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THE EFFECTS OF VERBAL INCENTIVE, RACE, AND SEX OF EXAMINER ON DIGIT-SYMBOL PERFORMANCE OF NEGRC MALES AND FEMALES

by

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Formulation of the Problem

Previous Research

It has been a generation since Gunnar Myrdal (1944), the renowned Swedish economist and sociologist, examined the life and times of the Negro in the United States in his massive work An American Dilemma. To Myrdal the dilemma was the fundamental clash between the abiding faith of white America in its creed of liberty and justice for all and the certain knowledge that it was denying this democratic heritage to the Negro. The momentous decision handed down by the Supreme Court on school desegregation in 1954 attempted to close that breach.

For the past half-century psychologists have been interested in the problems confronting the Negro as a participant in a predominantly white society. A large number of studies have been concerned with the performance of Negroes on a variety of cognitive and motor tasks, a fact attested to by the number of published reviews in this general area (Woodworth, 1916; Garth, 1925; Klineberg, 1944; North, 1957; Shuey, 1958; and Dreger and Miller, 1960). A large majority of the studies covered in these reviews made direct or indirect comparisons between a Negro sample and a white sample, or white norms. Dreger and Miller, for example, reviewed well over 200 studies concerned with Negro-white comparisons on physical and cognitive measures. In many of the studies white examiners obtained behavioral measures of

Negro performance and made a variety of generalizations concerning the differences between the two races from both environmental and hereditary points of view. The validity of these generalizations has been questioned on a number of points. Dreger and Miller were concerned by the general disregard of experimenters with the differential effects of the examiner's race upon the performance of Negro subjects. Shuey (1958), in her book on the testing of Negro intelligence, also reviewed several hundred studies concerned with the comparison of Negroes and whites on tests of intelligence.

In a pioneer study on racial identification and preference in Negro children, the important psychological findings contributed by Clark and Clark (1940) underscored the devastating effects of segregation on the Negro child. More recent evidence suggests that racial awareness at an early age plays a significant role in the experimental assessment of development. Molland (1966) found that Negro children of preschool age consistently preferred and identified with the white race. These results suggest adjustment problems which may become highly accentuated with maturity (Brink & Harris, 1964; Parsons & Clark, 1965).

As the desegregation of schools becomes a reality across the country, it is apparent that the number of Negro students having white teachers, counselors, and examiners will greatly increase. It follows that the focus of attention will be directed at the Negro's adjustment in schools where white age peers and teachers predominate. Although the race of the examiner may be an important

determinant for a Negro student's performance, additional factors, such as the sex of the examiner, the sex of the student, and the specific incentive involved, must also be considered. Since each of these variables will be introduced in the present research, their possible effects on performance will be reviewed and discussed here.

One of the variables frequently noted as having considerable importance in psychological research is the race of the experimenter who is conducting the study. Shuey (1958), commenting on this interaction between examiner and subject, refers to the rapport which is generally reported to be attained by the white examiner during intelligence testing of a Negro subject. While admitting that there may be some controversy associated with the effects of examiner variables upon the performance of Negroes, she states:

> "...in at least 23 of the investigations on Negro children and in at least 12 of the investigations on high school students the testing was conducted by colored Es. Their findings are similar to those reported by psychologists known to have been white. There is no evidence that the race of the examiner materially affected the testing rapport" (p. 316).

Her conclusion implies that the race of the examiner has no significant influence on the performance of Negro subjects, at least as far as the testing of intelligence is concerned.

Although the amount of empirical research on the differential effects of the race of the examiner is limited, the findings that have been obtained indicate that there may well be performance differences in Negro subjects as a function of being tested by a white or a Negro examiner. Certainly, in view of the caste status

of the Negro as defined by Dollard (1949), one would expect some sort of differential reaction to white examiners on the part of Negroes, especially when considering the "intimacy" and evaluative nature of testing and most experimental situations.

Working with Negro college students in a perceptual recognition situation, Whittaker, Gilchrist, and Fischer (1952) noted reactions of suppression, denial, and anger to the presentation of racially derogatory terms when the examiner was Negro, but not when he was white. Two recent public opinion surveys (Pierce and Searles, 1961; Pettigrew, 1964) using both Negro and white interviewers have obtained sharply diverse results with equivalent samples of Negro adults, particularly on questions concerning the race issue. Negro respondents in both surveys gave the more militant and informed answers to the Negro interviewers. Riess, Schwartz, and Cottingham (1950) compared responses to Negro TAT cards and the standard white TAT cards and obtained differences when the color of the characters in the test cards was kept constant and the color of the administrator varied. These investigators found that Negro subjects tended to produce more for a white administrator than for a Negro examiner.

The influence of white and Negro experimenters on the test behavior of 81 white and Negro kindergarten children was investigated by Trent (1954). Both white and Negro examiners gave the subjects a mother identification test consisting of three separate pictures of women: one white, one light-skinned Negro, and one dark-skinned Negro. The children were asked, "See these mothers? Which

one is yours? Why?" Trent found that both white and Negro children exhibited significant shifts in the picture chosen when compared across examiner race: (1) white children with a white examiner preferred the white mother and the light-skinned mother; (2) white children with a Negro examiner preferred the white mother and dark-skinned mother; (3) Negro children with a white examiner preferred the white mother and light-skinned mother; and (4) Negro children with a Negro examiner preferred the light-skinned mother and dark-skinned mother.

A study conducted by Rankin and Campbell (1955), although not concerned with Negro subjects, is relevant because it also demonstrates that the race of the experimenter can result in differential responses by the subjects. They examined the effects of Negro and white experimenters on the GSRs of 40 white subjects, participating in a word association test with the GSR being recorded. Two Es, one Negro and one white, alternated in making simulated adjustments to a dummy apparatus attached to the subject's left wrist. The subjects responded with significantly higher GSR deflections to the Negro E. However, Rankin and Campbell noted that a significantly smaller deflection occurred on the last contact as compared with the first contact. They concluded that although there was a differential effect as a result of the race of the examiner, the white subject exhibited adaptation to the Negro examiner with time.

An ambitious program of research was begun several years ago by Katz and his coworkers focusing on the performance of Negro male

college students in situations involving white peers and authority figures. In two exploratory studies (Katz & Benjamin, 1960; Katz, Goldston & Benjamin, 1958) various cognitive and motor tasks were assigned to groups composed of two male Negro students and two male white students. Initially the men were total strangers. They worked together in several sessions for a total of twelve and one-half hours. In general, it was found that Negroes displayed marked social inhibition and subordination to white partners. When teams were engaged in cooperative problem solving, Negro subjects made fewer proposals than did white subjects, and tended to accept the latter's contributions uncritically. On all tasks combined, Negroes made fewer remarks than did whites and spoke more to whites, proportionately, than to other Negroes. These behaviors occurred even when group members expected a monetary bonus for good teamwork, and were informed that their abilities were higher than those of subjects on other teams. In the second experiment, Negro and white partners were matched on intelligence, and were even made to display equal ability on certain group tasks by means of experimenter manipulation of the feedback. Yet, on a terminal questionnaire Negroes ranked whites higher on intellectual performance, preferred one another as future work companions, and expressed less satisfaction with the group experience than did whites.

In a later investigation, Katz and Cohen (1962) attempted to modify Negro behavior toward white partners in the direction of greater assertiveness and autonomy. Negro-white student dyads

engaged in cooperative solving of problems adapted from the Raven Progressive Matrices (1956). Each subject worked on the same set of problems twice, first at an individual session and several weeks later at a team session. Some of the problems were made easy and solvable to insure that both participants would perceive the correct answer. On other problems the subjects unknowingly received different information, so that one person had an insoluble version. Each subject had the easy version half the time. On every problem partners had to agree on a single team answer, after which the experimenter announced the correct solution. Before and after the problem-solving experience a disguised measure of social influence between the two men was obtained on a task which required group estimates of certain quantitative characteristics of briefly exposed photographs, for example, the number of paratroopers in descent.

Under assertion training, the men had sheets of paper which contained their previous answers. Their actual responses had been altered so that correct answers were made to all easy items and incorrect answers were made to all unsolvable items. After seeing the problem, the men were required to start their discussion by reading aloud their previous answers, which they were then free to abandon.

Under no training or control, subjects were not given information about their previous responses to the problems. Instead, both men had blank sheets on which they wrote individual answers to each problem. Team discussions began with partners announcing

to one another what they had just written.

It was found that Negroes in the control group tended to accept passively the suggestions of their white companions even when they held the easy version and the teammate had to be in error. As a consequence of the problem-solving experience in the control condition, Negroes showed increased social compliance on the picture estimations.

The Negro subjects under assertion training had the experience of openly announcing the correct solutions in about half of all instances of disagreement and both men read off approximately the same number of correct answers. In the subsequent interactions concerning picture estimation there was an increase in the amount of influence Negroes had over the white partners. Furthermore, Negro subjects were now inclined to accept the other person's influence only to the extent that he had displayed superior accuracy on previous pictures. Thus, when they were forced to act independently on one task, they achieved greater autonomy in the second situation.

In a later study, Katz and Greenbaum (1963) examined more directly the influence of threat on Negro performance on a digit substitution task by systematically varying the level of threat in different racial environments. The subjects were exposed to stress by the suggestion that a severe electric shock (high threat condition) or a mild electric shock (low threat condition) would be administered to the subjects in the task. When only the mild shock was threatened they performed better in the presence of whites

than of other Negroes. But when told to expect strong shock Negro subjects performed better with Negro persons present, whereas their efficiency was reduced in the presence of whites. The authors concluded that the results indicate performance depended upon the combination of stress and racial environment conditions, an interaction effect.

In still another investigation, Katz (1965) varied the race of the task administrator, the difficulty of the task, and its evaluative significance. As in the previous studies, subjects were students at a Southern Negro college. Half were tested individually by a Negro adult and the other half by a white adult. One-third of the subjects worked on a relatively easy task, one-third on a task of medium difficulty, and one-third on a relatively difficult task. In the nonthreatening condition, the task was described as a research instrument for studying eye-hand co-ordination, which the experimenters hoped the subjects would regard as a nonintellectual characteristic. Under this condition, Negro subjects worked more efficiently when tested by a white adult on the most difficult of the three tasks; with the other easier tasks there was no statistically reliable difference in achievement as a function of the race of the examiner. Following this portion of the study, two other groups of Negro students were tested by these same white and Negro administrators on the most difficult task only. Now, however, the subjects were told that the task was a test of intelligence. Under these conditions they

did not achieve higher scores in the presence of the white examiner. Performance was slightly elevated with the Negro examiner, and markedly lowered with the white examiner. Here, then, the results were similar to those under the strong threat condition described in the Katz and Greenbaum study (1963). Whenever the anxiety level of subjects is increased either by stress or task demands, the presence of a white examiner apparently intensifies this anxiety.

The aforementioned studies would appear to indicate that under specified conditions a differential response on the part of the Negro subject will occur when the race of the examiner is varied. However, the precise influence of this variable under these conditions on subject performance is as yet undetermined. Katz (1964) has offered two alternative interpretations of his findings. The first interpretation is based on the early Yerkes-Dodson (1908) hypothesis (later supported by Hullian theory) that the optimal intensity of motivation is inversely related to the difficulty of the learning task. If one assumes that a white person arouses more drive (anxiety) than a Negro for a Negro testee, it would follow that on a relatively easy task Negroes would perform better with a white tester than with a Negro tester, while on tasks of increasing difficulty this relationship should reverse.

An alternative interpretation derives from Atkinson's (1958) concept of motivation as a joint function of the subjective

probability of success and its incentive value. Assuming again that the white examiner is perceived by a Negro subject as having higher prestige, the prospect of eliciting the white person's approval would be more attractive. Thus, when the task was a relatively easy one, the Negro student performed better with a white adult than with a Negro adult. However, if the subject saw very little likelihood of meeting the white examiner's standard of excellence, then Atkinson's model would predict a reduction in task motivation, and as a consequence a poorer performance with such an examiner.

As an additional source of impairment in this situation, low expectancy of success could have aroused fear of earning the white examiner's disapproval (failure threat). At the same time, the experimental setting could pose a "social threat," that is, a Negro may be fearful of instigating the white examiner's resentment and hostility because of his own greater assertiveness.

Lefcourt and his co-workers (Lefcourt, 1965; Lefcourt & Ladwig, 1965; Lefcourt & Ladwig, 1966) account for the predominant failure-avoidant behavior of Negro males in biracial situations as characteristic of externally-controlled persons. They have attempted to account for some of Katz's findings by utilizing Rotter's (1962) internal-external control of reinforcement construct. As a general principle, internal control refers to the perception of positive and/or negative events as being a consequence of one's own actions and thereby under personal control;

external control refers to the perception of positive and/or negative events as being unrelated to one's own behaviors and therefore beyond personal control. These assumptions lead to the conclusion that as long as Negroes have low expectancies for obtaining positive reinforcements for more socially desirable behavior, they will continue to display passivity and low achievement motivation.

In an experimental setting, the visible, physical characteristics of the participants are relevant cues that may influence interaction. However, more significant are the indirect and direct responses of the examiner regarding the subject's performance. A substantial number of investigations have been conducted dealing with the effects of incentives on various types of performance. Among these are studies concerned with the effects of praise and reproof on the performance of school children. This literature is replete with conflicting results and a confusion of methodologies and terminologies so that no unequivocal evidence emerges that either praise or reproof is the more generally effective incentive for performance. The present review of this literature concentrates on empirical studies concerned with the verbal incentives of praise and reproof as these affect the performance of children on discrimination, learning, and motor tasks. Traditionally, this has been one of the more perplexing problems in educational circles, so it is not surprising that most studies have focused on school children.

The confusion of results is evident even emong the earliest studies. Thus, while Binet and Vaschide (1897) and Kirby (1913) found that verbal encouragement improved the performance of their subjects, this finding cannot be critically evaluated because, among other methodological difficulties, no control groups were used. Hurlock (1924, 1925a), on the other hand, found both praise and reproof to be equally effective, and both to be more effective than practice. However, in a later study in which the effects of the incentives were studied over a longer period of time, Hurlock (1925b) found praise to be superior to no incentive.

The latter experiment of Hurlock was replicated by Cohen (1927), who obtained essentially the same results and drew the same conclusions. Bird (1927) found varying results in studying the effect of verbal incentives on the reading test performance of a group of pre-school children ranging in age from four to six. Thus, for some children reproof stimulated them to their greatest efforts, while for others praise was apparently necessary. Warden and Cohen (1931) using a variety of incentives including praise, reproof, promise of a game, promise of a continued story, and a party, found that neither praise nor reproof significantly influenced performance compared to the control condition. They did find, however, that any change in the regular classroom routine, such as a game, served as an incentive.

Several major reviews of this area were written about this time (Hurlock, 1931; Davis & Ballard, 1932; and Diserens & Vaughn,

1931), and generally all agree that praise was more effective than reproof. In addition, Davis and Ballard maintained that reproof may also be effective and distinguished between three different types of incentives - intellectual, emotional, and social. The intellectual consisted of informing the subject of success or failure, the emotional consisted of encouragement and discouragement, and the social made use of the effects of a group upon an individual. Another reviewer, Brenner (1934), suggested that the differences found in the results of the studies under review were logically to be expected due to the variety of experimental conditions and the general inadequacy of the studies.

These reviews served to stimulate a new wave of studies beginning with Chase (1932) who, studying the effects of different incentives on the performance of a motor task, concluded that some motivation, either positive or negative, was more effective than none. She also found failure to be more effective than praise, but this finding was probably due to her methodology and appears to be an artifact. Chase's study was followed by that of Anderson and Smith (1933) whose findings agreed with hers, and who definitely concluded that reproof was more effective than praise.

Forlano and Axelrod (1937), taking into account personality differences, found that reproof was more effective than praise or control for a group of introverts, while there were no differences among these three incentives for a group of extroverts. Their

study was replicated by Thompson and Hunnicutt (1944), who spread the incentives over a longer period of time and found that for introverts praise was superior to reproof and for extroverts reproof was superior to praise.

Schmidt (1941), in a review of the literature, concluded, among other things, that the relative superiority of praise as an incentive over reproof is not settled. It is difficult to make adequate comparisons between various studies for several reasons. First, the methodology varies considerably between experiments; second, the statistical treatment of the data has often been unreliable or inadequate; and, finally, there is a lack of a common ground upon which to make comparisons. In addition, it was quite clear that many of the subjects were not matched on variables which could effect task performance on the dependent variable.

