

Group	Index	First Administration			Second Administration		
		Male	Female	Total	Male	Female	Total
1	M	40.61	39.64	40.18	38.43	37.68	38.10
	SD	5.42	8.06	6.58	9.00	8.66	8.85
2	M	40.15	37.96	38.91	36.25	34.62	35.33
	SD	5.54	12.73	9.60	6.37	7.29	6.89
3	M	34.47	32.46	33.72	34.63	29.58	32.74
	SD	7.54	6.98	7.33	13.06	6.53	10.61
4	M	40.06	41.22	40.80	37.56	37.69	37.64
	SD	3.12	7.65	6.02	7.38	8.42	8.04

Table 37

Average Before and After State Anxiety Scores with Standard Deviations of Experimental Groups by Race of Examiner

Group	Index	Mean Before and After		
		Male	Female	Total
BBE	M	38.79	36.92	37.85
	SD	5.82	7.64	6.73
BWE	M	39.15	37.83	38.49
	SD	7.56	10.86	9.21
WBE	M	35.43	35.45	35.44
	SD	7.49	7.80	7.65
WWE	M	36.32	36.23	36.28
	SD	9.98	7.17	8.58

Table 38

Average Before and After Trait Anxiety Scores with Standard Deviations of Experimental Groups for All Administrations

Group	Index	First Administration			Second Administration		
		Male	Female	Total	Male	Female	Total
1	M	42.57	42.09	42.36	41.50	41.91	41.68
	SD	3.68	7.62	5.41	5.22	8.28	6.57
2	M	39.90	40.81	40.41	37.80	37.27	37.50
	SD	8.52	12.01	10.49	7.09	10.87	9.22
3	M	33.42	34.42	33.80	33.42	33.08	33.29
	SD	9.49	6.99	8.55	12.05	5.58	9.62
4	M	38.06	39.97	39.28	37.67	38.88	38.44
	SD	4.32	4.09	4.07	2.36	4.29	3.60

Table 39

Average Before and After Trait Anxiety Scores with Standard Deviations of Experimental Groups by Race of Examiner

Group	Index	Mean Before and After		
		Male	Female	Total
BBE	M	40.58	39.48	40.03
	SD	5.11	9.38	7.25
BWE	M	40.83	41.31	41.07
	SD	6.60	9.30	7.95
WBE	M	34.74	36.97	35.86
	SD	7.28	5.45	6.37
WWE	M	34.86	37.02	35.94
	SD	9.65	4.73	7.19

ences did not reach the level of statistical significance. Since the differences are in the same direction on both scales, it may be possible that the personality of the white examiner had some influence on performance. Tables 40 and 41 show a significant Race of Subject x Race of Examiner interaction on both scales, $F(1,97) = 7.00$, $p<.01$; $F(1,97) = 5.18$, $p<.03$. The basis for this analysis was the mean scores for the first administration. The interaction for State Anxiety is based on the fact that white subjects scored significantly lower than all other groups when the examiner was black, $t(55) = 3.87$, $p<.001$; $t(55) = 3.38$, $p<.001$; and $t(53) = 2.70$, $p<.01$. These t tests are comparing respectively, whites with a black examiner first administration, to whites with a white examiner, blacks with a black examiner and blacks with a white examiner first administration.

Figure 6 suggests that black females are less anxious than black males on the State Anxiety Scale and this difference is more pronounced when the test is administered by a black examiner than when it is by a white examiner. Table 40 indicates that this difference is not statistically significant. Figure 7 suggests that black females are less anxious than black males on the Trait Anxiety scale when the test is administered by the black examiner and more anxious than black males when the test is administered by the white examiner. The figure also indicates that white females are more anxious

than white males with both examiners. Table 41 indicates that these differences are not statistically significant.

The results for the anxiety scales did not support the hypothesis that subjects would score less tested anxiety with an examiner of the same race. Black subjects did score less anxiety on both scales with the same race examiner, but the difference was not statistically significant.

Table 42 presents the difference average means on State and Trait Anxiety between scores obtained by the two examiners. The white examiner scores were subtracted from the black examiner scores (BE - WE). Tables 43 and 44 (see Appendix B) show the results of the analyses of variance of these difference scores. None of the F tests were significant. These findings were consistent with first administration findings and suggest that the race of the examiner had no effect on the subjects' performance on the State and Trait Anxiety scales and that any effect which the white examiner had on the subjects' performance on these scales may be due to his personality.

Table 42

Mean Differences Between Black and White Examiners' Scores (BE - WE) on State and Trait Anxiety Scales with Standard Deviations

Group	Index	State			Trait		
		Male	Female	Total	Male	Female	Total
1	M	2.18	1.95	2.08	1.07	0.18	0.68
	SD	7.63	8.31	7.93	3.88	4.39	4.10
2	M	-3.90	-3.35	-3.59	-2.10	-3.54	-2.91
	SD	9.40	8.92	9.13	5.59	4.08	4.74
3	M	-0.15	2.88	0.99	0.00	1.33	0.50
	SD	9.66	6.73	8.56	3.90	2.38	3.33
4	M	-2.50	-3.53	-3.16	-0.39	-1.09	-0.84
	SD	9.42	8.31	8.71	3.59	2.11	2.64
All black Ss	M	-0.35	-0.92	-0.64	-0.25	-1.83	-1.04
	SD	8.77	8.88	8.83	4.82	4.55	4.69
All white Ss	M	-0.88	-0.79	-0.84	-0.12	-0.05	-0.09
	SD	9.48	8.20	8.85	3.75	2.50	3.14

CHAPTER V

DISCUSSION

The hypotheses of this study were: (1) subjects show less hostility with examiners of the same race as measured by the intropunitive and extrapunitive scores of the Rosenzweig Picture Frustration Test; and (2) that subjects show less anxiety with examiners of the same race as measured by the Spielberger State and Trait Anxiety Scles.

It was discovered that all male and female black subjects and white female subjects responded as hypothesized; white males did not. Female and black male subjects gave more E scores when the examiner was of the opposite race.

For intropunitive (I) responses, it was found that males and females responded differentially to the race of examiner. Black and white males gave fewer I responses than females, regardless of the race of examiner. Furthermore, females gave more intropunitive responses to the white examiner and males gave more intropunitive responses to the black examiner. Although, it was white females who were responsible for the significant interaction. In both cases there was no Race of Examiner x Race of Subject interaction, but there were significant Sex of Subject x Race of Examiner interactions.

With respect to the hostility scores (E + I) it was found that white males did not give fewer E + I responses to the examiner of the same race. Black males did and black females showed very hostile reactions when the examiner was white. White females showed more hostile reactions when the examiner was black. The differences between subjects was based on black females being significant different than white females.

For impunitive (M) scores, it was found that white subjects tended to score higher than black subjects. It was also found that subjects tended to give higher M responses when the examiner was black, with the exception of white females. With the white examiner, white females scored highest, the black females scored lowest and both groups of males were intermediate.

In sum, the results of this study indicated that female subjects and black males gave more outward-directed expressions of hostility when the examiner was of the opposite race. Females gave more inward-direct expressions of hostility than males. Females gave more blameless responses when the examiner was of the same race, while both races of male subjects gave fewer M responses to the white examiner. Black females and white males averaged higher E + I scores than black male subjects and black female subjects, but, both races of females gave higher E + I responses to the examiner of the opposite race, though the differences were not significant.

That females reacted to the race of examiner may be understandable. The literature does not address itself to this phenomenon directly, but it provided findings which shed some light on the problem.

Stevenson and Allen (1964) used eight male and eight female experimenters in conducting a marble sorting task with 128 male and 128 female college students. They found that when male experimenters interacted with female subjects and when female experimenters interacted with male subjects, significantly more marbles were processed than when the experimenter and subject were of the same sex. They explained this effect in several ways, one being a greater desire to please when the experimenter was of the opposite sex.

Friedman (1964), Katz (1964) and Exline (1963), in spite of differences in group composition, experimental procedures and means of measuring glancing behavior in their experiments, found that female subjects drew about 2.4 to 2.9 times as many glance exchanges as males did from male experimenters. One conclusion from these results was that female subjects seem to be treated more attentively and more considerately than male subjects by male experimenters.

In an unpublished experiment reported in Rosenthal (1966), the experimenters (12 males and 2 females) were rated by the subjects on how well they were liked. Female subjects rated their male experimenters as being more friendly. Filmed inter-

actions between experimenters and subjects showed that male experimenters behave more warmly than female experimenters when the subjects are primarily female.

In the opinion of this experimenter, females reacted to the race of examiner as if he were a potential mate or, more basically, someone to please. It is, perhaps, not so much that females were more hostile to the opposite-race examiner, as they were more positively oriented to the same-race examiner. This may explain the racial differences seen in the hostility scores. Moreover, many of the subtle behaviors (glancing, smiling, and attentiveness) by male examiners toward female subjects may not be present if the subject is of the same race. The studies cited above did not provide information on the composition of their samples; consequently, one can only speculate. It is felt that, either consciously or subconsciously, the presence of a professional, possibly attractive, male, constellates in the female a desire to be appealing and considerate. It is also interesting to note that female subjects of both races gave more blameless responses to the same-race examiner; this and the findings on the Bogardus (SDS) tend to support the above interpretation. On the Bogardus (SDS), it was found that females expressed greater social distance to groups other than their own, with black females expressing the greatest social distance. Black women responded to the question, "Would marry into the group,"

by marking the number "1" for their own group, indicating an absence of social distance. For whites, they scored close to "2", meaning "Would have as close friends;" and for the other category, more than "2", indicating that they "Would have them as next door neighbors." On the other hand, white females scored closer to the number "1" for both, "Blacks and others." Findings on the Bogardus (SDS) suggest that black women are positvely oriented toward members of their own race, and are seemingly willing to exhibit a more positive attitude when confronted with a black man. This is also true for white women with regard to white men.

There are findings in the literature that suggest the hypothesis that blacks would tend to give higher hostility responses to the white examiner than the black examiner (Donnerstein and Donnerstein, 1971; and Gentry, 1972). Earlier studies in the 1950's and 1960's demonstrated that blacks were reluctant to express outward aggression toward whites (Winslow and Brainerd, 1950; McCary, 1956; and Katz, et al., 1964). It may be the newfound freedom of blacks, initiated during the "Black Revolution" of the 1960's, that has ceased to inhibit blacks in terms of how they relate to whites (Jones, 1972). This may account for the black males giving higher E responses to the white examiner than to the black examiner.

It has been documented in several articles that males are more aggressive than females (Devi, 1967; Feshbach, 1969; Oetzel, 1966). It is therefore not surprising that females would score higher on the intropunitive scale than males. Researchers have stated that females have been historically forced into the "female role" of passivity and femininity. There have always been cultural mores which have discouraged females from being outwardly aggressive. Though this tends to be less true for black females.

The hypothesis that subjects with an examiner of the same race would have lower tested anxiety was not statistically proven. On the anxiety scales, black subjects tended to express more anxiety than white subjects, regardless of the race of the examiner, although the level of significance was only for Trait Anxiety. All subjects expressed more anxiety in the presence of the white examiner. There were indications in the literature review that blacks scored higher than whites on tests of anxiety. Hawkes and Koff (1970) combined items from the Children's Manifest Anxiety Scale and the General Anxiety Scale for Children. The new test was then administered to 211 fifth and sixth graders of middle to upper class backgrounds. In this group there were 90 white boys, 90 white girls, nine black boys, eight black girls, nine Oriental boys and five Oriental girls. The second group was comprised of 114 black boys and 135 black girls from the inner city; 20 percent of these children were on Aid to Dependent Children

programs. It was found that, with grade and sex held constant, the inner city school children scored higher in anxiety. Examining the sex variable, they found that girls scored higher on anxiety than boys. Unfortunately, this study did not describe the number or sex of the administrators.

Hawkes and Furst (1971) replicated the above study, utilizing 1,201 children from a large eastern city. The subjects were fairly evenly distributed between black and white boys and girls in the fifth and sixth grades. The anxiety scale from the Hawkes and Koff (1970) study was again used. It was found that blacks from low socioeconomic backgrounds had greater anxiety than whites from high socioeconomic backgrounds. It was also discovered that girls of both races had more anxiety than boys. Again, no description of examiners was provided.

Palermo (1959) had the teachers of 61 black boys, 75 black girls, 207 white boys and 187 white girls administer the Children's Manifest Anxiety Scale to their respective classes. It was found that black and white girls tended to score higher than males in their respective racial groups and black subjects scored higher than white subjects for both sexes. Researchers related these findings to blacks coming from more stressful environments than whites. These studies were done with children, but it may be possible that, as blacks grow older, they continue to feel anxious about their life situations, particularly when in the presence of whites.

These findings highlight the fact that blacks do have more anxiety than whites. Because anxiety denotes stress and discomfort, clinicians must be concerned about this. Psychologists and sociologists must investigate the reasons why blacks are more anxious than whites, and take steps to ameliorate the conditions that cause this phenomenon.

The specific findings of this research must not be over-generalized. The subjects for this study were college students at two universities composed of a multi-ethnic student body. It is quite conceivable that identical research procedures at different universities or with non-college populations would result in different specific findings.

The findings of this research concur with McQuigan's (1963) third alternative as to what effect experimenters may have on research. This alternative stated that the experimenter may differentially affect differences between treatment groups or subjects in the same study. In this study it can be seen that females and black males reacted differently to the race of the examiner than white males on the Picture Frustration Test. On the Spielberger, there was no race of examiner effect.

Further Considerations of This Study

There are several factors which need to be considered when doing research of this nature. This study was an explor-

atory study and future research must consider the effects of the examiner's personality. While personality may have some effect, it may be overridden by the race of the examiner.

This research utilized two examiners, one black and one white, and well matched in terms of physical stature, background and training. It did not become evident that this design may have confounded race and personality until after the data were analyzed. It was not feasible to add additional subjects and examiners because the subject pools had been exhausted at the two universities. To add schools from other areas would further confound this research in terms of geographical locations and socioeconomic backgrounds. Future research in this area may use more examiners to random out personality differences, particularly when many subjects are available and geographical location and socioeconomic status can be controlled. It must be also taken into consideration that the more independent variables you have, the more unmanageable the data become.

Research of this nature was more complex than originally thought, because of different interactions. Experimenters will have to cease considering that there is a single constant effect and be prepared for the possibility of many different interactions.

It would also be desirable to explore the universe of tests and other instruments in order to determine which tests

and instruments are affected by the race of examiner variable, the magnitude of the effect, and the circumstances under which the effect becomes manifest. One must be aware of the order effect of standardized and unstandardized tests. The order of presentation of tests, as well as the repetition of a test, may influence the data.

It is obvious from the results of this research that the sex of the examiner and the sex of the subject must be considered in future research as well as in clinical practice. The findings in this research demonstrated a Sex of Subject x Race of Examiner interaction more so than a Race of Subject x Race of Examiner interaction. Future research should include several examiners of both races and sexes. Rosenthal (1966) has stated:

> An experiment employing male and female subjects is likely to be a different experiment for the males and for the females. Because experimenters behave differently to male and female subjects even while administering the same formally programmed procedures, male and female subjects may, psychologically, simply not be in the same experiment at all (p. 56).

Since the findings may be population-specific, the populations from which samples are drawn should be clearly described in future research. Furthermore, in future research, researchers may wish to sample different populations in a deliberate fashion.

Summary and Conclusions

The primary purpose of this study was to investigate the interactive effects of the race of examiners and the race of subjects in a projective personality assessment situation. Special attention was given to the relationship between the examiner effect and hostility and/or anxiety in subjects of the opposite race. From the review of the literature, it appeared that many studies concerned themselves with the effect of the race of examiner when the examiner was white and the subject was black. Few studies focused on anxiety and hostility. Studies that investigated hostility indicated that blacks studied in the 1950's and 1960's tended to exhibit inner-directed aggression, while blacks studied in the 1970's tended to exhibit outward-directed aggression.

In this study, 105 black and white, male and female, subjects were group-tested by both a black and a white examiner. The race of the examiner was counterbalanced for order effects. Each subject was first administered the Spielberger State-Trait Anxiety Inventory, then the Shipley Institute of Living Scale for Measuring Intellectual Impairment, and the Bogardus Social Distance Scale. After the completion of these scales, the subjects were administered the Rosenzweig Picture Frustration Test, Adult Form, the Spielberger Anxiety scales again, and, lastly, a short demographic questionnaire. Subjects returned one week later and were retested by the same

procedure, except that the Shipley scale and the demographic questionnaire were not administered. Results indicated that "race of examiner" had no effect on the performance on the Spielberger anxiety scales and the Bogardus Social Distance Scale, and some effect on the performance on the Rosenzweig Picture Frustration Test.