Following Schmidt's review the scope of the studies in this area began to change. Slowly the number of variables under scrutiny was enlarged. Thus, the effectiveness of the incentives was studied as a function of the subject's grade level (Potter, 1943) and intelligence level (Kennedy, Turner & Lindner, 1962; Kennedy & Willcutt, 1963). Their effects on the performance of mentally retarded children were studied (Stevenson & Snyder, 1960). The relative achievement level of the subjects was studied (Van De Riet, 1963). A number of incentive variables were also studied, so there were interesting additions to the

standard comparisons of praise and reproof. The effects of money versus praise, or candy versus verbal incentives were investigated (Terrell & Kennedy, 1957; Fischer, 1962; Tiber & Kennedy, 1963), as well as the effects of massed versus spaced praise (Mech, Kapos, Hurst & Auble, 1954).

Several studies of examiner variables in terms of the differential effects of verbal incentives have also recently been reported. Patterson, Littman and Hinsey (1964) focused on parental effectiveness as reinforcement in the laboratory situation and its relationship to child-rearing practices. The "parent" tester tried to change the behavior of his child by verbal reinforcement. The results showed that the main effects of mother, father, and sex of child were not significant in effectiveness of conditioning. However, fathers were more successful in conditioning daughters than sons, and mothers were more successful with sons. Boys and girls who were conditioned more by their same-sex parent came from permissive homes, while those conditioned more by opposite-sex parent came from restrictive homes. Stevenson (1961) also reported larger increments in response for both boys and girls when supportive statements concerning the children's performances were delivered by female experimenters than when they were delivered by male experimenters. These results were interpreted as supporting the assumption that the reinforcing effectiveness of the mother, derived from her role in satisfying the child's basic needs, generalizes to other women,

thereby increasing their effectiveness as reinforcing agents. The father, on the other hand, plays a less significant role in the early caretaking of children, and it was assumed that fathers, and in turn other men, acquire less capacity for reinforcing behaviors. In another study Stevenson, Keen & Knights (1963) found that social reinforcement delivered by women had greater effect on the performance of boys than of girls. Conversely, social reinforcement delivered by men had a greater effect on the performance of girls than of boys. One of the variables which could account for the disparate results was the age of the subjects used in the two studies.

In one relevant study (Stevenson & Allen, 1964) the interaction between the sex of the experimenter and the sex of the adult subject was investigated. As in previous studies, subjects tested by members of the opposite sex had a higher level of performance. However, other researchers (Meyer, 1964; Rowley & Stone, 1964) have not confirmed these findings. Thus, the sex of experimenter-sex of subject interaction reflects the operation of complex processes which can be ascertained only on the basis of further research.

In addition to the diversity in the variables studied, there was also a great deal of variation in the nature of the tasks used by the experimenters. These tasks ranged from a localization problem (Sandstrom & Weinz, 1958) to performance on a test of creativity (Metz, 1961). Some of the other tasks employed included

a simple discrimination (Terrell & Kennedy, 1957); an oddity discrimination (Kennedy, Turner & Lindner, 1962; Willcutt & Kennedy, 1963; Kennedy & Willcutt, 1963); paired associate learning (Van De Riet, 1963); arithmetic problems (Dollins, Angelino & Mech, 1960); a reading test (Silverman, 1957); and an intelligence test (Klugman, 1944; Tiber & Kennedy, 1963). With such a variety of variables and tasks being investigated direct comparison between studies in this area is extremely difficult, and it is not surprising that these later studies also produced conflicting findings.

When one turns to the investigation of race in relation to incentive conditions, only a small number of studies have included Negroes as subjects. To demonstrate the relevance of these studies for the present investigation, it is necessary at this point to review these findings of the effects of praise and reproof in more detail.

Hurlock (1924) studied the effects of praise, reproof, and no incentive on the intelligence test performance of Negro and white third-, fifth-, and eighth-graders. She concluded that both praise and reproof tended to result in more improvement than practice alone. She also found that, although Negro children reacted more favorably to praise than did white children, this difference was slight, and that the two races were more alike than different in their responses to the incentives.

The effect of praise and money incentives on the intelligence test performance of Negro and white school children was studied

by Klugman (1944), who concluded that there was no significant difference between the incentive conditions. However, certain trends were noted in his data. Negro children tested with the money incentive made higher scores over those tested with the praise incentive, and white children showed a gain over Negro children when praise was the incentive. The significance of Klugman's study is clouded by his failure to control for socio-economic differences. It may be that the Negro children were from a lower socioeconomic level, thus, the psychological value of the money incentive was greater for them.

Tiber and Kennedy (1964) studied the effect of praise, reproof, candy, and no incentive on the intelligence test performance of Negro and white children and found no differences between incentive groups and no significant interaction between the type of incentive and social group.

Kennedy and Willcutt (1963) studied the effects of verbal incentives on a group of white and Negro second-, fourth-, seventh-, and tenth-graders. They found:

1. Speed of performance was increased under conditions of praise and no incentive for both Negro and white subjects and decreased under conditions of reproof.
2. For the white subjects there was an inverse relationship between grade level and speed of performance; this was not true for the Negro subjects.
3. White subjects at all grade levels were consistent in their response to the incentives, while the Negro subjects were not; Negro second-graders responded

to reproof with increased speed, and fourth-graders under the control condition decreased the speed of their response.

4. There was no sex-related differences among the Negro subjects, while for the white subjects the girls responded more favorably to praise, the boys to blame.

Two recent studies have investigated the interaction of the examiner's race and the type of experimental incentive on performance in a test situation. Vega (1964) studied the differential effect of Negro and white examiners on the performance of Negro school children on an oddity discrimination task as a function of grade level, reward condition, and intelligence level. The verbal incentive was administered between trial 1 and trial 2. The only significant relationships involving the examiner variable were as follows: subjects tested by Negro examiners reduced trial 2 mean reaction time under all incentive conditions; those tested by white examiners showed decreased trial 2 mean reaction time under praise and no incentive conditions, but demonstrated a marked increase under the reproof condition. For all examiners combined the subjects reduced trial 2 mean reaction time under praise and no incentive, and increased it under reproof. However, Kennedy and Vega (1965) found that under white examiners Negro students reacted to blame with a decrement in performance, while under Negro examiners the students showed an increment in performance.

Present Problem

Based on the available literature reviewed above, it appears to be difficult to predict specifically how a Negro subject will perform when different incentive conditions are administered by a white or Negro examiner. Yet, a pressing need exists for further clarification in this area since Negro students often attend schools where white teachers predominate. It may be that previous studies have offered conflicting findings because relevant examiner and subject variables were not explored nor interactions among them considered. The present investigation considers the significance of the examiner's sex as well as race in the presentation of verbal incentives to Negro male and female students.

A particular hardship encountered by the prospective researcher in this area is the variety of terms confronting him. Thus, reward and punishment (Atkinson & Robinson, 1961); social approval and social censure (Rowley & Stone, 1964; Cavanaugh et al., 1960); praise and reproof (Rodnick & Garmezy, 1959); social reinforcement (Stevenson, 1961); and social feedback (Johanneen, 1961), all involve similar responses on the part of the examiner. These responses usually consist of delivering some statements pertaining to the subjects' behavior; for example, "you were good" or "you pleased me" and "you were bad" or "you disappointed me." At times these comments are accompanied as well by some response on the part of the examiner such as smiling and nodding when giving a response of verbal support or looking concerned and upset when giving a

response of verbal disapproval. The assumption is that the examiner's comments accompanied by his expressive motor behavior will affect performance.

However, there are other terms which are grouped under this broad, inclusive heading of verbal incentives which differ qualitatively from the aforementioned studies. The following researchers extend the content and meaning of incentives: praise and reproof (Potter, 1943; Kennedy & Willcutt, 1963; Vega, 1964); positive and negative incentives (Kennedy & Vega, 1965); positive and negative evaluation (Schooler & Tecce, 1967); strong support and weak support (Cohen, 1965); and success and failure (Sears, 1941). The incentive conditions in these studies focus on task performance and incorporate the following components: (1) Direct feedback from the examiner with an accompanying evaluative judgment; for example, "Your scores are good/bad." (2) Reactions of the examiner to the subject's performance with a comparison offered; for example, "This is the best/worse group."

Based on the extensive body of research previously cited, this investigation starts with the assumption that praise and reproof have differential influences on performance. In general, praise and reproof have been divided into these two categories, personal evaluation and task-oriented evaluation. While both types have been found to be important, the present investigation will limit itself to task evaluation and its two most common features as noted above: direct feedback from the examiner and implied comparisons with other subjects.

Praise is viewed as a positive reinforcer which will strengthen the recurrence of those responses which it follows. Reproof is viewed as a negative reinforcer which will weaken the recurrence of those responses which it follows. Finally, the control condition is viewed as neutral with respect to reinforcement; and thus it is assumed that response level will remain relatively unchanged, except for practice effects.

Any investigation which attempts to delineate the factors contributing to the performance of Negroes in classroom situations is particularly germane at this time. Racial desegregation in schools has been viewed from the standpoint of the integration of white and Negro children. The other tremendous change taking place, however, is the exposure of many of these children to both Negro and white teachers. One can only speculate about the effects of these circumstances on learning and performance. In order to establish some concrete evidence regarding the consequences of these conditions, the present research problem was formulated.

The aim of this study is to explore those factors which it is believed affect the performance of both male and female Negroes, namely, the sex of the examiner, the race of the examiner, and the particular verbal incentives administered. Since most of the reported findings in the literature have been confined to only one sex, the male, it cannot be assumed that they apply to females as well. Unfortunately, many generalizations have been made about the modal behavior of <u>all</u> Negroes on the basis of the sampling of

only the male's behavior. The task here will be to investigate a number of possible interactions which may take place between sex and race of both subject and examiner. Both Negro male and female subjects will be placed in an experimental situation with a white male or white female examiner or Negro male or Negro female examiner.

Conceptual and empirical support for hypothesizing different interactions between sex and race of the examiners for Negro males and females are not difficult to find. The minority group status of the Negro female has been in many ways less harsh for her than the male Negro. She has been able to achieve a higher educational level along with a more productive position in the labor force. A recent study by Clark and Plotkin (1963) showed that females do significantly better at college than males by two criteria: grade average and dropout rate. The authors concluded that their findings tend to confirm the belief that the generalized pattern of racial discrimination in American society takes a higher toll of Negro males than Negro females. Since the indications are that Negro females have been able to move within the white community with greater ease and less threat, their experiences are qualitatively different from their male counterparts.

The special considerations accorded the Negro female do not prevail only in her contact with whites. Negro children more often tend to live in a matriarchal family atmosphere where girls are openly preferred by mothers and grandmothers and the

male sex role is generally denigrated. Moreover, this pattern receives reinforcement from the fact that the Negro female, in household interactions with middle-class white families, acquires attitudes and norms of behavior which lead her to look down upon the Negro male who is not similarly exposed. The Negro male suffers from the cumulative effects of discrimination by the white members of society as well as differential treatment in a matriarchal family structure. Consequently, he cannot meet the expectations of the Negro female and often tends to be an unreliable source of economic and emotional security to his family (Bernard, 1966; Clark, 1965). As a result, the mother shoulders most of the burdens and responsibilities of child-rearing and is the only dependable adult with whom the child can identify.

The impact of this family structure may be especially harsh for the Negro male child, since he must achieve an acceptable masculine self-image without the aid of a male parental model. There is some evidence that appropriate sex-role identification is an important precondition for healthy growth and development and that an absence of an appropriate sex-role model will have deleterious effects (Kagan, 1964). In view of this finding on sex-role identification, it is not surprising that Pettigrew (1964) reports that Negro males scored higher than white males on a measure of femininity. Deutsch (1964), in his study of social influences in Negro-white intelligence differences, reports that children coming from homes where fathers are

present have significantly higher scores than children from fatherless homes. Studies which focus more on personality than cognitive variables also find significant differences for boys from fatherless homes (Mischel, 1961; D'Andrade, 1962). An extensive body of literature exists to support the notion that father-absence may have negative effects for both white and Negro males.

Negro males. The literature in the field of paternal deprivation has examined its effects on the development of the male child. The reported data lead to contradictory conclusions. Some studies (Bach, 1946; Sears, Pintler & Sears, 1946, 1951; Tiller, 1958) indicate that father-absent boys tend to develop in the direction of femininity. Specifically, Sears et al. state that mother-dominated boys seem to be more feminine in their behavior and therefore react more positively to females. However, other research demonstrates that father-absent boys show stronger strivings toward masculine identification because of insecurity in their identification with masculine figures (Lynn & Sawry, 1962; Burton & Whiting, 1961). Recently a number of writers have taken this position in discussing the Negro male (Clark, 1965; Bernard, 1966; Pettigrew, 1964). They have suggested that the Negro male is denigrated by the Negro female as well as by society in general and because of this he may strive for a strong identification with male figures.

Studies which have relevance for the present research have focused on the effects of mother-domination on the performance of males in the presence of male and female examiners. The race variable was not included as a component in these studies. One study (Bandura, Ross & Ross, 1963) investigated identification patterns in a three-person group with two adult models and a child. In one of the conditions of the experiment, one adult dispensed positive reinforcers to the child, while the other adult was assigned a subordinate and powerless role. Under most conditions, the child would identify with the controller of resources. However, when the nonparticipating adult was of the same sex as the child this identification pattern did not always receive support. The experimenters felt that the addition of a same-sex third person who is denied access to desired rewards may provoke in some children negative evaluations of the rewarding model and thereby decrease the potency of the individual as a modeling stimulus. This finding was more typically noted when boys were recipients of rewards mediated by a female model and the third person of the group was a male adult. The above findings would appear to support this investigator's hypothesis that the performance of a Negro male may be enhanced when he is in the presence of a male examiner.

The second body of research which has implications for the present study focuses on the race of the examiner as an important determinant of the performance of Negro males (Katz, 1964; Bayton, et al., 1965). In general, the findings of these investigations appear to support the conclusion that under most conditions Negro males

do better with white male examiners than with Negro male examiners. The interpretation offered for these findings is that Negro males hold white examiners in higher esteem than Negro examiners and therefore value their approval more. The present study will provide a further test of these earlier findings.

Little is to be found in the psychological literature concerning the effects of a white female examiner on the performance of Negro males. Bayton (1965) found that Negro males rated all whites, including females, higher on a "friendliness" trait than either Negro males or females. Abel (1945) reports that Negro male subjects were inhibited under test conditions with white female examiners. This latter view is very much in keeping with the well-known social and moral prohibitions involving white females, commonly termed "racial etiquette."

There is also a lack of information as to how the Negro male perceives the Negro female. A priori, two tenable hypotheses can be offered. The Negro female may still be a powerful source of incentive because of her early association with reinforcement; or, she may be a constant reminder of the male's inadequacies. The data compiled here should provide some useful information regarding this question.

In keeping with the above discussion, the following hypotheses with respect to Negro males are tested in the present study. They are all formulated in such a way as to coordinate the requirements of the present experimental design and to permit verification and extension of previously cited findings.

Negro males will show the following order of level of performance. The highest level of performance will occur with a white male examiner and the lowest level with a white female examiner.

(1) Negro males with white male examiner.

(2) Negro males with Negro male examiner.

(3) Negro males with Negro female examiner.

(4) Negro males with white female examiner.

These relative levels will be retained under the experimental incentive conditions of praise and reproof. Subjects assigned to the praise condition should show variable increments in performance levels with the greatest increment occurring for a white male examiner and the lowest for a white female examiner. Under conditions of reproof, subjects should show the greatest decrement in performance with a white male examiner and the lowest for a white female examiner.

Negro females. The male has been the primary focus of attention when attempts have been made to study the effects of a matriarchal family structure. The assumption underlying this focus is that the father's absence will have a more negative effect upon the son than on the daughter. Presumably, the major effect of the absence of fathers for daughters is a heightened dependency on their mothers (Lynn & Sawry, 1962, 1965). Little, if any, consideration has been given to the special effects paternal deprivation may have on Negro females. Compared to her

Negro male counterpart, it may be inferred that the Negro female has fewer problems with her self-esteem. To the extent that a female model was available to her, she would have ample opportunity to establish her feminine identity. Her performance should be most enhanced with an examiner of the same sex and same race. It would tend to follow that other females may also be endowed with reinforcing power.