More specifically, it was found that female subjects responded with more intropunitive (inwardly-directed) hostility than males. Female and black male subjects gave higher extrapunitive responses when the examiner was of the opposite race. Females gave more blameless responses when the examiner was of the same race. More general hostility (intropunitive and extrapunitive) was exhibited by females when the examiner was of the opposite race, though this finding was not significant.

The results indicated that "race of the examiner" is not a universally effective variable but may affect performance on specific tests, instruments, and procedures, and possibly, differentially, depending on specific situations and populations. Results also indicated the importance of considering the sex of subject and examiner in research of this nature.

These results were further interpreted as indicating that females are more positively oriented toward the examiner of the same race. Whereas, the "Black Revolution" of the 1960's may be responsible for the now non-passive approach that black

males outwardly exhibit toward whites. It was suggested that the social and cultural mores that have historically dictated the female role to be one of femininity and passivity, account for their greater number of intropunitive responses. That blacks are generally more anxious than whites was attributed to the more stressful living conditions for black people and that psychologists and sociologists should be concerned about the conditions that cause this increased anxiety.

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APPENDIX A

"SO YOU'RE LOOKING FOR PERSONAL GROWTH, HUH?"

"One hundred subjects are needed for some interesting and innovative psychological testing, utilizing several personality tests. Names will not be used in the analysis of the data, and all results will be confidential. This is a two-part study, covering a period of roughly one week; that is, if you show up for the first session, you must also show up for the second, or no credit will be given. Each subject will earn two credits for this experiment. If you have read this far, you are most probably interested, in which case, leave the information requested below. Those subjects interested in their results will receive them by request. Return in two days to determine the time and location of your participation. Thank you."

After a number of subjects had signed up for this experiment, they were randomly assigned to either the black or white examiner for the first session of testing. This was done until enough subjects had volunteered for the experiment. Upon arrival at the testing site, which was a classroom at California State University, Los Angeles, subjects were given the following instructions:

Instructions

1. Take a folder, and note the number in the upper right-hand corner. On the sign-in sheet, I would like you to write your name adjacent to the number that you have been assigned. As you recall, when you volunteered, names will not be used in the analysis of the data. The purpose of this sign-in sheet is to identity you (to the professor) for credit. Please do not sign your name on anything else, unless it is requested of you.

2. I would like you to note the material on the board. (Depending upon which examiner administered the test first, there was one of two alphabets.) First, I would like you to put this alphabet on the upper right-hand corner (outside) of your folder. Using the appropriate numbers, indicate your sex and race. (Each examiner used himself as an example to illustrate what the code should look like.)

3. Instructions were given to take out certain items at the time they were needed and to close the folders. (This was further illustrated by examiners holding up the necessary items, and saying something to the effect of, "Does everybody have one?" or, "The form you need now should look like this," etc.) Also, instructions were given not to write on any forms unless requested of them. Instructions for each form were read prior to its completion by the examiner, and if there were any questions these were entertained after the reading of instructions. Subjects were encouraged to read along. Depending upon the nature of the question, the instructions or procedure was either repeated or the question was answered in a succinct manner (e.g., "You want us to write the number or write the word out?" Reply: "Just the number", etc.)

4. If questions of content arose during the completion of tests, the reply was, "Answer to the best of your ability" or, "Put whatever your feelings dictate".

5. Instructions were read directly from each item in the prescribed order. An exception being the Spielberger; "Blacken in appropriate answer" was replaced by, "Indicate on the answer sheet provided".

Name_____ Age_____ Birthday_____

Address_____ Education _____

Institution_____ Present Date _____

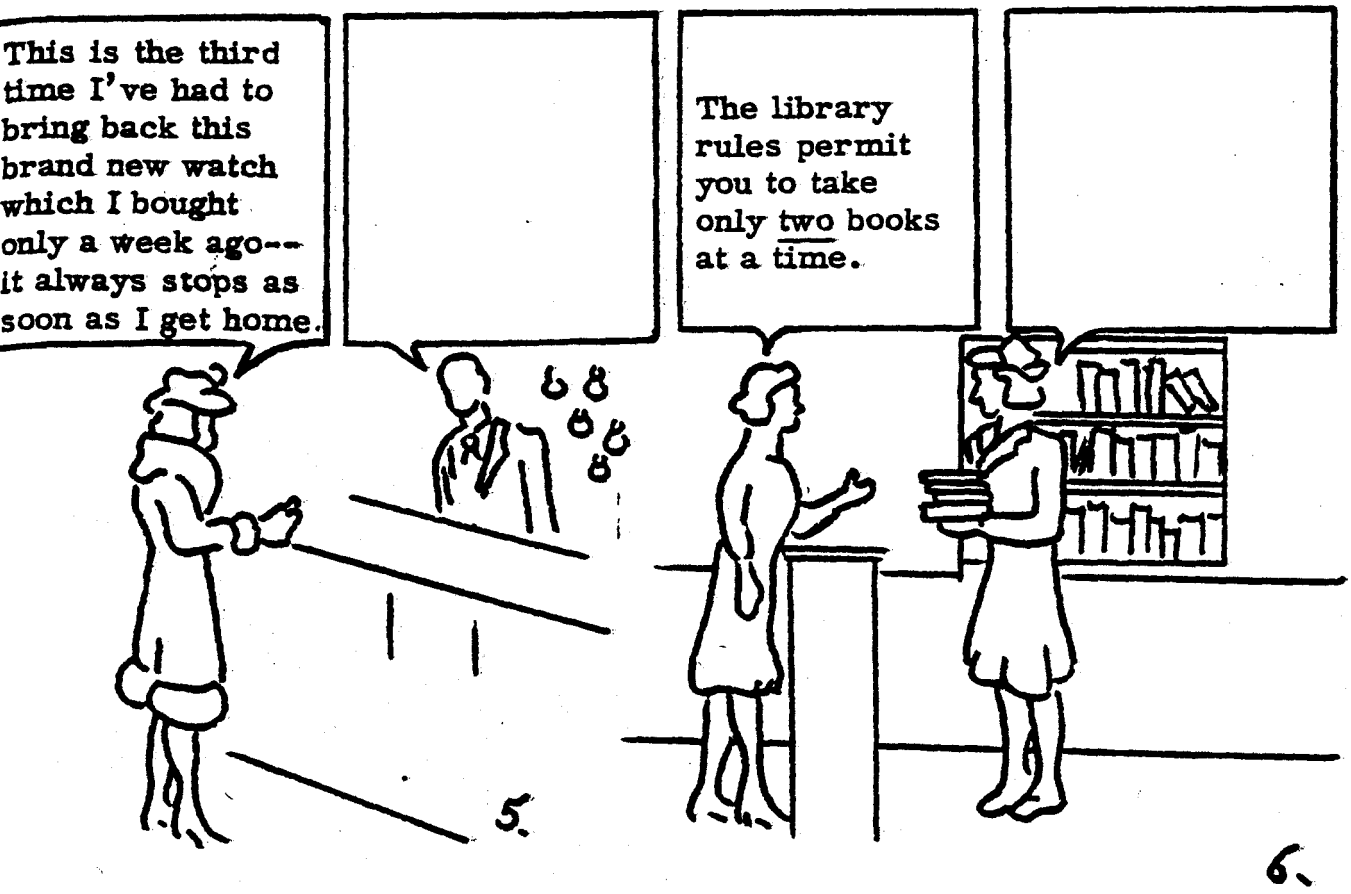
ROSENZWEIG P-F STUDY

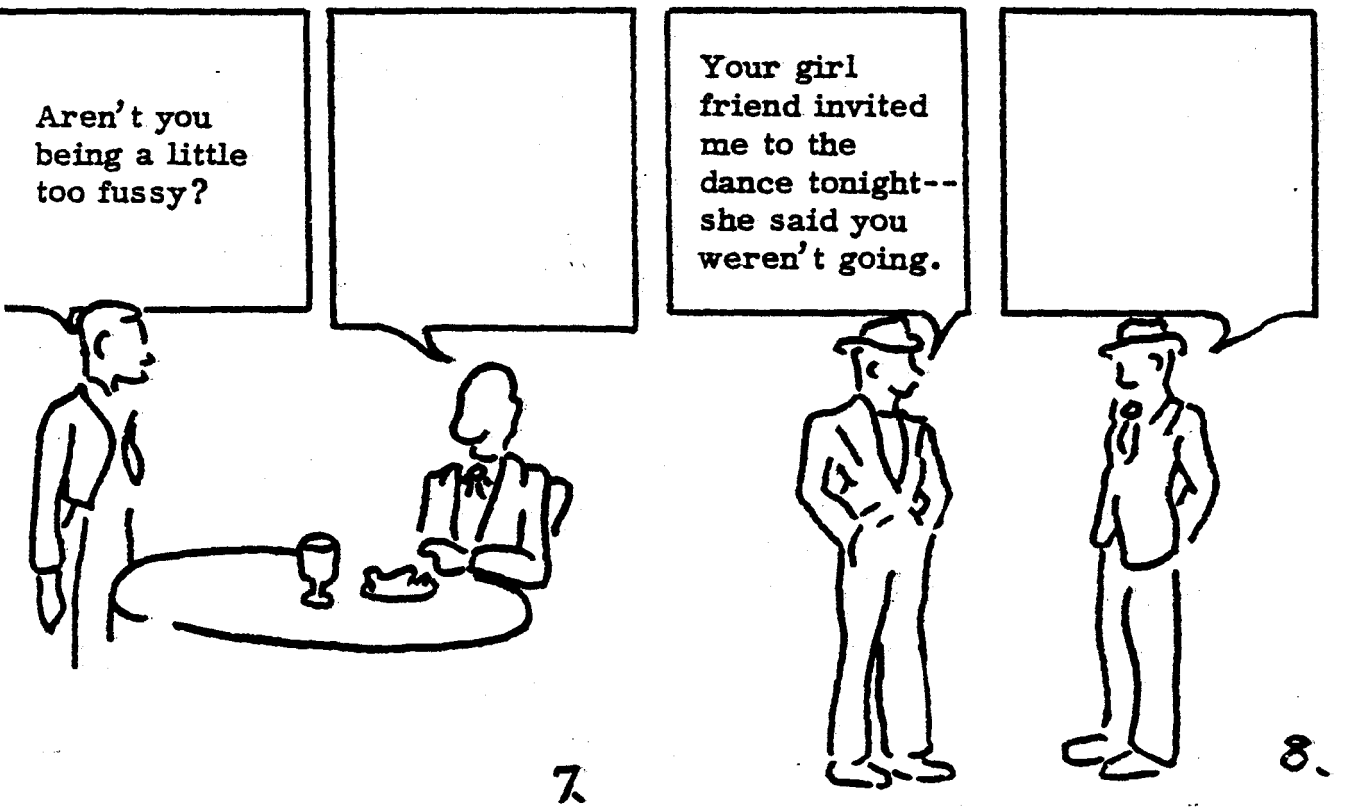
(Revised Form for Adults)

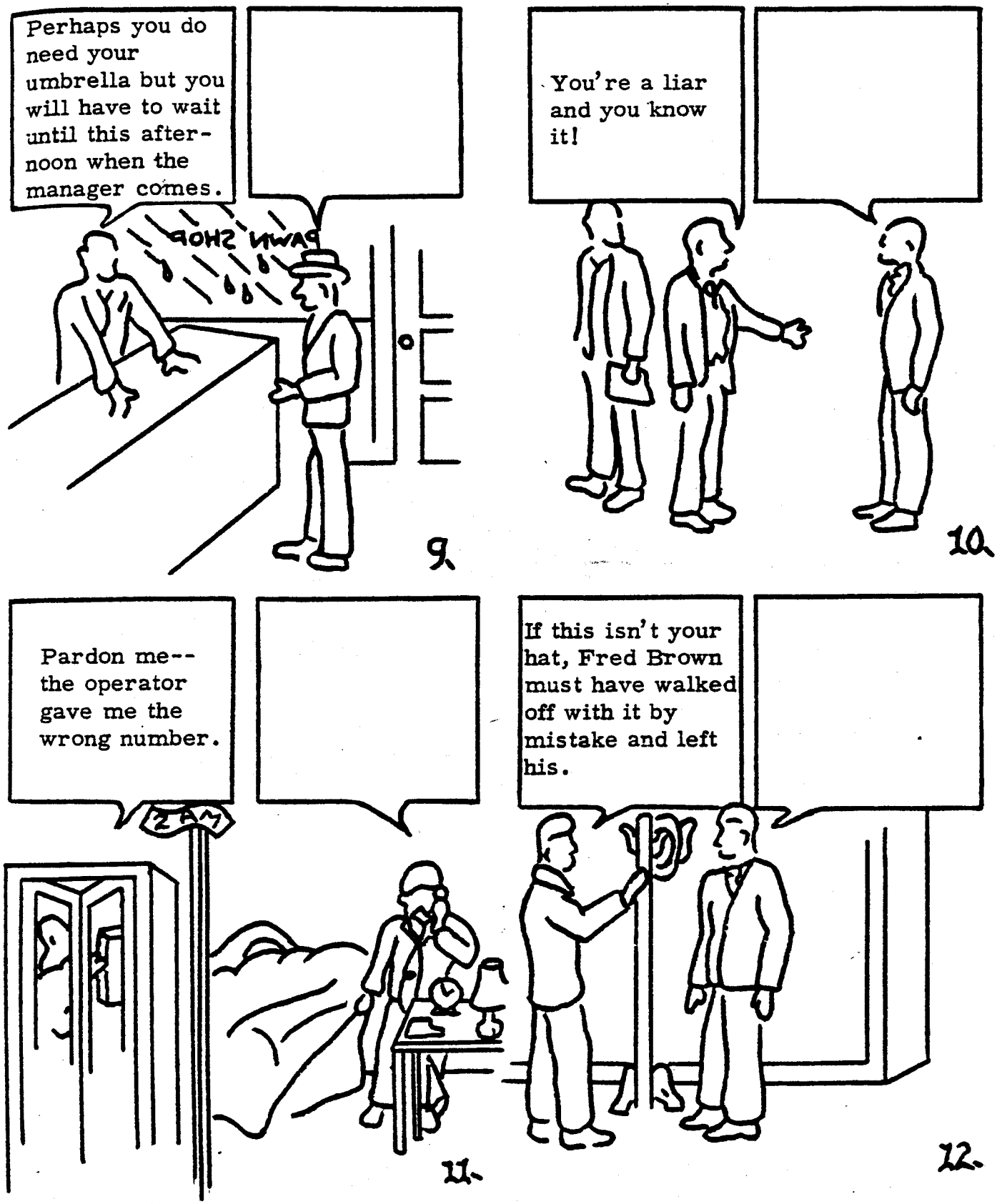
Instructions

In each of the pictures in this leaflet two people are shown talking to each other. The words said by one person are always given. Imagine what the other person in the picture would answer and write in the blank box the very first reply that comes into your mind. Work as fast as you can.


I'm very sorry we splashed your clothing just now though we tried hard to avoid the puddle.
1.
How awful! That was my mother's favorite vase you just broke.
2.
You can't see a thing.
3.
It's a shame my car had to break down and make you miss your train.
R.R.STA
4.

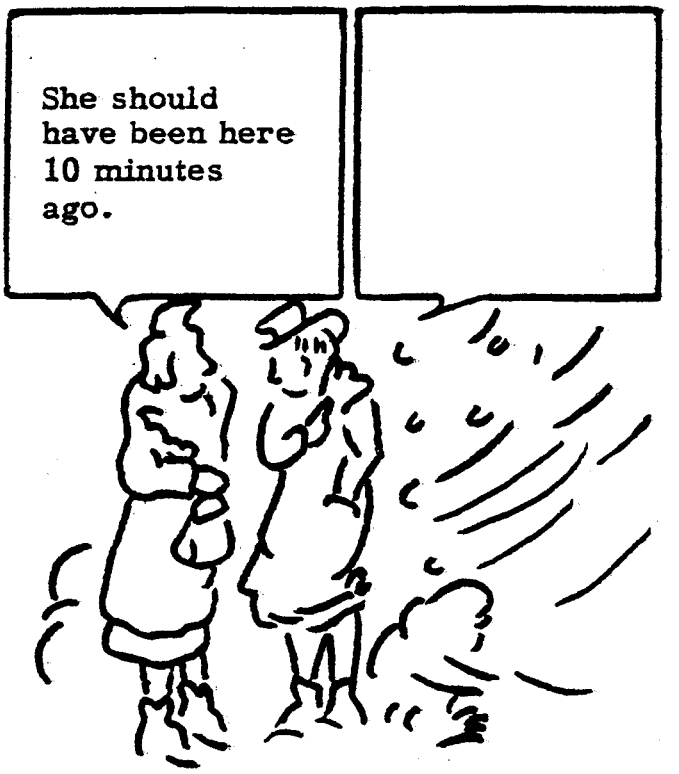

This is the third time I've had to bring back this brand new watch which I bought only a week ago-- it always stops as soon as I get home.
5.
The library rules permit you to take only two books at a time.
6.