Further speculations arise about the nature of the interactions between Negro females and males. In one study (Bayton, 1965), Negro female college students ranked females, both white and Negro, higher than males when asked to comment on "friendliness." The present investigation addresses itself to a more empirical test of this viewpoint. Specifically, it is hypothesized that while Negro females tend to denigrate Negro males, this effect will be generalized to all males. However, the Negro female will probably be relatively more tolerant of the white male because of his more respected position in society.

The following hypotheses are tested in the present study with respect to Negro females. Negro females will show these orders of level of performance. The highest level will be with a Negro female examiner and the lowest level with a Negro male examiner.

(1) Negro females with Negro female examiner.

(2) Negro females with white female examiner.

(3) Negro females with white male examiner.

(4) Negro females with Negro male examiner.

These relative levels will be retained under the experimental incentive conditions. Subjects assigned to the praise condition should show variable increments in performance levels with the greatest increment occurring for a Negro female examiner and the lowest for a Negro male examiner. Under conditions of reproof, subjects should show the greatest decrement in performance with a Negro female examiner and the lowest for a Negro male examiner.

While manipulations in an experimental environment can produce powerful effects on a subject's response, it is clear that past experiences will predispose him to interpret the demands made by the experiment in particular ways. The present investigator feels that it is important to obtain information on early experiences which influence the Negro individual's later differential sensitivity to social reinforcements. Subjects will be asked to describe their parents' behavior as they perceived and remembered it along a continuum of acceptance and rejection. Then, the subjects' perception of this major dimension of parental behavior will be examined in relation to their levels of performance on the task. This information will also afford an opportunity to assess possible differences in feelings of Negro male and female college students in regard to their male and female parents. Previous investigators in this field have not considered in any detail the family-structure variables of the individual subjects. Consequently, there is not much evidence for stating specific hypotheses about their relation to later performance.

Method

Subjects

The subjects were 240 Negroes, 120 males and 120 females, in the age range of 17-19 years, enrolled in the Community Colleges of the City University of New York as students in the College Discovery Program which aids economically and culturally disadvantaged individuals who wish to continue their education. All Negro students in the freshman and sophomore classes were contacted by mail. Students were requested to participate in a project created ostensibly to improve the College Discovery Program. The subjects, then, consisted of those students who volunteered to participate on the basis of this request. The following letter was sent to each of the students.

> The College Discovery Program is growing in size and expanding its services with each new school year. Largely because of the student's efforts, the program is constantly improving. This could not have been accomplished without your participation and your help in continuing to evaluate the program through various group and individual meetings.
>
> We are asking you to take part in a group session in the next few weeks. We realize that your schedule is probably quite hectic so we will try our best to arrange a convenient time. This session will meet only once and will be less than an hour long. You will be contacted personally by telephone to set a specific date. Thank you.

Experimental Design

The present study consists of a 2 x 2 x 2 x 3 experimental factorial design of two subject sexes, two examiner sexes, two

examiner races, and three incentive conditions: praise, reproof and control. It was decided to include a minimum of ten subjects for each of the 24 experimental variations for a total of 240 subjects.

Each of the male or female subjects had been randomly assigned beforehand to one of the treatment groups: (a) praise; (b) reproof; or (c) control; and to one of the four examiners: (a) Negro male; (b) Negro female; (c) white male; or (d) white female. This arrangement meant that each examiner saw a total of six groups with ten subjects in each group, or more specifically, a group of only female subjects and only male subjects under each of the three experimental conditions.

Procedure

An Instructor's Manual which includes detailed directions given to the students in each of the incentive conditions appears in Appendix B.

Those subjects who volunteered were asked to report to a designated room. When the subjects arrived they found a notice on the blackboard stating that this was the waiting room and they were to wait there for the assistant. When all of the subjects in that particular group arrived, an assistant directed them to the testing room. Upon arriving at the testing room, subjects were informed that their participation was an aid to the College Discovery Program. The examiner gave the following introductory comments:

> The College Discovery Program is interested in developing new tests to use as a way of understanding more about the students. At present, we are still in the exploratory stages of developing such methods. Your scores, therefore, will not be used to evaluate you, but rather to evaluate the tests. How well you perform on today's tests will in no way affect your college grades or standing. However, we would like you to try your best.
>
> The testing session should take approximately one hour. You will be given several things to do during this time. Please be sure to put your code number on all of the items that you work on. I think we are now ready to begin. There will be no further talking, except that pertaining to the testing situation, once the tests begin.
>
> The first thing that I will ask you to do is to answer some questions about your feelings right now. I will distribute these questions to you now.

Then, the pretest measure of anxiety (MAACL) was administered. After the anxiety scale was collected, the first set of digit-symbol test booklets was distributed to subjects in each group. The examiner gave the following instructions:

> I have just passed out digit-symbol tests plus pencils. As you can see at the top of the page there are nine boxes each with a number. Below each box is a mark or symbol. Each number has its own symbol. Your job is to fill in the empty boxes with the symbol that goes with each number. Since this is partially a test of speed, you are to answer as rapidly as possible. You start with the first line and continue without skipping any spaces. When you finish one line, go to the next line and continue until I call out STOP. Then when I give the signal I want you to turn the page and do the next set of numbers. Are there any questions concerning what you will be doing on these tests? Alright - BEGIN.

The first set of digit-symbol test booklets consisted of six pages with the digit-symbol codes at the top of each page. Each page represented a one-minute trial, altogether there was a warm-up trial and five scored trials. The second set of digit-symbol test booklets included five pages or trials. The dependent

measure, that is, the index of digit-symbol efficiency was the difference between the total scores in the first and second series of five trials each.

When the initial administration of the digit-symbol task was completed, the examiner collected all the task booklets and gave them to the assistant who was waiting outside the testing room. The students were informed that the results of their performance would be available in a few minutes. After the examiner was handed the bogus results, the following comments were made to the respective experimental groups:

Reproof. I now have the scores of the tests that you have just worked on. Your scores on this test are very low. We do not know specifically what kinds of abilities the test measures, but we do know that they are closely related to how people do in school. One of the purposes of the research program is to get as much information about this as possible.

You did so poorly on the test you took that I think these are the lowest scores I have gotten so far. Why don't you finish up the rest of the test anyway.

Praise. I now have the scores of the test that you have just worked on. Your scores on this test are very high. We do not know specifically what kinds of abilities the test measures, but we do know that they are closely related to how people do in school. One of the purposes of the research program is to get as much information about this as possible.

You did so well on the test you took that I think these are the highest scores I have gotten so far. Now I would like you to go through the task again. Keep up the good work!!

After the praise and reproof groups were evaluated in the manner indicated, the second set of digit-symbol test booklets were distributed to the subjects in each group.

Control. Control subjects were asked to turn in their booklets and they were reassured that people's scores do vary on such a test. After a few minutes break, subjects were given the second set of test booklets and were requested to finish the test.

At the conclusion of the task performance, a post-test measure was obtained from each of the subjects. The Terminal Questionnaire which directly assessed the subjects' reactions to the experimental situation and to the examiner was distributed. Then all the subjects involved in the experimental groups were thoroughly debriefed. Essentially, the examiner informed the subjects about the arbitrary appraisal given to them regarding their performance. (See Appendix B.)

In order to guard against any possible contaminating effects the experimental procedure could have on the subjects' choice of responses, the Parental Behavior Inventory (PBI) was given to the students well in advance of the actual experimental situation. (See Appendix A.) Counselors affiliated with the College Discovery Program at each of the schools administered the PBI at the time of their scheduled conferences with the individual students.

Examiners

The examiners, in the age range of 26-31 years, had all completed graduate work in fields of study other than psychology. They were trained by the investigator in the administration of the various tests and the prescribed verbal incentives. Training consisted of familiarization with the testing forms and uniformity in handling the materials. In addition, the verbal incentive instructions were practiced by all of the examiners so that the delivery of these were made as nearly similar as possible in terms of tone of voice, inflection, and volume. The examiners were periodically checked in the field so that the procedure was kept as uniform as possible throughout the experiment.

Instruments

A complete copy of each instrument used in the experiment appears in Appendix A.

Anxiety scale. An anxiety scale was administered since there is some evidence to suggest that anxiety may interact with the experimental incentive conditions. A group of researchers (Stevenson, Keen & Knights, 1963) have proposed that when subjects are extremely anxious, social reinforcement (praise) will operate to reduce anxiety, resulting in a decrease in motivation and slower rate of response. Furthermore, there is also an indication that performance tests, such as the dependent measure in this research, the Digit-Symbol subtest from the Wechsler Adult Intelligence Scale (WAIS), may be affected by the anxiety levels of

the subjects (Wolman, 1965). The measure of anxiety (Zuckerman, 1960) consisted of 132 items which the subject checked as to whether they applied to him or not. The timeset of the Multiple Affect Adjective Checklist (MAACL) can be adjusted. Thus, it is possible for the subject to describe how he feels usually ("in general" form) or at that moment ("today" form). The subject was asked to check all the words alphabetically arranged that described his feelings today. Some of the words appearing on the list are: aggressive, amused, irritated, and tense.

Reliability for the MAACL was .85 for the "today" form, while test-retest reliability was .31 for the "today" form after a week (Zuckerman, 1960). Of course, it would be expected that the today form would have a low test-retest reliability. Validity studies were conducted by Zuckerman (1960, 1961) by administering the MAACL to classes of students daily right up to test-day. There were very significant differences between exam-days and non-exam-days. The forms which stated "in general" and "during the past month" were found to correlate with the Manifest Anxiety Scale rather well with five of seven correlations between .58 and .85.

Experimental Test. A digit-symbol substitution test was selected as the dependent variable since performance on this task has been successfully used in a series of studies in this area (Katz & Greenbaum, 1963; Katz et al., 1964; Katz et al., 1965; Cohen, 1965). Task similarity should facilitate comparisons with previous findings. Moreover, the digit-symbol test, unlike many other non-verbal or performance tasks, can be readily understood by subjects

and easily administered.

Two task booklets were distributed: one with six pages and another with five pages. All eleven pages contained the identical code for the WAIS subtest. Six one-minute trials were administered, then the experimental incentive condition, and finally a second series of five trials. The first one-minute trial served as a practice or warm-up trial and was not counted as part of the final calculations.

Parent Behavior Inventory. The main focus of this study is on the experimental effects of race of the examiner, sex of the examiner, and verbal incentives on the performance of Negro subjects. It should be useful to have, in addition, some information on early experiences which could influence the Negro child's later reinforcement sensitivity. Since it is felt that the subject's reaction to the examiner and incentive condition had been influenced in part by his perceptions of his parents' behavior, measures pertaining to this relationship were obtained.

A limited pilot study by this researcher attempted to obtain subjects' perceptions of parental behavior by using two scales, Parent Evaluation Mother (PEM) and Parental Evaluation Father (PEF), devised by Cooper (1966). Subjects described their parents' behavior for six categories: acceptance, attitude toward sexuality, responsibility, consistency, warmth, and outlook of life. However, these scales lacked a refined discrimination of parental behavior along the dimension of acceptance and rejection which is relevant

for this study. For this reason, it was decided to replace them with a more suitable measure.

The scales of the Children's Reports of Parental Behavior Inventory (PBI; Schaefer, 1965) were selected for this purpose. Three replicated factors were identified from correlation matrices of reports of maternal and paternal behavior by children and by adults: Acceptance versus Rejection, Psychological Autonomy versus Psychological Control, and Firm Control versus Lax Control. Reliabilities were higher for scales designed to measure the dimension of Love versus Hostility than for those designed to measure components of Autonomy versus Control. Significant differences were found in scores on these scales between children's reports by two groups of males who differed in adjustment, age, and socioeconomic status (Schaefer, 1965). These results suggest that the scales might be useful in the investigation of the relationship between perceptions of parental behavior and child adjustment. Only those scales which deal with Acceptance and Rejection were used here.

There was a cover sheet to indicate information on family background items which were relevant to the scales. For example: "Is your father/mother living?" The PBI scales consisted of separate but virtually identical forms with 62 items for mothers and 62 items for fathers. Some items from the PBI are:

Complains that I get on his/her nerves.	L	SL	NL
Is always finding fault with me.	L	SL	NL

Seems proud of the things I do. L SL NL

Seems to see my good points more than my faults. L SL NL

The method of scoring was as follows. Values were assigned to each of the three choices available to the subjects: the value of 2 to Like; 1 to Somewhat Like; and 0 to Not Like.

Terminal Questionnaire. A 13-item questionnaire was administered to the subjects at the end of the experimental session. The items were answered on a five-point scale with each of the points labelled.

The items in the questionnaire were used to determine:

(A) The subject's report on his level of anxiety.

(B) The subject's reactions to the digit-symbol task.

(C) The effectiveness of the experimental manipulations.

(D) The subject's reactions to the examiner.

(E) The subject's response to the entire experimental situation.

Examples of two of the items are presented below:

How much did you like the task?

dislike very much	dislike a little	neither dislike or like	like a little	like very much
1	2	3	4	5

How hard did you try on the task?

not motivated	slightly unmotivated	unsure	slightly motivated	highly motivated
1	2	3	4	5

Results

The 2 x 2 x 2 x 3 factorial design in this experiment utilized two subject sexes, two examiner races, two examiner sexes, and three incentive conditions: praise, reproof, and control. Having four factors in any study makes it difficult to interpret complex interactions if they are found to be significant. To preclude such difficulty, it was decided to partition the analysis of results. The data obtained from the male subjects was analyzed separately from the data of female subjects. In following this procedure, the results of each will be treated individually with some comparison offered between male and female subjects when it is deemed appropriate and useful.

Effectiveness of Experimental Manipulations

Before presenting the actual results of the study, it is necessary to examine the subjects' perceptions of how they felt after the examiner evaluated them. One of the items on the Terminal Questionnaire (Item 9) tests the effectiveness of this experimental manipulation. It is the only available measure obtained from the subjects on their own affective reactions to the incentive conditions of praise and reproof.

The questionnaire item asked the subjects how they felt after the examiner told them how they were doing. The subjects were given

an opportunity to indicate their responses on a 5-point scale ranging from very bad (a score of 1) to very good (a score of 5). Since the question was only pertinent to subjects in the praise or reproof conditions, subjects assigned to the control group were requested to ignore this item.

The means for each experimental condition for male subjects appears in Table 1 and for females subjects in Table 2. Upon examination of these means, it can be seen that subjects tended to "feel good" about what they were told in the praise condition with a mean of 3.9 for males and 3.6 for females and to "feel badly" in the reproof condition with a mean of 2.7 for males and 2.8 for females. However, an analysis of variance of responses for male subjects ($F=3.01$, $df=1/72$, $p<.10$) and for female subjects ($F=2.91$, $df=1/72$, $p<.10$) yielded no statistically significant findings.

It is likely that a social desirability response set operates to some extent, so that subjects would tend to present themselves and their feelings in positive ways. While the direction indicates a weak tendency for subjects to report being affectively influenced by the incentive conditions, there is some indication that the experimental manipulation was effective.

Anxiety Scores on the MAACL

Since subjects had not been matched on a measure of anxiety prior to the experiment, it was necessary to make certain that

Table 1

Cell Means and Analysis of Variance of Responses to Affective Reaction Item (Item 9) for Male Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
Praise	4.1[a]	4.3[b]	3.7[c]	3.8[d]
Reproof	2.8[e]	2.8[f]	2.7[g]	2.7[h]
Combined	3.4	3.5	3.2	3.7

n = 10 for each cell; N = 80.

Multiple range test:
a,b,c,d significantly higher than e,f,g,h ($p < .05$ both tails).

Analysis of Variance

Source	df	MS	F
Race (R)	1	1.51	1.83
Sex (S)	1	0.11	0.13
Incentive	1	2.48	3.01†
R x S	1	0.01	0.01
R x I	1	0.83	1.01
S x I	1	0.11	0.13
R x S x I	1	0.01	0.01
Within	72	0.83	
Total	79		

†$p < .10$ (both tails)

Table 2

Cell Means and Analysis of Variance of Responses to Affective Reaction Item (Item 9) for Female Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
	a	b	c	d
Praise	3.6	3.7	3.6	3.7
	e	f	g	h
Reproof	2.8	2.9	2.7	3.0
Combined	3.2	3.3	3.1	3.3

n = 10 for each cell; N = 80.

Multiple range test:
a,b,c,d significantly higher than e,f,g ($p < .05$ both tails).