Aren't you being a little too fussy?
7.
Your girl friend invited me to the dance tonight-- she said you weren't going.
8.

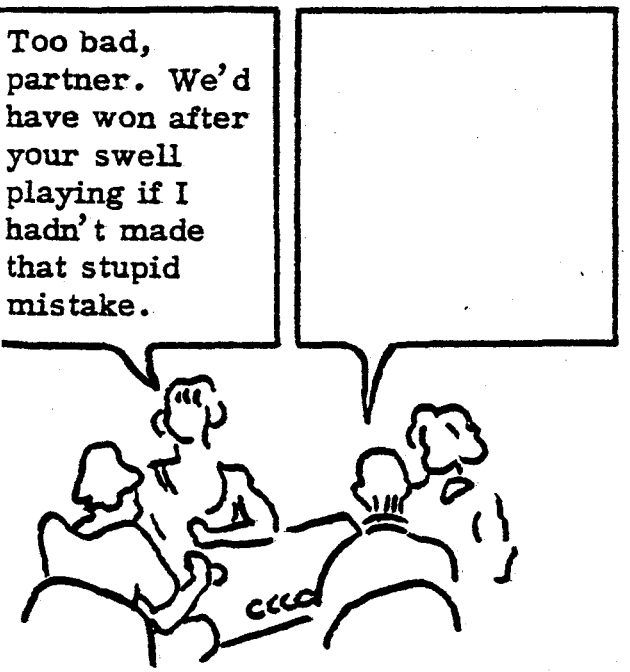

Perhaps you do need your umbrella but you will have to wait until this afternoon when the manager comes.
9.
You're a liar and you know it!
10.
Pardon me--the operator gave me the wrong number.
11.
If this isn't your hat, Fred Brown must have walked off with it by mistake and left his.
12.


I can't see you this morning even though we made the arrangement yesterday.

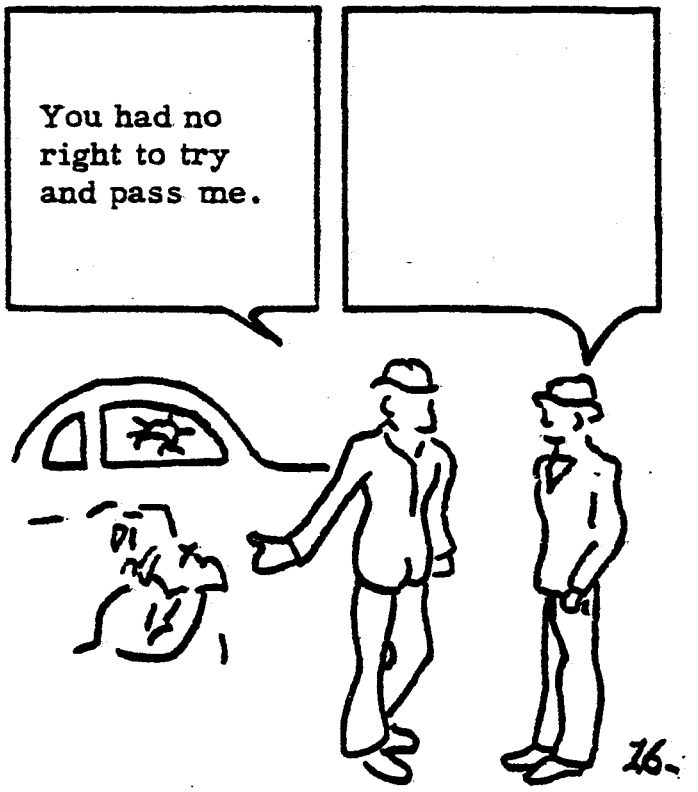
13.


She should have been here 10 minutes ago.

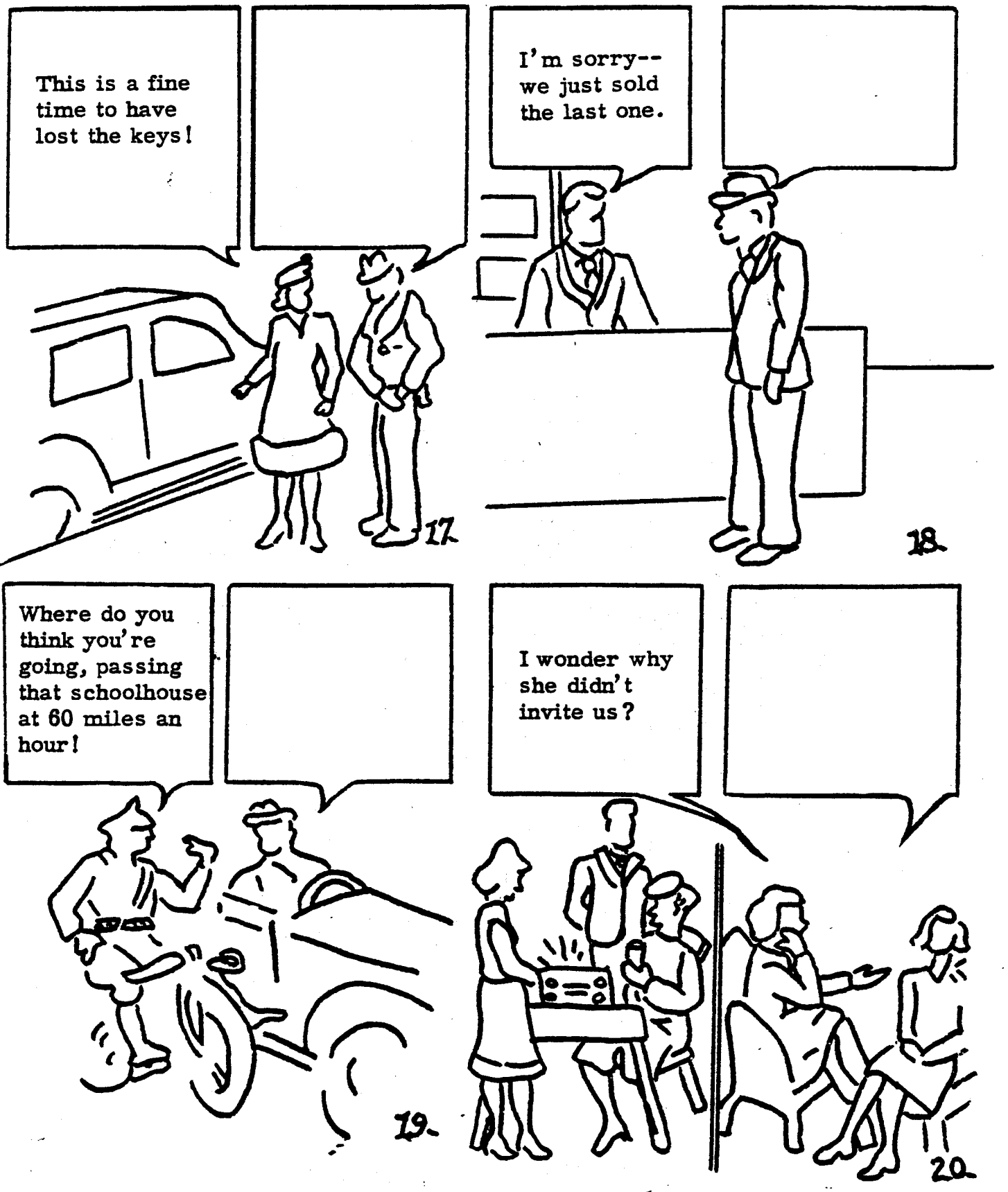
14.