Analysis of Variance

Source	df	MS	F
Race (R)	1	0.00	0.00
Sex (S)	1	0.45	0.59
Incentive (I)	1	2.20	2.91†
R x S	1	0.04	0.06
R x I	1	0.00	0.00
S x I	1	0.15	0.19
R x S x I	1	0.04	0.06
Within	72	0.75	
Total	79		

†$p < .10$ (both tails)

both high and low anxiety subjects were equally distributed among the different experimental conditions. Anxiety scores on the MAACL are assumed to be positively related to subjective levels of anxiety. That is, a low anxiety scale score would indicate a lower level of subject anxiety, whereas a high scale score would indicate a higher level of anxiety.

The results of the analysis of variance for male subjects, as well as the means for each experimental condition, are presented in Table A (see Appendix C). The results show no significant main effects for each of the three independent variables, race of the E, sex of the E, and incentive conditions, and no significant interactions of these variables.

Though the anxiety level of the subject does not appear to have interacted directly with the experimental conditions, anxiety still may have had an effect on digit-symbol performance prior to the administration of the experimental incentive. The correlation between the anxiety variable and digit-symbol performance in male subjects was +.01, indicating that in this research motor performance was not significantly affected by the anxiety levels of the male subjects.

The results of the analysis of variance for female subjects, as well as the means for each experimental condition, are presented in Table B (see Appendix C). The analysis does not yield any statistically reliable differences. Female subjects were also distributed equally among the different experimental conditions

with respect to their anxiety levels. The negative correlation of -.10 between the subjects' anxiety level and digit-symbol performance before the incentive was not statistically significant.

In order to ascertain if there were any differences in anxiety levels between the males and females, a t test for the significance of a difference between two means was performed on the mean for males of 7.96 and SD = 3.21 and the mean for females of 6.44 and SD = 4.39. The difference in anxiety between the sexes was not significant (t = .28).

Since means and SDs of both male and female college students in Zuckerman's normative sample on the MAACL were available, it was decided to compare Negro males and females with the norms for white groups. The mean for males in the normative sample was 6.9 with a SD of 3.3; and the mean for females was 6.3 with a SD of 4.0. For both males and females, the t tests proved to be nonsignificant (for males t = .23 and for females t = .24). With respect to anxiety levels, the Negro students in this study do not differ from white college students.

Anxiety Report of the Subject

The subject's self-report of his experienced level of anxiety was assessed by two items on the Terminal Questionnaire. The first item (Item 10)asked the subject how he felt when he was working on the task. The second item (Item 13) asked the subject how he felt about coming for the testing that day. The subject

was given an opportunity to indicate his responses on a 5-point scale ranging from very nervous (a score of 1) to very relaxed (a score of 5) for both items.

An analysis of variance of responses to each item yielded no significant main effects or interactions in Tables C and D (see Appendix C). This result supports the earlier finding on the MAACL which indicated that high and low anxiety subjects were equally distributed among the different experimental conditions.

However, when the questionnaire items are compared with the mean score on the MAACL for males, both yield significant negative correlations (Item 10 = -.19; Item 13 = -.24, $p < .05$). The higher anxiety scores on the MAACL were in contrast to the reports of relative relaxation on the questionnaire items. Several explanations may be offered to account for the discrepancy in scores. Responses on the Terminal Questionnaire may reflect a "relief" factor; the subjects feel now that the testing is over, it wasn't so bad after all. This attitude may also serve as a defense against any residual anxiety which may still be felt. In addition, the subjects' desire to present a more socially acceptable response may have produced the lower anxiety scores on the Terminal Questionnaire. Of course, since the MAACL is an established test for the assessment of anxiety, the findings reported earlier for the MAACL probably have greater validity and reliability.

An analysis of variance of responses to Item 10 for female subjects did not yield any significant main effects or interactions in Table E (see Appendix C). However, the analysis of variance of

responses to Item 13 in Table F (see Appendix C) indicated a significant sex and incentive interaction ($F = 4.31$, $df = 2/108$, $p < .05$). A Duncan's multiple range test showed that the score obtained with a Negro male examiner under control conditions was significantly higher than that obtained by female subjects with other examiners under that experimental condition. Previous analysis showed that this group did not differ at the beginning of the testing from the other female subjects. This suggests that the lower anxiety expressed at the end of the experiment relates specifically to the control condition when a Negro male is the examiner. The Negro females are perhaps overemphasizing their relaxed state as a way of demonstrating to the Negro male their own ability in mastering a potentially tension-provoking situation.

A comparison of the questionnaire items with the MAACL mean score yielded significant negative correlations (Item 10 = -.19; Item 13 = -.22, $p < .05$). This finding for female subjects replicates the reported results for male subjects.

Test of Hypotheses

Digit-Symbol Performance Before Incentive (Preincentive)

Levels of digit-symbol performance before the examiners delivered the praise, reproof, or control incentives were investigated. This assessment supplies information on whether the main effects of race of E, sex of E, as well as the assigned incentive condition for each subject, were yielding significant

differences prior to the administration of the incentive. Essentially, groups of subjects are compared with each other with respect to their base scores or level of digit-symbol performance. Preincentive scores were obtained by averaging the scores for the first five trials of digit-symbol performance for each of the subjects. Then the means for each group of subjects under the various experimental conditions were utilized in the analysis.

For male subjects, the hypothesis regarding sex of the examiner stated that performance, before the experimental conditions of praise and reproof were introduced, would be generally higher with male examiners as contrasted to female examiners.

In the analysis of variance for male subjects in Table 3 the main effect for sex of the examiner (F = 6.75, df = 1/108, $p < .05$) indicates that sex of the examiner influenced the subjects' performance from the beginning of the experimental situation. Subjects tested by male examiners, both Negro and white, had a digit-symbol mean of 42.1, whereas subjects tested by female examiners, both Negro and white, had a mean of 38.9.

For race of the examiner, the following relative levels of performance, arranged from highest to lowest, were anticipated: (1) Negro males with a white male E; (2) Negro males with a Negro male E; (3) Negro males with a Negro female E; and (4) Negro males with a white female E. The findings under the pre-incentive condition showed no significant differences and thus

Table 3

Cell Means and Analysis of Variance of Preincentive Condition Digit-Symbol Raw Scores for Male Subjects

	Negro Examiners		White Examiners		
Incentive	Male	Female	Male	Female	
	a	b	c	d	W=41.2
Praise	43.8	20.5	41.3	47.0	N=39.7
	e	f	g	h	
Reproof	39.8	40.9	40.8	39.5	M=42.1
	i	j	k	l	F=38.9
Control	46.3	47.4	40.6	38.3	
					P=38.1
Combined	43.3	36.2	40.9	41.6	R=40.2
					C=43.1

n = 10 for each cell; N = 120.

Multiple range test:
b significantly lower than a,c,d (p=.05 both tails).
k, l significantly lower than i,j (p=.05).

Analysis of Variance

Source	df	MS	F
Race (R)	1	64.53	1.44
Sex (S)	1	300.83	6.75*
Incentive (I)	2	252.13	5.65**
R x S	1	448.53	10.06**
R x I	2	961.73	21.58***
S x I	2	238.63	5.35**
R x S x I	2	848.63	19.04***
Within	108	44.53	
Total	119		

*p<.05 (both tails)
**p<.01
***p<.001

do not support these predictions.

It was not expected that the particular incentive conditions would have an effect on performance prior to the incentives being applied. However, a significant main effect for the incentive factor (F = 5.65, df = 2/108, $p < .01$) was obtained. An inspection of the findings shows the mean for the praise condition group is 38.1, the mean for the reproof condition group is 40.2, and the mean for the control group is 43.1.

It is difficult to account for the higher performance given by male subjects in the control conditions. While this unexpected finding under the preincentive conditions is a puzzling one, the postincentive or posttest results are of crucial interest. It will be recalled that the main focus in this study was to examine the interaction effects of characteristics of the examiner and types of incentives on performance. Consequently, the preincentive findings do not seriously interfere with these predicted interaction effects.

For female subjects, the hypothesis regarding sex of the examiner for female subjects stated that performance generally would be better with female examiners as contrasted to male examiners. The results of the analysis of variance for female subjects in Table 4 shows the main effect for sex of the examiner with an F of 1.25 was not significant. The mean performance scores for male and female examiners show little difference between them.

Table 4

Cell Means and Analysis of Variance of Preincentive Condition Digit-Symbol Raw Scores for Female Subjects

	Negro Examiners		White Examiners		
Incentive	Male	Female	Male	Female	
	a	b	c	d	W=47.3
Praise	45.6	44.4	48.7	46.1	N=47.4
	e	f	g	h	
Reproof	45.6	45.8	44.1	47.2	M=48.0
	i	j	k	l	F=46.6
Control	50.0	53.3	54.4	43.3	
					P=46.2
Combined	47.1	47.8	49.1	45.5	R=45.6
					C=50.2

n = 10 for each cell; N = 120 .

Multiple range test:
i,l significantly lower than j,k (p=.05 both tails).

Analysis of Variance

Source	df	MS	F
Race (R)	1	0.63	0.01
Sex (S)	1	57.41	1.25
Incentive (I)	2	250.72	5.48**
R x S	1	138.67	3.03+
R x I	2	67.67	1.48
S x I	2	79.00	1.72
R x S x I	2	202.82	4.43*
Within	108	45.69	
Total	119		

*p<.05 (both tails)
**p<.01
+p<.10

For race of the examiner, the following order of performance from highest to lowest was predicted: (1) Negro females with a Negro female E; (2) Negro females with a white female E; (3) Negro females with a white male E; (4) Negro females with a Negro male E. The results under the preincentive condition do not support these predictions since as shown in Table 4 the effect of the examiners' race did not produce statistically reliable differences.

The only significant main effect for female subjects was the incentive condition which was to be introduced later by the examiner (F = 5.48, df = 2/108, $p < .01$). The mean for the praise condition is 46.2, for the reproof condition 45.6, and for the control condition 50.2. This finding replicates that found with male subjects and their preincentive digit-symbol scores.

The differences in digit-symbol performance (preincentive) between male and female subjects was also subjected to statistical analysis. A t test for the significance of a difference between two means was performed. The mean for males was 40.51 with a SD of 9.27; and the mean for females was 47.37 with a SD of 7.29. Female subjects performed significantly better (t = 6.46, $p < .001$) on the digit-symbol test than male subjects. This finding corroborates the results of female superiority on this visual-motor test cited by other investigators (Miele, 1958; Wechsler, 1958; Norman, 1953).

Digit-Symbol Performance After Incentive (Postincentive)

Three measures on digit-symbol test performance were obtained for each of the subjects: the score before the incentive was administered (digit-symbol preincentive or preexperimental, termed Pre), the score after the incentive was administered (digit-symbol postincentive or postexperimental, termed Post), and the score signifying the difference (Diff.) between these two measures. If only the raw score differences were used, then the amount of shift in the postincentive score in relation to the base score or preincentive score could not be assessed. A more refined measure, the percent difference, was used.

This was defined as the proportion of change represented by the difference score with the plus or minus sign appended, when it was compared with the score on the preexperimental trial. The percent difference score was calculated by dividing the preincentive score into the difference score (Post - Pre ÷ Pre). Only the means of the percent difference scores for each of the 24 treatment conditions were used in the analysis of data presented here.

It was predicted that male subjects would perform better with male examiners as contrasted to female examiners. The main effect for sex of the examiner as revealed in Table 5 did not yield statistically significant results under postincentive conditions. These results are not in agreement with those in the preincentive condition.

For race of the examiner, the following order of performance from highest to lowest was predicted: white male E, Negro male E, Negro female E, and white female E. The main effect for race of the examiner was also not statistically significant. Race of the examiner alone was not a significant factor for male subjects either in the preincentive or postincentive conditions.

Predictions regarding the incentive main effect stated that praise as an incentive would tend to elevate performance, while reproof would lower performance. It was also expected that any change in the control conditions would only be due to the possibility of practice effects. The results of the analysis of variance in Table 5 show that only the incentive main effect was significant ($F = 9.07$, $df = 2/108$, $p < .001$). The significance level obtained indicates a very strong influence brought to bear by variations in the incentive employed. When the incentive condition means (percent difference scores) are averaged over the variables of examiners' race and sex, the following means are obtained: for praise a mean of 23.5, for reproof a mean of 12.7, and for control a mean of 11.1. A Duncan's multiple range test showed that the praise mean was significantly ($p < .05$) higher than the reproof or control means. This finding gives support to the general prediction that praise would tend to elevate performance. However, the results do not confirm the hypotheses made about reproof and control, since in both conditions there was an increment in performance. Indeed, there was not a

Table 5

Cell Means and Analysis of Variance of Postincentive Digit-Symbol Percent Difference Scores for Male Subjects

	Negro Examiners		White Examiners		
Incentive	Male	Female	Male	Female	
	a	b	c	d	
Praise	37.3	21.3	15.3	20.0	W=15.2
	e	f	g	h	N=16.3
Reproof	13.4	13.0	14.7	10.0	
	i	j	k	l	M=17.0
Control	11.0	2.3	13.6	17.7	F=14.0
Combined	20.5	12.2	14.5	15.9	P=23.5
					R=12.7
					C=11.1

n = 10 for each cell; N = 120.

Multiple range test:
a significantly higher than b,c,d (p=.05 both tails).
j significantly lower than i,k,l (p=.05).

Analysis of Variance

Source	df	MS	F
Race (R)	1	39.69	0.20
Sex (S)	1	366.45	1.87
Incentive (I)	2	1774.05	9.07***
R x S	1	700.80	3.58+
R x I	2	1060.38	5.42**
S x I	2	34.10	0.17
R x S x I	2	404.00	2.06
Within	108		
Total	119		

**p<.01(both tails)
***p<.001
+p<.10

significant difference between the performance levels for those who were assigned to the reproof group and those in the control group. It can be concluded, then, that praise, reproof and control, all lead to increases in performance, but praise results in significantly higher performance levels than either reproof or control. The postincentive digit-symbol findings are in contrast with those found in the preincentive condition where the control group surpassed the experimental groups in performance levels.

Basic predictions were made regarding the performance of Negro males under the four examiners and different incentive conditions. It was predicted that under praise conditions the highest increment would be with a white male examiner, the second highest with a Negro male examiner, then a Negro female examiner, and the lowest increment with a white female examiner. The results shown in Table 5 under praise conditions reveal the performance scores from highest increment to lowest increment were for these examiners: Negro male examiner, Negro female examiner, white female examiner and white male examiner. The rankings associated with the praise condition do not support the predictions offered at the outset of the research.

Under conditions of reproof, subjects were expected to show the greatest decrement in performance with a white male examiner, the second greatest decrement with a Negro male examiner, then with a Negro female examiner, and the lowest decrement with a white

female examiner. The results under reproof conditions revealed no decrements in performance levels but only increments. The performance scores from lowest increment to highest increment were for these examiners: white female examiner, Negro female examiner, Negro male examiner, and white male examiner. The findings for the reproof condition do not confirm the hypotheses. Indeed, if one considers decrement simply equal to the amount of positive change, then all findings are almost the opposite of what was predicted.

The control conditions were expected to show an ordering effect similar to the praise condition, however, differences among the examiners were not expected to be as marked as under praise. The results under the control groups revealed in Table 5 showed the following order: white female examiner, white male examiner, Negro male examiner, Negro female examiner. Here, too, the predictions made earlier were not substantiated.

Only two means out of all those listed above were significantly different ($p < .05$) according to Duncan's multiple range test when compared with the other means within their incentive condition. The highest score or best performance for groups of male subjects was obtained with a Negro male examiner under praise. The lowest score or poorest performance for groups of male subjects was obtained with a Negro female examiner under control conditions. Predictions were borne out in terms of sex of the examiner but not race of the examiner.

Table 6

Cell Means and Analysis of Variance of Postincentive Digit-Symbol Percent Difference Scores for Female Subjects

	Negro Examiners		White Examiners		
Incentive	Male	Female	Male	Female	
	a	b	c	d	
Praise	13.3	11.6	16.7	23.4	W=12.4
	e	f	g	h	N=12.9
Reproof	14.4	15.2	12.6	7.3	
	i	j	k	l	M=10.9
Control	7.3	15.9	1.3	13.4	F=14.4
Combined	11.7	14.2	10.2	14.7	P=16.2
					R=12.3
					C=4.4

n = 10 for each cell; N = 120.

Multiple range test:
d significantly higher than a,b,c ($p<.05$ both tails).
j significantly higher than i,k ($p<.05$).
k significantly lower than i,j,l ($p<.05$).