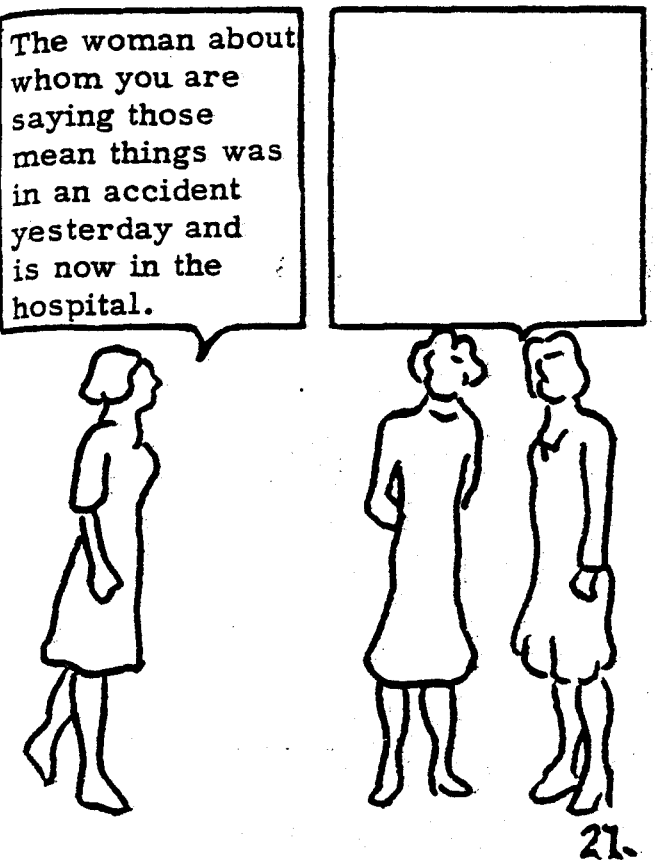

Too bad, partner. We'd have won after your swell playing if I hadn't made that stupid mistake.

15.

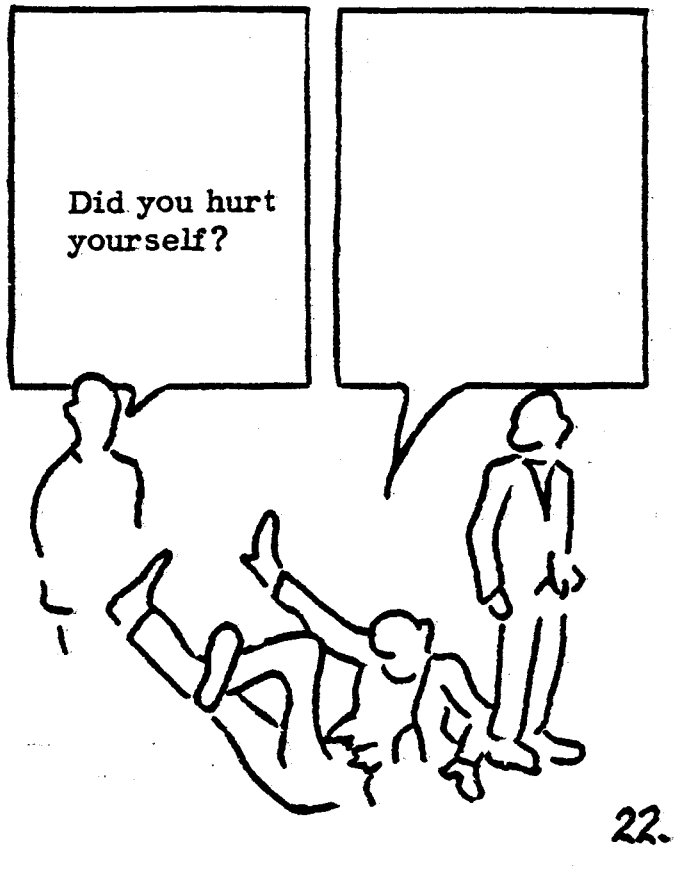

You had no right to try and pass me.

16.


This is a fine time to have lost the keys!
17.
I'm sorry-- we just sold the last one.
18.
Where do you think you're going, passing that schoolhouse at 60 miles an hour!
19.
I wonder why she didn't invite us?
20.


The woman about whom you are saying those mean things was in an accident yesterday and is now in the hospital.

21.


Did you hurt yourself?

22.


It's Auntie. She wants us to wait awhile until she can get here to give us her blessing again.

23.


Here's your newspaper I borrowed-- I'm sorry the baby tore it.

24.

SELF-EVALUATION QUESTIONNAIRE

Developed by C. D. Spielberger, R. L. Gorsuch and R. Lushene

STAI FORM X-1

NAME _____ DATE _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you *feel* right now, that is, *at this moment*. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	NOT AT ALL	SOMEWHAT	MODERATELY SO	VERY MUCH SO
1. I feel calm	①	②	③	④
2. I feel secure	①	②	③	④
3. I am tense	①	②	③	④
4. I am regretful	①	②	③	④
5. I feel at ease	①	②	③	④
6. I feel upset	①	②	③	④
7. I am presently worrying over possible misfortunes	①	②	③	④
8. I feel rested	①	②	③	④
9. I feel anxious	①	②	③	④
10. I feel comfortable	①	②	③	④
11. I feel self-confident	①	②	③	④
12. I feel nervous	①	②	③	④
13. I am jittery	①	②	③	④
14. I feel "high strung"	①	②	③	④
15. I am relaxed	①	②	③	④
16. I feel content	①	②	③	④
17. I am worried	①	②	③	④
18. I feel over-excited and "rattled"	①	②	③	④
19. I feel joyful	①	②	③	④
20. I feel pleasant	①	②	③	④

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SELF-EVALUATION QUESTIONNAIRE

STAI FORM X-2

NAME _____ DATE _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
21. I feel pleasant	①	②	③	④
22. I tire quickly	①	②	③	④
23. I feel like crying	①	②	③	④
24. I wish I could be as happy as others seem to be	①	②	③	④
25. I am losing out on things because I can't make up my mind soon enough	①	②	③	④
26. I feel rested	①	②	③	④
27. I am "calm, cool, and collected"	①	②	③	④
28. I feel that difficulties are piling up so that I cannot overcome them	①	②	③	④
29. I worry too much over something that really doesn't matter	①	②	③	④
30. I am happy	①	②	③	④
31. I am inclined to take things hard	①	②	③	④
32. I lack self-confidence	①	②	③	④
33. I feel secure	①	②	③	④
34. I try to avoid facing a crisis or difficulty	①	②	③	④
35. I feel blue	①	②	③	④
36. I am content	①	②	③	④
37. Some unimportant thought runs through my mind and bothers me	①	②	③	④
38. I take disappointments so keenly that I can't put them out of my mind	①	②	③	④
39. I am a steady person	①	②	③	④
40. I get in a state of tension or turmoil as I think over my recent concerns and interests	①	②	③	④

SHIPLEY INSTITUTE OF LIVING SCALE

Vocabulary Test and Abstraction Test

NAME .....

112

In the test below, the first word in each line is printed in capital letters. Opposite it are four other words. *Draw a line* under the *one word* which means the *same thing*, or most nearly the same thing, as the first word. A sample has been worked out for you. If you don't know, *guess*. Be sure to underline the *one word* in each line that means the same thing as the first word.

sample

LARGE	red	big	silent	wet

begin here

(1) TALK	draw	eat	speak	sleep
(2) PERMIT	allow	sew	cut	drive
(3) PARDON	forgive	pound	divide	tell
(4) COUCH	pin	eraser	sofa	glass
(5) REMEMBER	swim	recall	number	defy
(6) TUMBLE	drink	dress	fall	think
(7) HIDEOUS	silvery	tilted	young	dreadful
(8) CORDIAL	swift	muddy	leafy	hearty
(9) EVIDENT	green	obvious	sceptical	afraid
(10) IMPOSTOR	conductor	officer	book	pretender
(11) MERIT	deserve	distrust	fight	separate
(12) FASCINATE	welcome	fix	stir	enchant
(13) INDICATE	defy	excite	signify	bicker
(14) IGNORANT	red	sharp	uninformed	precise
(15) FORTIFY	submerge	strengthen	vent	deaden
(16) RENOWN	length	head	fame	loyalty
(17) NARRATE	yield	buy	associate	tell
(18) MASSIVE	bright	large	speedy	low
(19) HILARITY	laughter	speed	grace	malice
(20) SMIRCHED	stolen	pointed	remade	soiled
(21) SQUANDER	tease	belittle	cut	waste
(22) CAPTION	drum	ballast	heading	ape
(23) FACILITATE	help	turn	strip	bewilder
(24) JOCOSE	humorous	paltry	fervid	plain
(25) APPRISE	reduce	strew	inform	delight
(26) RUE	eat	lament	dominate	cure
(27) DENIZEN	senator	inhabitant	fish	atom
(28) DIVEST	dispossess	intrude	rally	pledge
(29) AMULET	charm	orphan	dingo	pond
(30) INEXORABLE	untidy	involatile	rigid	sparse
(31) SERRATED	dried	notched	armed	blunt
(32) LISSOM	moldy	loose	supple	convex
(33) MOLLIFY	mitigate	direct	pertain	abuse
(34) PLAGIARIZE	appropriate	intend	revoke	maintain
(35) ORIFICE	brush	hole	building	lute
(36) QUERULOUS	maniacal	curious	devout	complaining
(37) PARIAH	outcast	priest	lentil	locker
(38) ABET	waken	ensue	incite	placate
(39) TEMERITY	rashness	timidity	desire	kindness
(40) PRISTINE	vain	sound	first	level

SHIPLEY INSTITUTE OF LIVING SCALE

Complete the following. Each dash (__) calls for either a number or a letter to be filled in. Every line is a separate item. Take the items in order, but don't spend too much time on any one.

start here

(1) I 2 3 4 5 __

(2) white black short long down __ __

(3) AB BC CD D __

(4) Z Y X W V U __

(5) 12321 23432 34543 456 __ __

(6) NE/SW SE/NW E/W N/__

(7) escape scape cape __ __ __

(8) oh ho rat tar mood __ __ __ __

(9) A Z B Y C X D __

(10) tot tot bard drab 537 __ __ __

(11) mist is wasp as pint in tone __ __

(12) 57326 73265 32657 26573 __ __ __ __ __

(13) knit in spud up both to stay __ __

(14) Scotland landscape scapegoat __ __ __ __ee

(15) surgeon 1234567 snore 17635 rogue __ __ __ __ __

(16) tam tan rib rid rat raw hip __ __ __

(17) tar pitch throw saloon bar rod fee tip end plank __ __ __ __ __ meals

(18) 3124 82 73 154 46 13 —

(19) lag leg pen pin big bog rob __ __ __

(20) two w four r one o three __

BOGARDUS SOCIAL DISTANCE SCALE

CODE _____ DATE _____

QUESTION

	Black	Chinese	Indian	Japanese	Mexican	Puerto Rican	White	Other
1. Would Marry.								
2. Would have as regular friends.								
3. Would work beside in an office.								
4. Would have several families in my neighborhood.								
5. Would have as speaking acquaintances.								
6. Would have live outside my neighborhood.								
7. Would have live outside my country.								

APPENDIX B

Table 1

Mean Education, Income, IQ, and Age of Subjects

Group	Index	Education			Income			IQ			Age		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	M	15.00	14.18	14.18	2.50	2.27	2.40	103.57	112.82	107.64	25.43	20.00	23.04
	SD	1.18	1.40	1.28	1.22	1.56	1.37	12.94	8.52	10.99	8.16	3.13	5.13
2	M	14.30	14.38	14.35	2.90	2.54	2.70	106.40	111.46	109.26	19.70	19.85	19.78
	SD	1.42	1.61	1.53	1.97	1.90	1.93	13.01	12.28	12.59	1.16	2.88	2.13
3	M	15.75	14.92	15.44	3.90	3.50	3.75	124.10	122.83	123.62	27.09	24.50	26.12
	SD	2.02	1.93	1.99	1.59	1.94	1.72	12.70	12.78	12.73	6.37	5.95	6.21
4	M	15.22	14.75	14.92	3.67	3.13	3.32	120.56	119.44	119.84	20.00	20.06	20.04
	SD	0.67	1.24	1.03	1.00	1.20	1.13	6.98	4.76	5.56	1.22	2.72	2.18
All black Ss	M	14.71	14.29	14.50	2.67	2.42	2.55	104.75	112.08	108.42	23.04	19.92	21.00
	SD	1.30	1.49	1.40	1.55	1.72	1.64	12.77	10.52	11.65	6.82	2.93	4.87
All white Ss	M	15.59	14.82	15.21	3.83	3.28	3.56	123.00	120.89	121.96	24.89	21.96	23.45
	SD	1.72	1.54	1.63	1.42	1.54	1.48	11.23	9.06	10.16	6.26	4.85	5.51

Table 2

Analysis of Variance of Subjects' Age

Source	df	MS	F	p
R (Race of S)	1	99.194	3.34	
S (Sex of S)	1	238.976	8.05	<.01
RS	1	0.241	0.01	
ERROR	101	29.687		

Table 3

Analysis of Variance of Subjects' Family Income

Source	df	MS	F	p
R (Race of S)	1	26.839	11.15	<.01
S (Sex of S)	1	4.084	1.70	
RS	1	0.554	0.23	
ERROR	101	2.406		

Table 4

Analysis of Variance of Subjects' Educational Level

Source	df	MS	F	p
R (Race of S)	1	12.905	5.50	<.05
S (Sex of S)	1	9.091	3.87	<.05
RS	1	0.789	0.34	
ERROR	101	2.347		

Table 5

Analysis of Variance of Subjects' IQ

Source	df	MS	F	p
R (Race of S)	1	4769.089	39.98	<.001
S (Sex of S)	1	177.894	1.49	
RS	1	580.472	4.87	<.05
ERROR	101	119.277		

Table 8

Analysis of Variance of E-Scores on the First Administration

Source	df	MS	F	p
R (Race of S)	1	41.054	4.81	<.05
S (Sex of S)	1	20.527	2.40	
E (Race of E)	1	52.389	6.14	<.05
RS	1	58.362	6.84	<.01
RE	1	13.331	1.56	
SE	1	48.043	5.63	<.05
RSE	1	0.549	0.01	
ERROR	97	8.538		

Table 9

Analysis of Variance of I-Scores on the First Administration

Source	df	MS	F	p
R (Race of S)	1	15.051	3.59	
S (Sex of S)	1	47.528	11.34	<.001
E (Race of E)	1	24.056	5.74	<.02
RS	1	5.584	1.33	
RE	1	6.510	1.55	
SE	1	25.233	6.02	<.02
RSE	1	3.017	0.72	
ERROR	97	4.191		

Table 10

Analysis of Variance of M-Scores on the First Administration

Source	df	MS	F	p
R (Race of S)	1	22.160	5.95	<.05
S (Sex of S)	1	0.141	0.04	
E (Race of E)	1	27.905	7.49	<.01
RS	1	14.599	3.92	<.05
RE	1	15.131	4.06	<.05
SE	1	4.165	1.12	
RSE	1	0.821	0.22	
ERROR	97	3.724		

Table 12

Analysis of Variance of the Difference Scores (BE - WE) on the E-Scale

Source	df	MS	F	p
R (Race of S)	1	35.205	2.32	
S (Sex of S)	1	31.152	4.06	<.05
RS	1	28.823	3.59	
ERROR	101	8.668	3.33	

Table 13

Analysis of Variance of the Difference Scores (BE - WE) on the M-Scale

Source	df	MS	F	p
R (Race of S)	1	17.394	3.75	<.05
S (Sex of S)	1	1.049	0.23	
RS	1	12.792	2.76	
ERROR	101	4.643		

Table 14

Analysis of Variance of the Difference Scores (BE - WE) on the I-Scale

Source	df	MS	F	p
R (Race of S)	1	9.435	1.35	
S (Sex of S)	1	31.216	2.59	
RS	1	0.003	8.56	<.01
ERROR	101	3.647	0.00	

Table 18

Analysis of Variance of Hostility Scores (E and I Combined), First Administration

Source	df	MS	F	p
R (Race of S)	1	6.389	1.28	
S (Sex of S)	1	5.585	1.12	
E (Race of E)	1	5.443	1.09	
RS	1	27.840	5.58	<.02
RE	1	1.208	0.24	
SE	1	3.640	0.73	
RSE	1	2.257	0.45	
ERROR	97	4.991		

Table 19

Analysis of Variance of Hostility (E + I)

Difference Scores (BE - WE)

Source	df	MS	F	p
R (Race of S)	1	8.188	1.42	
S (Sex of S)	1	0.000	0.00	
RS	1	28.207	4.90	<.05
ERROR	101	5.761		

Table 34

Analysis of Variance of the Differences Between Before and After State Anxiety on the First Administration

Source	df	MS	F	p
R (Race of S)	1	0.625	0.01	
S (Sex of S)	1	39.136	0.67	
RS	1	143.960	2.46	
ERROR	101	58.439		

Table 35

Analysis of Variance of the Differences Between Before and After Trait Anxiety on the First Administration

Source	df	MS	F	p
R (Race of S)	1	31.905	2.68	
S (Sex of S)	1	3.558	0.03	
RS	1	0.677	0.06	
ERROR	101	11.906		