Analysis of Variance

Source	df	MS	F
Race (R)	1	7.50	0.10
Sex (S)	1	374.54	5.14*
Incentive (I)	2	462.18	6.35**
R x S	1	28.02	0.38
R x I	2	492.96	6.77**
S x I	2	404.90	5.56**
R x S x I	2	136.01	1.86
Within	108	72.75	
Total	119		

*$p<.05$ (both tails)
**$p<.01$

It was predicted that female subjects would perform better with female examiners as contrasted to male examiners. As can be seen in Table 6, the main effect for sex of the examiner was significant (F = 5.14, df = 1/108, $p < .05$) and indicates that female subjects did show higher levels of performance with female examiners (mean of 14.4) than with male examiners (mean of 10.9). No significant differences were found for female subjects in the preincentive conditions. Since this finding though is in line with that found for males, it gives added weight to a general notion that subjects do better when the examiner is of the same sex.

For race of the examiner, the following order of performance from highest to lowest was predicted: Negro female examiner, white female examiner, white male examiner, and Negro male examiner. The main effect for race of the examiner did not yield significant results. Race of the examiner alone was not a significant factor for female subjects either in the preincentive or postincentive conditions.

Predictions regarding the incentive main effect stated that praise as an incentive would tend to elevate performance, while reproof would lower performance. It was also expected that any change in the control conditions would only be due to the possibility of practice effects. The results of the analysis of variance show that the incentive main effect was significant (F = 6.35, df = 2/108, $p < .01$). The following means were obtained: a mean for the praise group of 16.2, for the reproof group 12.3,

and for the control group 4.4. A Duncan's multiple range test showed that all three means differ significantly ($p < .05$) from one another. The results do not confirm the hypotheses made about reproof and control, since both conditions led to an increment in performance. The postincentive digit-symbol findings are in contrast with those found in the preincentive condition where the control group surpassed the experimental groups in performance levels.

Predictions were made regarding the performance of Negro females under the various experimental conditions with the different examiners. It was predicted that under praise conditions the highest increment would be with a Negro female examiner, the next highest with a white female examiner, then a white male examiner, and finally a Negro male examiner. The results for praise conditions revealed the performance scores from highest increment to lowest increment were for these examiners: white female examiner, white male examiner, Negro male examiner, and Negro female examiner. The rankings associated with the praise conditions do not support the predictions offered at the outset of the research, indeed it seems that race rather than sex is more important.

Under conditions of reproof, subjects were expected to show the greatest decrement in performance with the Negro female examiner, the second greatest decrement with the white female examiner, then with the white male examiner, and the lowest

decrement with the Negro male examiner. The results under the reproof conditions revealed no decrements in performance levels but only increments. The performance scores from lowest increment to highest increment were for these examiners: white female examiner, white male examiner, Negro male examiner, and Negro female examiner. The findings do not confirm the predictions. Indeed, as in the case of the males, if one uses degree of increment as a measure of the effect of reproof, the actual results are close to being opposite of what was predicted. The Negro female examiner was predicted as showing the greatest decrement while actually she produced the greatest increment.

Subjects in control conditions were expected to show an ordering effect similar to the praise condition with differences between the groups not as marked as under praise. The following order of performance was obtained: Negro female examiner, white female examiner, Negro male examiner, and white male examiner. The predictions are not fully substantiated because of the findings with the male examiners.

According to Duncan's multiple range test ($p < .05$) the highest score or best performance for groups of female subjects was obtained with a white female examiner under praise. The lowest score or poorest performance for groups of female subjects was obtained with a white male examiner under control conditions.

Reactions to the Digit-Symbol Task

Several items on the Terminal Questionnaire dealt with the subject's reactions to the digit-symbol task and his reactions to the examiners. Item 1 asked the subject how he liked the task. Responses were recorded on a 5-point scale ranging from dislike very much (a score of 1) to like very much (a score of 5). An analysis of variance of responses to this item for male subjects yielded no significant main effects and only one significant interaction as shown in Table 7. The race and sex interaction ($F = 4.04$, $df = 1/108$, $p < .05$) revealed those subjects with a Negro male examiner or white female examiner (mean of 2.5 and mean of 2.8) claimed to have disliked the task more than those with a Negro female examiner or white male examiner (mean of 3.1 for both). The one mean score that was significantly lower than most of the others as indicated by a Duncan's multiple range test was the high amount of dislike for the task expressed with a Negro male examiner under praise conditions ($p < .05$). This is paradoxical since the highest score on the digit-symbol task was received by male subjects with a Negro male examiner. There were no significant differences for female subjects on this item as shown in Table G (see Appendix C).

An item (Item 2) measuring the subject's general reactions to the digit-symbol task required the subjects to judge their effort level while working on the task. Subjects indicated how

Table 7

Cell Means and Analysis of Variance of Responses to Task Enjoyment Item (Item 1) for Male Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
	a	b	c	d
Praise	1.9	3.2	3.1	2.7
	e	f	g	h
Reproof	2.6	3.0	2.8	2.5
	i	j	k	l
Control	3.0	3.0	3.2	3.3
Combined	2.5	3.1	3.1	2.8

n = 10 for each cell; N = 120.

Multiple range test:
a significantly lower than b,c,f,i,j,l ($p < .05$ both tails).

Analysis of Variance

Source	df	MS	F
Race (R)	1	0.67	0.61
Sex (S)	1	1.00	0.92
Incentive (I)	2	2.13	1.95
R x S	1	4.40	4.04*
R x I	2	0.70	0.64
S x I	2	0.53	0.48
R x S x I	2	2.03	1.86
Within	108	1.08	
Total	119		

*$p < .05$ (both tails)

hard they tried on the task on a scale ranging from tried very little (a score of 1) to tried very much (a score of 5).

An analysis of variance of responses to this item for male subjects in Table 8 yielded a significant main effect only for incentive conditions ($F = 4.55$, $df = 2/108$, $p < .05$). The mean for the praise group is 4.0, for the reproof group 3.6, and for the control group 4.3. A Duncan's multiple range test showed that only two means out of 12 treatment conditions differed significantly ($p < .05$) from one another; the score given with a Negro female examiner under control conditions (mean = 4.6) and the score given with a Negro female examiner under reproof conditions (mean = 3.5). It is interesting to note that there was a tendency for subjects under control and praise conditions to indicate that they had worked harder than those under reproof conditions. This is in agreement with the finding on the actual digit-symbol performance. It also suggests, however, that the Negro males might be reacting to the effects of reproof by replying that they were not putting very much effort into the task.

An analysis of variance of responses to this item for female subjects shown in Table 9 revealed that the main effects of race and incentive were significant. In addition, the interaction between race and sex was significant.

The main effect for race of the examiner ($F = 7.09$, $df = 1/108$, $p < .01$) can be seen in the following distribution of means:

Table 8

Cell Means and Analysis of Variance of Responses to Task Perseverance Item (Item 2) for Male Subjects

	Negro Examiners		White Examiners	
Incentives	Male	Female	Male	Female
	a	b	c	d
Praise	3.7	4.5	3.6	4.2
	e	f	g	h
Reproof	3.6	3.5	3.7	3.6
	i	j	k	l
Control	4.3	4.6	4.2	4.4
Combined	3.8	4.2	3.8	4.0

n = 10 for each cell; N = 120.

Multiple range test:
1 significantly higher than a ($p < .05$ both tails).

Analysis of Variance

Source	df	MS	F
Race (R)	1	0.20	0.15
Sex (S)	1	2.40	1.82
Incentive (I)	2	6.00	4.55*
R x S	1	0.07	0.05
R x I	2	0.25	0.19
S x I	2	1.60	1.21
R x S x I	2	0.02	0.01
Within	108	1.31	
Total	119		

*$p < .05$ (both tails)

Table 9

Cell Means and Analysis of Variance of Responses to Task Perseverence Item (Item 2) for Female Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
	a	b	c	d
Praise	4.2	4.1	3.6	4.2
	e	f	g	h
Reproof	4.6	3.2	3.1	3.2
	i	j	k	l
Control	4.7	4.4	3.4	4.2
Combined	4.5	3.9	3.3	3.8

n = 10 for each cell; N = 120.

Multiple range test:
i significantly higher than f,g,h,k ($p < .05$ both tails).
e significantly higher than f,g,h,k ($p < .05$).
j significantly higher than f ($p < .05$).

Analysis of Variance

Source	df	MS	F
Race (R)	1	10.20	7.09**
Sex (S)	1	0.07	0.05
Incentive	2	4.63	3.21*
R x S	1	9.07	6.30*
R x I	2	0.83	0.57
S x I	2	2.69	1.87
R x S x I	2	0.40	0.27
Within	108	1.43	
Total	119		

*$p < .05$ (both tails)
**$p < .01$

Negro male examiner 4.5, Negro female examiner 3.9, white female examiner 3.8, and white male examiner 3.3. A Duncan's multiple range test indicated that only the difference between responses given with a Negro male examiner and those given with a white male examiner were significant ($p<.05$). A discrepancy thus exists between the female subjects' perception of their task effort and their actual performance which showed higher performance with females than males.

The incentive effect ($F = 3.21$, $df = 2/108$, $p<.05$) revealed an overall difference in the means for the three incentive conditions: praise 4.0, reproof 3.5, and control 4.3. The overall tendency was for subjects under the control and praise conditions to state that they worked harder than those under reproof conditions. Digit-symbol scores for female subjects did show higher levels of performance under praise than reproof. The response to the question is similar to that found with male subjects and may also suggest a denial of effort in the face of verbal reproof.

On another item (Item 4), subjects were asked to give a direct account of how they felt they had performed on the digit-symbol task. Their responses were indicated on a 5-point scale ranging from very poor (a score of 1) to very good (a score of 5). An analysis of variance of responses to this item for female subjects in Table 10 showed a significant effect for the incentive condition ($F = 5.97$, $df = 2/108$, $p<.01$). The means were as follows: praise 3.4, reproof 2.9, and control 3.4.

Table 10

Cell Means and Analysis of Variance of Responses to Attitude Towards Own Performance Item (Item 4) for Female Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
	a	b	c	d
Praise	3.3	3.5	3.5	3.6
	e	f	g	h
Reproof	3.3	2.8	2.7	3.0
	i	j	k	l
Control	3.8	3.3	3.4	3.1
Combined	3.4	3.2	3.2	3.2

n = 10 for each cell; N = 120.

Multiple range test:
i significantly higher than f,g,h ($p<.05$ both tails).
d significantly higher than f,g ($p<.05$).
b significantly higher than g ($p<.05$).
c significantly higher than g ($p<.05$).

Analysis of Variance

Source	df	MS	F
Race (R)	1	0.40	0.75
Sex (S)	1	0.40	0.75
Incentive (I)	2	3.22	5.97**
R x S	1	0.67	1.25
R x I	2	0.55	1.03
S x I	2	0.75	1.40
R x S x I	2	0.52	0.97
Within	108	0.53	
Total	119		

**$p<.01$ (both tails)

The mean score of responses obtained for subjects under the reproof condition suggests that the negative feedback from the examiners probably influenced the perception of their own performance. The findings with male subjects were not significant as can be seen in Table H (see Appendix C).

On another item (Item 8) the subject was requested to compare himself with others in the same experimental situation. He was asked to state how he had performed in comparison to other students in the room. His response was recorded on a 5-point scale ranging from very poor (a score of 1) to very good (a score of 5). It seemed possible that the subjects themselves might inject some competitiveness into the test situation even though the incentive instructions of praise and reproof stressed group effort and performance.

The analysis of variance of responses to this item for male subjects reveals in Table 11 two significant main effects for the race of the examiner and the incentive condition, but no significant interaction effects.

The race effect ($F = 7.94$, $df = 1/108$, $p < .01$) revealed a significant difference between the mean score of 3.7 for subjects tested with Negro examiners, and a mean score of 3.3 for those tested with a white examiner. Male subjects, then, seemed to regard their own performance in a more favorable light when they were tested by Negro examiners than white examiners. They may have felt more competent with Negro examiners, or perhaps, they

Table 11

Cell Means and Analysis of Variance of Responses to Attitude Toward Other Subjects Item (Item 8) for Male Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
	a	b	c	d
Praise	4.3	4.0	3.2	3.8
	e	f	g	h
Reproof	3.6	3.6	3.1	3.3
	i	j	k	l
Control	3.6	3.4	3.4	3.3
Combined	3.8	3.6	3.2	3.4

n = 10 for each cell; N = 120.

Multiple range test:
a significantly higher than c,g,h,j,k,l ($p < .05$, both tails).
b significantly higher than c,g,h,l ($p < .05$,

Analysis of Variance

Source	df	MS	F
Race (R)	1	4.62	7.94**
Sex (S)	1	0.04	0.07
Incentive (I)	2	2.20	3.78*
R x S	1	1.25	2.15
R x I	2	0.62	1.06
S x I	2	0.26	0.46
R x S x I	2	0.45	0.78
Within	108	0.58	
Total	119		

*$p < .05$ (both tails)
**$p < .01$

felt less inhibited by the examiner and so were freer to engage in competitive behavior.

The incentive effect (F= 3.78, df = 1/108, $p<.05$) showed a difference between the means for the praise condition (3.8), the reproof condition (3.4), and the control condition (3.4). Here the subjects in the praise condition had compared their own performance with that of the other students more favorably than those in the other incentive conditions. This finding would support that noted on the digit-symbol task where group performance under praise was highest. There were no significant differences for female subjects on this item as shown in Table I (see Appendix C).

Another item (Item 7) measured the subject's task involvement during the postincentive period. Subjects were asked to judge their work level on a scale ranging from worked much less (a score of 1) to worked much more (a score of 5). The analysis of variance of responses for male subjects in Table 12 yielded two significant main effects for race and incentive conditions.

The main effect for race (F = 9.56, df = 1/108, $p<.01$) indicated that subjects with Negro examiners stated that they worked more after the incentive condition (mean of 3.7), regardless of the kind of incentive, than those with white examiners (mean of 3.3).

Table 12

Cell Means and Analysis of Variance of Responses to Task Involvement Postincentive Item (Item 7) for Male Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
	a	b	c	d
Praise	4.1	4.2	3.3	3.7
	e	f	g	h
Reproof	3.5	3.5	2.8	3.3
	i	j	k	l
Control	3.7	3.3	3.3	3.5
Combined	3.7	3.6	3.1	3.5

n = 10 for each cell; N = 120.

Multiple range test:
b and e significantly higher than c,h,g,j,k($p < .05$ both tails).
d significantly higher than g ($p < .05$).

Analysis of Variance

Source	df	MS	F
Race (R)	1	4.80	9.56**
Sex (S)	1	0.53	1.06
Incentive (I)	2	3.15	6.29**
R x S	1	1.63	3.25†
R x I	2	0.77	1.54
S x I	2	0.40	0.81
R x S x I	2	0.05	0.11
Within	108	0.50	
Total	119		

**$p < .01$ (both tails)
†$p < .10$

The main effect for incentive (F = 6.29, df = 2/108, $p < .01$) showed that the praise group of subjects felt that they worked harder (mean of 3.8) than the reproof group (mean of 3.2) or the control group (mean of 3.4). The praise mean agrees with the actual performance of these subjects on the digit-symbol task. There were no statistically significant differences for female subjects on this item as shown in Table J (see Appendix C).

Two additional items regarding the subjects' reactions to the digit-symbol task appeared on the Terminal Questionnaire: Interest level of the task and meaning of the task. However, responses of both the male and female subjects did not yield significant results as can be seen in Tables K - N (see Appendix C).

Reactions to the Examiners

The subjects' reactions to the examiners were assessed by two questionnaire items (Item 3 and Item 11). The first item on the questionnaire (Item 3) dealing with this topic asked the subjects how they felt toward the examiner. The subjects responded on a 5-point scale ranging from dislike very much (a score of 1) to like very much (a score of 5). The subjects were asked on the second item (Item 11) to state how they felt with

the examiner. Responses on a 5-point scale ranged from very uneasy (a score of 1) to very comfortable (a score of 5).

As is evident in Table 13 the analysis of variance of responses for male subjects to Item 3 yielded significant main effects for race and sex as well as a significant interaction effect for race and sex.

The significant race effect (F = 11.82, df = 1/108, $p < .001$) showed that males tended to like Negro examiners (mean of 4.2) more than white examiners (mean of 3.6). In terms of the sex effect (F = 16.50, df = 1/108, $p < .001$) it seems at first glance that they liked female examiners (mean of 4.2) more than male examiners (mean of 3.6). However, this result is heavily influenced by the responses from subjects tested by the white male examiner. Their responses rated the white male examiner as the most disliked examiner when compared to the others. It should be noted that the most expected findings, namely, differences in liking or disliking the examiner as a function of praise or reproof does not occur.

The analysis of variance of responses for male subjects to Item 11 in Table 14 showed a significant sex effect (F = 12.5, df = 1/108, $p < .001$). Males tended to be more comfortable with female examiners (mean of 4.2) than with male examiners (mean of 3.7). However, here too perhaps the low score given by male subjects with the white male examiner influenced the results. A Duncan's multiple range test indicated that the means of the other

Table 13

Cell Means and Analysis of Variance of Responses to Reactions to Examiners for Dislike/Like Continuum Item (Item 3) for Male Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
	a	b	c	d
Praise	4.5	4.5	3.1	4.5
	e	f	g	h
Reproof	4.0	4.1	2.8	4.0
	i	j	k	l
Control	3.8	4.3	3.4	4.1
Combined	4.1	4.3	3.1	4.2

n = 10 for each cell; N = 120.

Multiple range test:
a,b,d,j significantly higher than c,g,k ($p<.05$ both tails).
e,f,h,l significantly higher than c,g ($p<.05$).
i significantly higher than g ($p<.05$).

Analysis of Variance

Source	df	MS	F
Race (R)	1	9.05	11.82***
Sex (S)	1	12.63	16.50***
Incentive (I)	2	1.78	2.33
R x S	1	5.96	7.80**
R x I	2	0.47	0.62
S x I	2	0.02	0.03
R x S x I	2	0.96	1.25
Within	108	0.76	
Total	119		

**$p<.01$ (both tails)
***$p<.001$

Table 14

Cell Means and Analysis of Variance of Responses to Reactions to Examiners for Uneasy/Comfortable Continuum Item (Item 11) for Male Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
	a	b	c	d
Praise	4.2	4.2	3.6	4.4
	e	f	g	h
Reproof	3.9	4.2	3.4	4.4
	i	j	k	l
Control	3.5	4.3	3.9	4.0
Combined	3.8	4.2	3.6	4.2

n = 10 for each cell; N = 120.

Multiple range test:
a significantly higher than g ($p<.05$ both tails).
b significantly higher than g ($p<.05$).
d significantly higher than c,g,i ($p<.05$).
f significantly higher than g ($p<.05$).
h significantly higher than c,g,i ($p<.05$).
j significantly higher than g,i ($p<.05$).

Analysis of Variance

Source	df	MS	F
Race (R)	1	0.30	0.50
Sex (S)	1	7.50	12.50***
Incentive (I)	2	0.32	0.54
R x S	1	0.53	0.88
R x I	2	0.17	0.29
S x I	2	0.17	0.29
R x S x I	2	1.75	2.93
Within	108	0.60	
Total	119		

***$p<.001$ (both tails)

examiners along with the various incentive conditions did not significantly differ from one another ($p<.05$). In any case, neither of these results contradicts the findings on the digit-symbol task in which performance levels were not high with the white male examiner.

On these two items (Item 3 and Item 11) dealing with the subject's feelings toward the examiner, the responses of female subjects revealed these results. The analysis of variance of responses to Item 3 which is presented in Table 15 yielded a significant sex effect ($F = 8.83$, $df = 1/108$, $p<.01$). Female subjects tended to like female examiners (mean of 4.2) more than male examiners (mean of 3.7). This finding indicates that the emotional response here accurately reflects the actual performance levels of the subjects. It will be recalled that female subjects had a higher level of performance with female examiners than male examiners.

The analysis of variance of responses to Item 11 in Table 16 revealed a significant sex effect ($F = 4.54$, $df = 1/108$, $p<.05$). This finding indicates that females in addition to liking female examiners more, also felt more comfortable with them (mean of 4.3) than with male examiners (mean of 4.0).

Reactions to Entire Experimental Situation

On a final item (Item 12) subjects were requested to state whether they would consider taking part in something like this

Table 15

Cell Means and Analysis of Variance of Responses to Reactions to Examiners for Dislike/Like Continuum Item (Item 3) for Female Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
	a	b	c	d
Praise	3.7	4.2	3.2	4.4
	e	f	g	h
Reproof	3.9	4.2	3.6	4.2
	i	j	k	l
Control	4.5	4.2	3.5	4.1
Combined	4.0	4.2	3.4	4.2

n = 10 for each cell; N = 120.

Multiple range test:
b,f,h,j,l significantly higher than c ($p < .05$ both tails).
d significantly higher than c,g,k ($p < .05$).
i significantly higher than c,g,k ($p < .05$).

Analysis of Variance

Source	df	MS	F
Race (R)	1	2.40	3.03
Sex (S)	1	7.00	8.83**
Incentive (I)	2	0.40	0.50
R x S	1	3.00	3.79†
R x I	2	0.53	0.67
S x I	2	1.23	1.55
R x S x I	2	0.23	0.29
Within	108	0.79	
Total	119		

**$p < .01$ (both tails)
†$p < .10$

Table 16

Cell Means and Analysis of Variance of Responses to Reactions to Examiners for Uneasy/Comfortable Continuum Item (Item 11) for Female Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
	a	b	c	d
Praise	4.1	4.3	3.9	4.3
	e	f	g	h
Reproof	4.2	4.4	4.0	4.4
	i	j	k	l
Control	4.3	4.1	4.0	4.3
Combined	4.2	4.2	3.9	4.3

n = 10 for each cell; N = 120.

Multiple range test:
No significant differences.

Analysis of Variance

Source	df	MS	F
Race	1	0.20	0.67
Sex (S)	1	1.40	4.54*
Incentive (I)	2	0.10	0.34
R x S	1	0.67	2.17
R x I	2	0.00	0.02
S x I	2	0.20	0.67
R x S x I	2	0.07	0.24
Within	108	0.31	
Total	119		

*$p < .05$ (both tails).

again. Responses were given on a 5-point scale ranging from agree (a score of 1) to refuse (a score of 5). An analysis of variance of responses for female subjects which is presented in Table 17 revealed two significant main effects. The race effect (F = 19.59, df = 1/108, $p < .001$) showed that subjects in groups with Negro examiners would agree more readily to take part in a similar experimental situation (mean of 2.2) than those with a white examiner (mean of 3.3), who were more undecided. The incentive effect (F = 3.14, df = 2/108, $p < .05$) revealed that those in the praise and reproof conditions were unsure of their participation (praise mean of 3.0 and reproof mean of 2.9), whereas those in the control condition were more willing to agree (mean of 2.3). The findings for male subjects on this item yielded no significant differences as shown in Table O (Appendix C).

Table 17

Cell Means and Analysis of Variance of Responses to Reaction to Entire Experimental Situation Item (Item 12) for Female Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
	a	b	c	d
Praise	2.7	2.8	3.6	2.9
	e	f	g	h
Reproof	2.1	2.3	3.7	3.7
	i	j	k	l
Control	1.3	2.1	3.4	2.5
Combined	2.0	2.4	3.5	3.0

n = 10 for each cell; N = 120.

Multiple range test:
g and h significantly higher than e,f,i,j ($p<.05$ both tails).
c significantly higher than e,i,j ($p<.05$).
a,b,d,k significantly higher than i ($p<.05$).

Analysis of Variance

Source	df	MS	F
Race (R)	1	35.20	19.59***
Sex (S)	1	0.20	0.11
Incentive (I)	2	5.65	3.14*
R x S	1	6.07	3.38†
R x I	2	2.70	1.50
S x I	2	0.40	0.22
R x S xI	2	1.42	0.79
Within	108	1.79	
Total	119		

*$p<.05$ (both tails)
***$p<.001$
†$p<.10$

Summary of Findings on the Digit-Symbol Task

The following statements can be made about the performance of male and female subjects before the examiners delivered the praise and reproof incentives. The examiner's sex had an effect on the performance of male subjects but not female subjects. Male subjects showed a higher level of performance with male examiners than with female examiners. Before the incentive was administered male and female subjects assigned to the control conditions showed higher levels of performance than those assigned to the experimental conditions of praise or reproof.

After the incentives were administered, these findings were noted. Female subjects had higher performance levels with female examiners than with male examiners, but male subjects showed no difference in performance when sex of examiner was considered. In the preincentive condition, as noted above, male subjects had higher performance levels with male examiners than with female examiners. The experimental conditions of praise, reproof, and control revealed the following effects. Male subjects following praise performed best, but there were no significant differences in performance following reproof or under the control condition. Female subjects performed best following praise, then reproof, and lowest under the control condition.

When one considers the interaction of all three variables, the race and sex of the examiner as well as the particular

incentive, the following results are obtained. The highest score or best performance for male subjects was with a Negro male examiner under praise, and the lowest score or poorest performance was with a Negro female examiner under control conditions. For female subjects the highest or best performance was with a white female examiner under praise and the lowest score was with a white male examiner under control conditions.

If the findings for the preincentive and postincentive conditions are summarized for both male and female subjects, the following statements can be made. Race of the examiner alone was not a significant factor for performance of either male or female subjects. However, the examiner's sex did play an influential role with the highest performance level being achieved when the sex of the examiner was the same as the subjects'. For the incentive conditions, subjects performed best when examiners praised their performance.

Several items on the Terminal Questionnaire dealt with the subject's reactions to the digit-symbol task and reactions to the examiners. One item asked the subject how he liked the task. Male subjects with a Negro male examiner or white female examiner claimed to have disliked the task more than those with a Negro female examiner or white male examiner. The highest amount of dislike for the task was expressed with a Negro male examiner under praise conditions. There were no significant differences for female subjects on this question.

Another item measured the subject's task involvement during the postincentive period. Male subjects with Negro examiners stated that they worked more after the incentive condition, regardless of the kind of incentive, than those with white examiners. Also, subjects in the praise condition felt that they worked harder than those in the reproof group or the control group. There were no significant differences for female subjects on this item.

Subjects were required to judge their effort level while working on the task. There was a tendency for male subjects under control and praise conditions to indicate that they had worked harder than those under reproof conditions. A similar finding was noted for female subjects.

On another item subjects were asked to give a direct account of how they felt they had performed on the digit-symbol task. Female subjects in the reproof condition felt they had performed poorly. The findings with male subjects were not significant.

In addition to judging their own performance, subjects were requested to compare themselves with others in the same experimental situation. Male subjects, especially those in the praise condition, seemed to regard their own performance as compared to others in a more favorable light when they were tested by Negro examiners. Responses for female subjects were not significant.

Two questionnaire items dealt with the subjects' reaction to the examiners. Both males and females indicated that they

liked and felt more comfortable with female examiners than with male examiners. It was noted that male subjects rated the white male examiner as the most disliked examiner when compared to the others.

When subjects were asked whether they would consider taking part again in a similar experimental situation, female subjects with Negro examiners stated they would agree more readily than those with a white examiner. Also, those subjects in the control condition were more willing to participate in the future. Responses of male subjects to this item were not significant.

Perceptions of Parental Treatment

Parental Behavior Inventory Results

The Parental Behavior Inventory (PBI) was administered to subjects on a separate occasion outside the formal experimental situation. As noted before, the purpose of the measure was to obtain information on the earlier parental reinforcement history of each of the subjects. It was felt that the subject's performance in the experimental situation would probably be sensitized by previous interactions with adult males and females and by his perception of the kind of treatment, positive or negative, which he had encountered. Since the prototypical model of such experiences occurs in the presence of one's parents, subjects were asked to respond to a variety of statements pertaining to their mother and father which fell along a general acceptance-rejection categorization.

A total of four scores were obtained from subjects: Mother-Acceptance score, that is, cumulative scores on items reflecting the subject's perception of his mother as accepting; Mother-Rejection score, that is, cumulative scores on items reflecting the subject's perception of his mother as rejecting; Father-Acceptance score, that is, cumulative scores on items reflecting the subject's perception of his father as accepting; and Father-Rejection score, that is, the cumulative scores on items reflecting the subject's perception of his father as

rejecting. Many of the subjects could not be included in this analysis since they were unable to respond to statements because they did not know one or the other parent well enough. Only 76 out of 120 Negro males were able to complete forms on both their mother and father, and only 88 out of 120 Negro females completed both forms. The possible repercussions of a broken home on this research will be discussed later.

When the acceptance and the rejection scores for mothers were compared for male subjects in Table 18, the difference between the two was found to be significant at the .01 level (t = 8.9 for correlated scores, df = 112). A higher score was obtained under the heading of Mother-Acceptance (mean = 33.16) than under Mother-Rejection (mean = 16.23). The Father-Acceptance scores (mean = 32.83) were significantly higher (t = 2.2 for correlated scores, df = 78, $p < .05$) than the Father-Rejection scores (mean = 18.02).

Table 18

Mean Scores for Male and Female Subjects on the PBI

Subjects	Mother		Father	
	Acceptance	Rejection	Acceptance	Rejection
Males	33.16	16.23	32.82	18.02
Females	37.84	15.24	32.22	18.80

Additional analyses were performed to see if males who tended to accept or reject one parent responded in a similar manner to the other parent. The correlation between the Mother-Acceptance scores and Father-Acceptance scores was +.34 which is significant at the .01 level. The relation between the rejection scores for both mother and father was positive and significant at the .01 level (r = +.51).

The difference between the acceptance and rejection scores for mothers as presented in Table 18 for female subjects was significant at the .01 level (t = 8.8 for correlated scores, df = 112). A higher score was obtained under the heading of Mother-Acceptance (mean = 37.84) than under Mother-Rejection (mean = 15.24). The Father-Acceptance scores (mean = 32.22) were significantly higher (t = 3.2 for correlated scores, df = 89, $p<.01$) than Father-Rejection scores (mean = 18.02).

The correlation between the Mother-Acceptance scores and Father-Acceptance scores for females was not significant. The correlation between the rejection scores for mother and father was positive and significant at the .05 level (r = +.27).

The results show that males as well as females felt that both parents were more accepting than rejecting. While no specific predictions were offered for the PBI responses, it was anticipated that the inventory would reveal differences between the sexes. This assumption was in part based on the findings that males and females do react differently to same-sex and

and opposite-sex parents, especially when they come from homes which are not intact (Sears et al., 1946, 1951). The higher acceptance scores expressed for both mothers and fathers by subjects in this study may reflect a strong social desirability response, that is, their desire not to represent either parent as rejecting.

To determine if there were any differences in the responses by the two sexes, acceptance and rejection scores were compared for mothers and fathers. For Mother-Acceptance scores, the results of a t test proved to be significant at the .05 level ($t = 2.56$ for uncorrelated scores, $df = 225$). While as indicated above, all subjects had higher Mother-Acceptance scores than Mother-Rejection scores, it is apparent here that female subjects did demonstrate higher Mother-Acceptance scores (mean for males 33.16 and mean for females 37.84). Scores of males vs. females for Mother-Rejection, Father-Acceptance, Father-Rejection were also compared, but none were statistically significant.

Anxiety Scores (MAACL) as a Function of Subject's Perception of Parental Behavior

While previous analyses revealed that the anxiety levels of the subjects was not a significant factor in the experimental findings on digit-symbol performance, nonetheless, the relationships of anxiety levels to the responses on the PBI were of interest. For male subjects the only significant finding was a negative

correlation with the Mother-Acceptance scores ($r = -.22$, $p < .05$). Those male subjects who gave low Mother-Acceptance scores had higher anxiety levels. For females, there was a significant negative correlation between anxiety and Father-Acceptance scores ($r = -.22$, $p < .05$). Low Father-Acceptance scores were related to higher levels of anxiety.

These results underscore the expected sex difference noted earlier. There was, indeed, a differential response on the part of male and female subjects to their parents. In both cases a higher score for the feeling of acceptance by opposite-sex parent was related to a lower level of anxiety. Having negative feelings toward a parent, specifically the opposite-sex one, is associated with a greater degree of anxiety.

Digit-Symbol Scores as a Function of Subject's Perception of Parental Behavior

The possibility of the subject's perception of his parents affecting his performance on the digit-symbol task in the presence of a male or female examiner was also considered. There were no significant relationships between acceptance/rejection scores and digit-symbol scores for either male or female subjects.

It was also felt that any existing relationship might be obscured by those scores on the PBI which fell within the middle range of the distribution. Therefore, the digit-

symbol results for only those subjects who scored in the top third or bottom third on the PBI was further examined as was performance on the digit-symbol task in terms of the examiner variables of sex and race. These analyses again failed to reveal any significant differences or interactions.