Table 40

Analysis of Variance of Mean State Anxiety on the First Administration

Source	df	MS	F	p
R (Race of S)	1	159.339	2.65	
S (Sex of S)	1	24.914	0.42	
E (Race of E)	1	230.664	3.84	
RS	1	8.226	0.14	
RE	1	419.921	7.00	<.01
SE	1	5.957	0.10	
RSE	1	29.925	0.50	
ERROR	97	60.030		

Table 41

Analysis of Variance of Mean Trait Anxiety on the First Administration

Source	df	MS	F	p
R (Race of S)	1	588.660	9.86	<.01
S (Sex of S)	1	17.179	0.29	
E (Race of E)	1	60.023	1.01	
RS	1	9.496	0.16	
RE	1	309.285	5.18	<.03
SE	1	8.253	0.14	
RSE	1	0.335	0.01	
ERROR	97	59.684		

Table 43

Analysis of Variance of the Mean Differences Between the Black and White Examiner (BE - WE) on State Anxiety

Source	df	MS	F	p
R (Race of S)	1	1.011	0.72	
S (Sex of S)	1	1.429	0.01	
RS	1	2.800	0.02	
ERROR	101	78.351	0.04	

Table 44

Analysis of Variance of the Mean Differences Between the Black and White Examiner (BE - WE) on Trait Anxiety

Source	df	MS	F	p
R (Race of S)	1	23.737	1.52	
S (Sex of S)	1	14.972	0.96	
RS	1	17.741	1.14	
ERROR	101	15.577		

APPENDIX C

Table 20

Mean Social Distance Scores on First Administration

Toward Blacks, Whites and Others

Group	Index	Black			White			Others		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	M	1.00	1.00	1.00	1.50	1.64	1.56	1.49	2.05	1.74
	SD	0.00	0.00	0.00	0.52	0.67	0.59	0.85	1.10	0.96
2	M	1.00	1.00	1.00	1.50	1.85	1.70	1.94	2.08	2.02
	SD	0.00	0.00	0.00	0.53	0.55	0.54	1.17	0.90	1.02
3	M	1.35	1.17	1.28	1.05	1.00	1.03	1.30	1.77	1.45
	SD	0.49	0.39	0.45	0.22	0.00	0.009	0.35	1.70	0.91
4	M	1.44	1.44	1.44	1.00	1.00	1.00	1.42	1.36	1.38
	SD	0.53	0.51	0.52	0.00	0.00	0.00	0.75	0.42	0.54
All black Ss	M	1.00	1.00	1.00	1.50	1.75	1.63	1.68	2.07	1.88
	SD	0.00	0.00	0.00	0.51	0.61	0.56	1.00	0.97	0.99
All white Ss	M	1.38	1.32	1.35	1.03	1.00	1.02	1.34	1.54	1.44
	SD	0.49	0.48	0.49	0.19	0.00	0.10	0.50	1.15	0.82

Table 21

Mean Social Distance Scores on Second Administration

Toward Blacks, Whites and Others

Group	Index	Black			White			Others		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	M	1.00	1.00	1.00	1.50	1.55	1.52	1.34	1.85	1.56
	SD	0.00	0.00	0.00	0.52	0.52	0.52	0.48	0.78	0.61
2	M	1.00	1.00	1.00	1.50	1.92	1.74	1.80	2.29	2.08
	SD	0.00	0.00	0.00	0.53	0.49	0.51	1.05	1.46	1.28
3	M	1.35	1.17	1.28	1.05	1.00	1.03	1.26	1.72	1.43
	SD	0.49	0.39	0.45	0.22	0.00	0.14	0.34	1.53	0.79
4	M	1.56	1.50	1.52	1.11	1.00	1.04	1.64	1.72	1.69
	SD	0.53	0.52	0.52	0.33	0.00	0.12	0.74	0.40	0.52
All black Ss	M	1.00	1.00	1.00	1.50	1.75	1.63	1.53	2.09	1.81
	SD	0.00	0.00	0.00	0.51	0.53	0.52	0.78	1.30	0.99
All white Ss	M	1.41	1.36	1.39	1.07	1.00	1.04	1.38	1.46	1.42
	SD	0.50	0.49	0.50	0.26	0.00	0.13	0.52	1.05	0.78

Table 22

Mean Social Distance Scores of Experimental Groups by Race of Examiner

Group	Index	Black			White			Others		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
BBE	M	1.00	1.00	1.00	1.50	1.79	1.65	1.62	2.18	1.90
	SD	0.00	0.00	0.00	0.52	0.57	0.55	0.93	1.30	1.11
BWE	M	1.00	1.00	1.00	1.50	1.71	1.61	1.59	1.97	1.78
	SD	0.00	0.00	0.00	0.51	0.54	0.53	0.77	0.85	0.81
WBE	M	1.42	1.36	1.38	1.07	1.00	1.03	1.41	1.74	1.56
	SD	0.50	0.46	0.48	0.25	0.00	0.06	0.47	0.96	0.74
WWE	M	1.38	1.29	1.35	1.03	1.00	1.02	1.31	1.51	1.41
	SD	0.50	0.44	0.48	0.15	0.00	0.08	0.47	0.70	0.68
All black Ss	M	1.00	1.00	1.00	1.50	1.75	1.63	1.61	2.08	1.84
	SD	0.00	0.00	0.00	0.52	0.56	0.54	0.85	1.08	0.96
All white Ss	M	1.40	1.33	1.37	1.05	1.00	1.03	1.36	1.63	1.44
	SD	0.50	0.45	0.48	0.20	0.00	0.07	0.47	0.83	0.71

Table 23.

Analysis of Variance of Social Distance Scores Toward Blacks on the First Administration

Source	df	MS	F	p
R (Race of S)	1	3.027	23.72	<.001
S (Sex of S)	1	0.056	0.44	
E (Race of E)	1	0.206	1.62	
RS	1	0.056	0.44	
RE	1	0.206	1.62	
SE	1	0.048	0.38	
RSE	1	0.048	0.38	
ERROR	97	0.127		

Table 24

Analysis of Variance of Social Distance Scores Toward Whites on the First Administration

Source	df	MS	F	p
R (Race of S)	1	9.150	58.48	<.001
S (Sex of S)	1	0.289	1.85	
E (Race of E)	1	0.039	0.25	
RS	1	0.438	2.80	
RE	1	0.104	0.67	
SE	1	0.104	0.67	
RSE	1	0.039	0.25	
ERROR	97	0.156		

Table 25

Analysis of Variance of Social Distance Scores Toward Others on the First Administration

Source	df	MS	F	p
R (Race of S)	1	4.502	5.15	<.03
S (Sex of S)	1	1.915	2.19	
E (Race of E)	1	0.058	0.07	
RS	1	0.138	0.16	
RE	1	0.890	0.02	
SE	1	1.421	1.63	
RSE	1	0.013	0.02	
ERROR	97	0.873		

Table 26

Mean Difference Social Distance Scores Between Black and White Examiners (BE - WE) by Experimental Group

Group	Index	Black			White			Others		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	M	0.00	0.00	0.00	0.00	0.09	0.04	0.15	0.20	0.18
2	M	0.00	0.00	0.00	0.00	0.07	0.04	-0.14	0.21	0.06
3	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.02
4	M	0.12	0.06	0.08	0.11	0.00	0.04	0.22	0.36	0.31
All black Ss	M	0.00	0.00	0.00	0.00	0.08	0.04	0.00	0.21	0.11
All white Ss	M	0.04	0.03	0.04	0.03	0.00	0.02	0.07	0.00	0.04

Table 27

Analysis of Variance of Social Distance Difference Scores (BE - WE) Toward Blacks

Source	df	MS	F	p
R (Race of S)	1	0.031	0.32	
S (Sex of S)	1	0.000	0.00	
RS	1	0.000	0.00	
ERROR	101	0.038		

Table 28

Analysis of Variance of Social Distance Difference Scores (BE - WE) Toward Whites

Source	df	MS	F	p
R (Race of S)	1	0.015	0.56	
S (Sex of S)	1	0.015	0.56	
RS	1	0.090	3.26	
ERROR	101	0.027		

Table 29

Analysis of Variance of Social Distance Difference Scores (BE - WE) Toward Others

Source	df	MS	F	p
R (Race of S)	1	0.126	0.43	
S (Sex of S)	1	0.126	0.43	
RS	1	0.500	1.70	
ERROR	101	0.295		

APPROVAL SHEET

The dissertation submitted by Oliver W. Slaughter has been read and approved by the following committee:

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The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy .

August 1, 1978
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