Biographical Information - Intact Family vs. Nonintact Family

On the basis of information obtained from subjects on the Family History Sheet or Biographical Form attached to the PBI, it was possible to separate subjects into two main groups: Intact Family Background and Nonintact Family Background. The exact number of subjects in each group was as follows: 66 male subjects from intact families and 54 male subjects from nonintact families; 68 female subjects from intact families and 52 female subjects from nonintact families.

Each of the dependent measures was analyzed on the basis of this dimension of intactness vs. nonintactness. However, as noted earlier, the analysis of PBI responses could not include all of the subjects since many forms were incomplete.

Anxiety (MAACL Scores)

A comparison of the mean scores on the anxiety measure for subjects with intact families and those with nonintact families revealed no significant differences for either male subjects (t = 1.86, df = 118) or female subjects (t = .80, df = 118).

Digit-Symbol Task

Only the scores from the digit-symbol task under the pre-incentive conditions were used for the analysis of results here.

Preincentive scores would permit a better look at the effects of intactness vs. nonintactness on performance than post-incentive scores which are influenced by the incentive conditions.

The mean digit-symbol scores of subjects from intact families were not significantly different from those with nonintact families for either male subjects (t = 1.05, df = 118) or female subjects (t = 1.66, df = 118).

Parental Behavior Inventory

Each of the four scores (Mother-Acceptance, Mother-Rejection, Father-Acceptance, Father-Rejection) obtained from each subject were analyzed separately for differences between the two main groups of subjects, that is, subjects from intact homes and subjects from nonintact homes.

Mother-Acceptance/Rejection Scores. For Mother-Acceptance scores there was no difference between males who came from intact homes as compared with those from nonintact homes (t = 1.59, df = 111). However, when Mother-Rejection scores were analyzed, it was found that male subjects from nonintact families tended to differ from those with intact families (t = 1.78, df = 111, $p < .10$). It does appear that males from nonintact homes (mean = 18.0) express more rejection of their mothers than males from intact homes (mean = 13.0).

When scores of female subjects from nonintact families and intact families were compared, no significant differences were

found for either Mother-Acceptance scores or Mother-Rejection scores (t = .71, df = 111, and t = .41, df = 111, respectively).

Father-Acceptance/Rejection Scores. No significant differences were found between the two groups of males for either the Father-Acceptance scores (t = .29, df = 78) or the Father-Rejection scores (t = .69, df = 97).

For Father-Acceptance scores, females from intact families expressed more acceptance than those from nonintact families (t = 2.7, df = 89, $p < .01$). As might be expected, females from nonintact families expressed greater rejection of their fathers (t = 2.14, df = 87, $p < .05$).

Summary of Findings on Family Intactness

The separate analysis of results for subjects with different family backgrounds yielded important information. Male subjects who have been exposed to a broken home situation tend to reject their mothers. Conversely, females from nonintact homes were rejecting of their fathers. These findings may help to account in part for the better digit-symbol performance observed in male subjects with male examiners and females with female examiners.

Discussion

One of the focal aims of this study was an assessment of the effects of varying incentives, such as praise, reproof and control, on task performance in Negro subjects. Although the major concern was the relation of such incentives to examiner variables of race and sex, certain predictions were made regarding the overall contributions of praise and reproof. Praise was viewed as a positive reinforcer which would strengthen the recurrence of those responses which it follows. Reproof was viewed as a negative reinforcer which would weaken the recurrence of those responses which it follows. Under the control condition, it was expected any change in response level would only be due to the possibility of practice effects.

The results of the present study give confirmation to the general prediction made in regard to the praise incentive. Both male and female subjects showed an increase in performance levels when praise was administered. It is important to note how much facilitative effect praise had on performance. It has been reported in the research literature that supportive statements given to adult subjects fail to result in increments in rate of response (Stevenson and Allen, 1964). The fact that praise did produce such effects on these students might be in part accounted for by their social class backgrounds. Deutsch (1956) observed that lower-class children were deficient in a crucial area necessary for pre-school orientation. These children lacked an

expectation of reward for performance, especially for successful task completion. For most middle-class children, parents set a task for the child, observe its performance, and in some way reward its completion. Gradually, these children internalize such reinforcements and gain feelings of competency. The College Discovery students with their impoverished backgrounds appear not to have developed a strong system of self- reinforcement and therefore are still dependent upon such positive feedback from others. Individuals who work with these students, especially in educative areas, should be aware of such sensitivities.

Since almost all subjects, regardless of the incentive condition, showed an increase in performance, the predictions made in respect to the reproof and control conditions were not confirmed. For male subjects, there was not a significant difference between the performance levels for those who were assigned to the reproof group and those in the control group. For female subjects, subjects assigned to the reproof group performed significantly higher than those assigned to the control group. Increments in performance, regardless of the presence or absence of incentives, suggests the susceptibility of motor tasks, as the digit-symbol task, to practice effects. However, the effects of the incentives on performance cannot be overlooked. Control groups showed a lesser increment in performance levels than either praise or reproof groups.

When responses of both praise and reproof groups were compared on the Terminal Questionnaire, there was only a negligible difference between the positive affect ("felt good") experienced by the praise group of subjects and the negative affect ("felt badly") experienced by the reproof group. However, some of the examiners during the testing observed sex differences in behavior depending upon the particular incentive administered. Male subjects under praise conditions often reacted to the feedback in a boisterous and expansive manner, sometimes, cheering and congratulating one another. Whereas under reproof, they usually tended to externalize the blame for their supposedly poor performance. They would accuse the examiner of not giving them enough time and hasten to add that they couldn't see why time was so important in everything they did at school.

Female subjects reacted quite differently than male subjects in that they were quieter and more reticent, regardless of the type of feedback. Under praise, they felt pleased, but not overtly enthusiastic. When reproof was given, female subjects, according to the examiners, seemed very concerned that they had not done well, but responded that they would try harder next time. Another quality that often appeared in their reactions was one of self-blame and denigration. At times, they would volunteer that they found it difficult to get involved

with the task and were not sure if they could improve on their performance.

For sex of the examiner, it was predicted that male subjects would perform better with male examiners as contrasted to female examiners; while female subjects would perform better with female examiners as contrasted to male examiners. For male subjects a significant main effect for sex of the examiner was obtained on the preincentive digit-symbol trials. Regardless of the kind of incentive administered, Negro male subjects showed their highest level of performance when the examiner was male. Female subjects had the highest digit-symbol scores with female examiners. These findings on level of performance with same-sex examiners supports previously cited research (Rowley and Stone, 1964) as well as the predicted preferences regarding sex of the examiner.

It was surprising to note, though, that in their responses to items on the Terminal Questionnaire relevant to this topic, no significant sex differences were established. That is, both male and female subjects responded that they felt more comfortable with female examiners than male examiners and liked female examiners more than male examiners. It is understandable that female subjects would express positive feelings toward a female examiner. To the extent that a female model was available to her, the young Negro college woman would have the opportunity to establish a feminine identity. It would tend to follow that

females, more than males, would be endowed as examiners with positive reinforcing qualities as reflected in the female students' preferences.

It is not entirely clear why males who performed better under male examiners still expressed a greater preference for female examiners. However, there are some possible explanations which can be offered. Since the Negro male as a child, in general, spends more time with a Negro female and is more likely to have an enduring relationship with her than a male, his responses of "comfortableness" may reflect his feelings toward a familiar figure. It is well documented that in many Negro families, whether intact or nonintact, the man is assigned a peripheral and tangential role (Minuchin et al., 1967). Consequently, any early positive experiences of family life are more likely to be associated with the Negro female. These observations serve to highlight one of the basic dilemmas of the Negro male. In his striving for a masculine identification, his mother provided him with a source of conflict. While she may be quite nurturant of his needs as a young child, she later derogates him by viewing him as useless or undependable. Such deprecation by his mother is apt to have serious consequences for the Negro male. As revealed on the Parental Behavior Inventory, males who perceived their mothers as showing less acceptance of them had high anxiety scores.

Obviously then, the heightened digit-symbol performance of Negro males with male examiners has important implications.

There is a preponderance of female teachers in our primary and secondary schools. Given the fact that the matriarchal family structure is fairly common, it would seem crucial that a male milieu be available in the schools. Schools should offer emotional support for the development of male sex-role identity by having male teachers and administrators who can provide appropriate sex-role models, especially for Negro youths who have grown up without fathers present in their homes.

For race of the examiner, the following order of performance from highest to lowest was predicted for male subjects: white male examiner; Negro male examiner; Negro female examiner and white female examiner; and for female subjects: Negro female examiner; white female examiner; white male examiner; and Negro male examiner. There were no significant results for the main effect of race of the examiner for either male or female subjects. Therefore, race alone was not a sufficient factor to affect task performance.

For male subjects the only instances in which race was revealed as an important variable was when it interacted with the particular experimental incentive. Specifically, under praise and reproof males did better with Negro examiners than with white examiners. The highest mean digit-symbol score was obtained by that group of subjects with a Negro male examiner under praise conditions, whereas the lowest mean score occurred with a Negro female examiner under control conditions. All other mean scores did not significantly differ from one another. The ranking or ordering of performance

levels was not as predicted. Moreover, these findings are also not in agreement with the bulk of earlier research of Katz (1964) and of Bayton (1965) which indicated that under most conditions Negro males do better with white male examiners than with Negro male examiners. The interpretation offered by these investigators is that Negro males hold white male examiners in higher esteem than they do Negro male examiners and therefore value their approval more.

The evidence here of Negro male subjects performing best with Negro examiners, especially the Negro male examiner, suggests the awakening of a more positive sense of racial identity for the Negro male. In Erickson's terms, the beginnings of "self-identity" are being witnessed, which incorporate blackness as being ego-syntonic. The integration of the individual's self-image and his role-images, accompanied by solidarity with a group ideal appears to be emerging. Indeed, the most recently published study exploring the effects of the race of the tester, noted after the data for this study was already collected, indicates a better performance with Negro testers than white testers (Katz, 1968).

This finding, of course, is congruent with the current trends in the Black community which have fostered and heightened racial pride, especially among Negro males. Black Power advocates warn that Negroes must stop being ashamed of being black and stop wanting to be white. Some militant Negroes talk of building a Negro subculture based on a positive sense of identity

and seek to boost their self-esteem by legitimizing being black, Whether a Negro militant leader or a Negro conservative leader speaks out, the crux of the message remains the same. Both urge Negroes not to be ashamed of their African heritage and not to give up their fight for full equality.

Undoubtedly, Negro males are passing through a stage in the attainment of a more positive self-concept. One of the elements of this phase appears to involve more hostile and negative feelings toward white males. The findings of this study appear to support such a conclusion. Specifically, there was an unpredicted reversal on the digit-symbol task where subjects with Negro examiners, both male and female, achieved higher performance levels averaged across incentive conditions. In addition, the personal response made by male subjects to the white male examiner was one of strong antipathy. On a Terminal Questionnaire item, Negro males stated that they disliked and felt most uncomfortable with the white male examiner. This would suggest, then, that for the Negro male the concept of maleness is tightly intertwined with being a Negro and is apt to imply a rejection of all other males not Negro ("Black is beautiful").

Female subjects performed best with white examiners under praise conditions and best with Negro examiners under reproof conditions. The highest mean digit-symbol score was obtained by those groups of female subjects with a white female examiner under praise conditions, and the lowest mean score occurred

with a white male under control conditions. The initial predictions made about the ranking of performance levels did not receive support. This finding, however, does not refute the general assumption made about the Negro females' position being different from the males'. As stated earlier, a generally accepted notion is that Negro females are less traumatized than Negro males by the impact of racial discrimination. It would then follow that they would be less exposed to slights and humiliation from whites in general. The Negro females' improved performance with a white female may simply reflect an easier acceptance on their part of another female regardless of race. There is, however, other evidence that appears to contradict this notion. Female subjects showed their lowest performance levels with a Negro female examiner under praise conditions when compared to the other examiners. This finding implies that Negro females in positions of authority may be targets for negative feelings which could be a byproduct of the fact that they often have the sole burden of managing the family. It may also be that since Negro females developmentally receive much feedback of various sorts from adult females, some adaptation would be expected. That is, as young adults, Negro girls may be relatively unresponsive to such incentives from a female Negro examiner.

A secondary aim of this research was an analysis of the effects that a matriarchal family structure might have on the later performance of Negro males and females. Due to the paucity

of research in this area, no specific predictions were offered concerning the possible outcomes.

When the perceived acceptance and rejection scores derived for each of the subjects from the Parental Behavior Inventory were compared with digit-symbol performance, no significant relationship was observed. The unexpected findings which emerged from the responses to the PBI were the higher acceptance scores than rejection scores reflecting attitudes toward both parents. Since this finding applies to both males and females, it can be interpreted as an effort by all the subjects to present a socially-desirable picture of their parents. However, it was felt that some meaningful phenomena might be obscured by analysis of the results only according to the sex of the subject. Hence, male and female subjects were assigned to two distinct groups, those from intact families and those from nonintact families. These groupings appeared to be along a most relevant dimension since so many of the subjects came from broken homes.

Even with these new subject groupings, no direct relationship was observed between the task performance of subjects and their family backgrounds. Thus, the data here do not confirm previous findings which noted that males and females from father-absent homes show poorer performance in school and have lower IQ's (Deutsch and Brown, 1964). Since this is a somewhat unique sample of subjects, it is not possible to state that the variable of intactness vs. nonintactness does not categorically effect

performance levels. Individuals seriously handicapped by father-absence may be excluded from selection for the College Discovery program by some covert circumstance operating in the environment. Therefore, it must be cautioned that the results reported here have limited generalizability.

When acceptance/rejection responses of subjects from intact families were compared with subjects from nonintact families, meaningful differences were found. Not all Negro males and females reflect predominantly positive and accepting attitudes in regard to their parents.

Male subjects from intact families and those from nonintact families do not differ in their feelings about their fathers, both regard him favorably. Lynn and Sawry (1962) also noted that males from father-absent homes most typically react to their insecure masculine identification with compensatory masculinity as well as an overly accepting attitude toward males. However, male subjects who have been exposed to a broken home tend to reject their mothers as shown in the present research. Perhaps they express more rejection towards her than males from intact families because they regard her as the cause of their father's absence. Certainly they may incorporate the idea of the male's role as one of uselessness, or at least of unknown usefulness. They may also be exposed to her antagonistic reactions and attitudes against Negro males, and so they harbor much resentment toward her (Bell, 1963).

Female subjects, regardless of their family backgrounds, express positive feelings towards their mothers. When females from nonintact homes are compared with those from intact homes, the former tend to reject their fathers. This finding may be accounted for by the nature of father-typing provided by their mothers during the fathers' absence. Some researchers (Bach, 1946; Tiller, 1958) have observed that the mother's attitude toward the father is a significant variable in determining the kind of attitude the child has. In families headed by women, many of the females express their dislike and resentment against their male counterparts (Bernard, 1966). Bach (1946) noted that children whose mothers were antagonistic toward, or contemptuous of, the fathers showed more aggression in play situations involving a doll symbolizing the father than did children whose mothers were affectionate in their feelings about the absent father. It is understandable, then, that many of the attitudes toward Negro males expressed by Negro females can be traced to their mothers' feelings. Embittered by their own experiences with men, mothers often behave in such ways as to contribute to the perpetuation of the matriarchal pattern and its attendant problems.

In terms of identification, the father's absence seems to have a more severe effect upon the Negro males than upon the Negro females, since the Negro female learns her role by identification with her mother who is available. However, she does lack an opportunity to observe the interaction of her mother

and father in the everyday give-and-take of a marital relationship. It is possible that this impoverishment will have important effects upon her ability to make the necessary adjustments in her own marriage.

In conclusion, the data seem to indicate that the Negro male is no longer attempting to imitate white America or to adopt what has been called "cultural whiteness." He has never really been able to do so comfortably, and now he appears ready to internalize a new sense of self which has emerged since the beginning of the civil-rights movement. The Negro female, on the other hand, still appears to be straddling both racial identities.

The civil-rights campaign may have had a more pervasive and penetrating effect on Negro males as opposed to Negro females. Negro males may have been more powerfully reminded of their harsh and unfair treatment in the past, and thus have reacted with more resentment and militancy. The Negro female has had more of a sense of feminine identity, but perhaps has felt that her femaleness would be enhanced if she were white and not Negro. Her feminine identity is complemented by, and has as an integral part, the role played by the Negro male. The lack of respect and dignity accorded to him adds to her sense of incompleteness.

Until recently most research and popular literature has focused on the plight of the Negro male, whereas the female has only been included on the basis of her Negroism, not her femaleness. Both Negro men and women need conditions in which they

can build identities which incorporate a sense of confidence and personal worth. Future research on the problems of the Negro and his level of achievement under differential conditions should emphatically address itself jointly to both the Negro male and the Negro female to further illuminate the kind of trends suggested in this research.

Summary and Conclusions

The object of the present investigation was to study those factors which effect the performance of both male and female Negroes, namely, the sex of the examiner, the race of the examiner, and the particular verbal incentives administered. The subjects were 240 Negroes, 120 males and 120 females, enrolled in the City University of New York as students in a special program which aids economically and culturally disadvantaged individuals. Each of the male or female subjects had been randomly assigned to one of the four examiners: (a) Negro male examiner; (b) Negro female examiner; (c) white male examiner; or (d) white female examiner; and to one of the incentive groups: (a) praise; (b) reproof; or (c) control. The incentive conditions consisted of direct feedback from the examiner and implied comparisons with other subjects. Specifically, praise was viewed as a positive reinforcer which would strengthen the recurrence of those responses which it followed. Reproof, on the other hand, was viewed as a negative reinforcer which would weaken the recurrence of those responses which it followed. Finally, in the control condition no reinforcement would be given, and it was therefore presumed that any change in response level would only be due to the possibility of practice effects.

The following hypotheses with respect to Negro males were tested in the present study. Negro males would show the following order of level of performance. The highest level would be with a white male examiner and the lowest level with a white female examiner. The order would be as follows:

(1) Negro males with white male examiner.

(2) Negro males with Negro male examiner.

(3) Negro males with Negro female examiner.

(4) Negro males with white female examiner.

Male subjects assigned to the praise condition would show variable increments in performance levels with the greatest increment occurring for a white male examiner and the lowest for a white female examiner. Under conditions of reproof, subjects would show the greatest decrement in performance with a white male examiner and the lowest for a white female examiner.

It was predicted that Negro females would show this order of level of performance:

(1) Negro females with Negro female examiner.

(2) Negro females with white female examiner.

(3) Negro females with white male examiner.

(4) Negro females with Negro male examiner.

For praise conditions, subjects would show the greatest increment in performance with a Negro female examiner and the lowest with a Negro male examiner. Under conditions of reproof, subjects would show the greatest decrement in performance with a Negro female examiner and the lowest with a Negro male examiner.

The major dependent variable in this study was digit-symbol performance. Three measures on digit-symbol test performance were obtained for each of the subjects: the score before the incentive was administered (termed Pre), the score after the incentive was administered (termed Post), and the score signifying the difference (termed Diff.) between these two measures. For all analyses of the data, the percent difference score was used (Post - Pre / Pre). Subsidiary dependent variables focused on the subjects' anxiety level (the Multiple Affect Adjective Checklist), the subjects' reactions to the experiment (the Terminal Questionnaire), and finally the subjects' perceptions of their parents' behavior (the Parental Behavior Inventory). For this last measure, subjects were asked to describe their parents' behavior as they perceived and remembered it along a continuum of acceptance and rejection. While no specific predictions were offered, it was felt that past experiences with parents would influence the Negro individual's later sensitivity to social reinforcements as used in this study.

The results indicated that race of the examiner alone was not a significant factor for performance of either male or female subjects. However, the examiner's sex did play an influential role with the highest performance level being achieved when the sex of the examiner was the same as the subjects'. For the incentive conditions, male subjects performed best in the praise condition, but there was no difference between

the reproof and control conditions. Female subjects performed best under praise, then reproof, and lowest under control.

With the interaction of all three variables considered, the race and sex of the examiner as well as the particular incentive, the following results were obtained. The highest score or best performance for male subjects was with a Negro male examiner under praise, and the lowest score or poorest performance was with a Negro female examiner under control conditions. For female subjects the highest or best performance was with a white female examiner under praise and the lowest score was with a white male examiner under control conditions.

When the subjects' responses to the Parental Behavior Inventory were analyzed, males and females expressed higher acceptance scores than rejection scores for both mothers and fathers. However, there were no significant relationships between acceptance/rejection scores and digit-symbol scores for either male or female subjects.

It was possible to determine on the basis of personal history data obtained from each of the subjects whether their family structure was intact or nonintact. Each of the dependent measures was then analyzed on the basis of this dimension of intactness vs. nonintactness. The findings indicated that subjects from intact homes and subjects from nonintact homes did not differ from one another in level of anxiety or in digit-symbol performance. However, significant differences were observed between the two groups when the Parental Behavior Inventory results

were considered. Male subjects who have been exposed to a broken home situation tend to reject their mothers. Conversely, females from nonintact homes were rejecting of their fathers.

The higher performance of Negro males with male examiners was discussed in terms of its important educational implications and emphasized the necessity for schools to ensure the presence of adequate male authority figures. The unexpected result of Negro male subjects openly preferring Negro examiners over white examiners, especially the Negro male examiner, suggested the awakening of a powerful sense of positive identity for the Negro male.

The finding that Negro females performed best with a white female examiner was difficult to interpret. The tenuous explanation offered was that her performance may simply have reflected an easier acceptance toward females in general. It was also noted that females who come from a matriarchal family background reacted negatively to males and thus they may tend to perpetuate this type of family structure.

It was felt that the findings of this study demonstrate the obvious requirement that future investigations include both Negro males and Negro females as subjects.

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APPENDIX A.

Debriefing (only for praise and reproof groups)

The testing time is now over. I want to thank all of you for coming today and taking part in this testing. There is some information I must now share with you. When I reported the level of your scores, I was giving you a "prearranged" report. It was not related to how well or poorly you actually performed on the test. So I hope none of you will go away from this room today with any feelings about what you can or cannot do.

Let me tell you briefly what we are trying to find out. We would like to know how somebody's performance is affected by what they are told. You can probably imagine how important something like this is, especially in a school setting. Most of us are interested in getting an evaluation on the kind of work we produce. However, little is really known about whether this evaluation can affect the way we work.

Your participation here today will help us solve some of these problems. Without your interest and efforts, we could never really hope to get at some of the answers. I realize that each one of you made some sacrifice in time since all of you have such busy schedules. I thank each of you for a job well done and for your personal contributions that extended beyond the call of duty in terms of what you are expected to do

here at the college. Do any of you have any questions that you would like to ask me?

Now, since this is a research project, I am going to enlist your help in making it successful. Please do not speak with each other or your friends about our procedures today. Again, I would like to express my appreciation for your cooperation.

Dear Student,

The College Discovery Program is growing in size and expanding its services with each new school year. Largely because of the student's efforts, the program is constantly improving. This could not have been accomplished without your participation and your help in continuing to evaluate the program through various group and individual meetings.

We are asking you to take part in a group session in the next few weeks. We realize that your schedule is probably quite hectic so we will try our best to arrange a convenient time. This session will meet only once and will be less than an hour long. You will be contacted personally by telephone to set a specific date. Thank you.

Research Division

College Discovery Program

PLEASE NOTE:

Pages 128-129 "Multiple Affect Adjective Check List" © 1965 by Educational and Industrial Testing Service, not microfilmed at request of author. Available for consultation at City University of New York Library.

UNIVERSITY MICROFILMS

Digit – Symbol

2	1	3	7	2	4	8	1	5	4	2	1	3	2	1	4	2	3	5	2	3	1	4	6	3

1	5	4	2	7	6	3	5	7	2	8	5	4	6	3	7	2	8	1	9	5	8	4	7	3

6	2	5	1	9	2	8	3	7	4	6	5	9	4	8	3	7	2	6	1	5	4	6	3	7

9	2	8	1	7	9	4	6	8	5	9	7	1	8	5	2	9	4	8	6	3	7	9	8	6

P129-A-4M-68 346 The City College

PRI

INSTRUCTIONS

We are interested in learning more about the different experiences people have had in their families. We are, therefore, asking a number of people to report their experiences during childhood.

First answer the questions about yourself and your family listed on the next page. Then read each item on the following pages and circle the answer that most closely describes the way each of your parents acts towards you.

BE SURE TO MARK EACH ITEM FOR EACH PARENT.

If you think the item is LIKE your parent, circle L.

If you think the item is SOMEWHAT LIKE your parent, circle SL.

If you think the item is NOT LIKE your parent, circle NL.

Code #

We are also interested in finding out something about your home and parents. Please answer the following questions to the best of your ability.

1. Is your father alive? Yes___ No___ (If No, how old were you when he died? ____)

2. Is your mother alive? Yes___ No___ (If No, how old were you when she died? ____)

3. If either of your parents has died, has the other one remarried?
   No ___ Yes ___ (If Yes, how old were you when this happened? ____)

4. Are your parents living together at home? Yes___ No____

   a. If No, whom do you live with: Mother ____
      Father ____
      Other relatives ____
      Other person ____ Who _____

   b. How old were you when the divorce or separation occurred?

5. If your mother is living and you do not live with her, how often do you see her? _____ times per month.

6. If your father is living and you do not live with him, how often do you see him? _____ times per month.

7. Who brought you up until the present time. (Fill-in real parent, step-parents, foster parents, etc.)

   1-4 years _____

   5-9 years _____

   10-13 years _____

   14 years to present _____

Code # Form for Mother	Like	Some-what Like	Not Like
Makes me feel better after talking over my worries with Her.	L	SL	NL
Isn't very patient with me.	L	SL	NL
Says I'm very good natured.	L	SL	NL
Doesn't talk with me very much.	L	SL	NL
Seems to see my good points more than my faults.	L	SL	NL
Thinks my ideas are silly.	L	SL	NL
Tells me I'm good looking.	L	SL	NL
Spends very little time with me.	L	SL	NL
Almost always speaks to me with a warm and friendly voice.	L	SL	NL
Says I'm a big problem.	L	SL	NL
Tells me how much she loves me.	L	SL	NL
Almost never brings me a surprise or present.	L	SL	NL
Understands my problems and my worries.	L	SL	NL
Forgets to help me when I need it.	L	SL	NL
Likes to talk about what she has read with me.	L	SL	NL
Doesn't seem to think of me very often.	L	SL	NL
Enjoys talking things over with me.	L	SL	NL
Sometimes wishes she didn't have any children.	L	SL	NL
Kisses me often.	L	SL	NL
Thinks I am just someone to "put up with."	L	SL	NL
Enjoys going on drives, trips, or visits with me.	L	SL	NL
Forgets to get me things I need.	L	SL	NL
Believes in showing her love for me.	L	SL	NL
Doesn't seem to enjoy doing things with me.	L	SL	NL
Smiles at me very often.	L	SL	NL
Is always getting after me.	L	SL	NL
Tries to treat me as an equal.	L	SL	NL

	Like	Some-what Like	Not Like
Doesn't show that she loves me.	L	SL	NL
Is able to make me feel better when I am upset.	L	SL	NL
Almost always complains about what I do.	L	SL	NL
Always listens to my ideas and opinions.	L	SL	NL
Doesn't share many activities with me.	L	SL	NL
Enjoys doing things with me.	L	SL	NL
Gets cross and angry about little things I do.	L	SL	NL
Often has long talks with me about the causes and reasons for things.	L	SL	NL
Enjoys working with me in the house.	L	SL	NL
Often blows her top when I bother her.	L	SL	NL
Often praises me.	L	SL	NL
Complains that I get on her nerves.	L	SL	NL
Comforts me when I'm afraid.	L	SL	NL
Doesn't work with me.	L	SL	NL
Encourages me to study.	L	SL	NL
Hardly notices when I do well at home or in school.	L	SL	NL
Cheers me up when I am sad.	L	SL	NL
Doesn't get me things unless I ask over and over again.	L	SL	NL
Tells me where to find out more about things I want to know.	L	SL	NL
Is always finding fault with me.	L	SL	NL
Often speaks of the good things I do.	L	SL	NL
Doesn't seem to know what I need or want.	L	SL	NL
Is happy to see me when I come home from school or work.	L	SL	NL
Often makes fun of me.	L	SL	NL
Has a good time at home with me.	L	SL	NL
Acts as though I'm in the way.	L	SL	NL
Hugged or kissed me goodnight when I was small.	L	SL	NL
Wishes I were a different kind of person.	L	SL	NL

	Like	Some-what Like	Not Like
Seems proud of the things I do.	L	SL	NL
Tells me to quit "hanging around the house" and go somewhere.	L	SL	NL
Is very interested in what I am learning at school.	L	SL	NL
Often seems glad to get away from me for a while.	L	SL	NL
Makes me feel I'm not loved.	L	SL	NL
Says I make her happy.	L	SL	NL
Is never interested in meeting or talking with my friends.	L	SL	NL

Code #

Form for Father	Like	Some-what Like	Not Like
Makes me feel better after talking over my worries with him.	L	SL	NL
Isn't very patient with me.	L	SL	NL
Says I'm very good natured.	L	SL	NL
Doesn't talk with me very much.	L	SL	NL
Seems to see my good points more than my faults.	L	SL	NL
Thinks my ideas are silly.	L	SL	NL
Tells me I'm good looking.	L	SL	NL
Spends very little time with me.	L	SL	NL
Almost always speaks to me with a warm and friendly voice.	L	SL	NL
Says I'm a big problem.	L	SL	NL
Tells me how much he loves me.	L	SL	NL
Almost never brings me a surprise or present.	L	SL	NL
Understands my problems and my worries.	L	SL	NL
Forgets to help me when I need it.	L	SL	NL
Likes to talk about what he has read with me.	L	SL	NL
Doesn't seem to think of me very often.	L	SL	NL
Enjoys talking things over with me.	L	SL	NL
Sometimes wishes he didn't have any children.	L	SL	NL
Kisses me often.	L	SL	NL
Thinks I am just someone to "put up with."	L	SL	NL
Enjoys going on drives, trips, or visits with me.	L	SL	NL
Forgets to get me things I need.	L	SL	NL
Believes in showing his love for me.	L	SL	NL
Doesn't seem to enjoy doing things with me.	L	SL	NL
Smiles at me very often.	L	SL	NL
Is always getting after me.	L	SL	NL

	Like	Some-what Like	Not Like
Tries to treat me as an equal.	L	SL	NL
Doesn't show that he loves me.	L	SL	NL
Is able to make me feel better when I am upset.	L	SL	NL
Almost always complains about what I do.	L	SL	NL
Always listens to my ideas and opinions.	L	SL	NL
Doesn't share many activities with me.	L	SL	NL
Enjoys doing things with me.	L	SL	NL
Gets cross and angry about little things I do.	L	SL	NL
Often has long talks with me about the causes and reasons for things.	L	SL	NL
Enjoys working with me in the house.	L	SL	NL
Often blows his top when I bother him.	L	SL	NL
Often praises me.	L	SL	NL
Complains that I get on his nerves.	L	SL	NL
Comforts me when I'm afraid.	L	SL	NL
Doesn't work with me.	L	SL	NL
Encourages me to study.	L	SL	NL
Hardly notices when I do well at home or in school.	L	SL	NL
Cheers me up when I am sad.	L	SL	NL
Doesn't get me things unless I ask over and over again.	L	SL	NL
Tells me where to find out more about things I want to know.	L	SL	NL
Is always finding fault with me.	L	SL	NL
Often speaks of the good things I do.	L	SL	NL
Doesn't seem to know what I need or want.	L	SL	NL
Is happy to see me when I come home from school or work.	L	SL	NL
Often makes fun of me.	L	SL	NL
Has a good time at home with me.	L	SL	NL
Acts as though I'm in the way.	L	SL	NL

	Like	Some-what Like	Not Like
Hugged or kissed me goodnight when I was small.	L	SL	NL
Wishes I were a different kind of person.	L	SL	NL
Seems proud of the things I do.	L	SL	NL
Tells me to quit "hanging around the house" and go somewhere.	L	SL	NL
Is very interested in what I am learning at school.	L	SL	NL
Often seems glad to get away from me for a while.	L	SL	NL
Makes me feel I'm not loved.	L	SL	NL
Says I make him happy.	L	SL	NL
Is never interested in meeting or talking with my friends.	L	SL	NL

Terminal Questionnaire

Code #

Please indicate your answer by circling the number which best corresponds to your response.

1) How much did you like the task?

dislike very much	dislike a little	neither dislike or like	like a little	like very much
1	2	3	4	5

2) How hard did you try on the task?

tried very little	tried a little	unsure	tried some	tried very much
1	2	3	4	5

3) How did you feel toward the examiner?

dislike very much	dislike a little	neither dislike or like	like a little	like very much
1	2	3	4	5

4) How do you think you did on the task?

very poor	poor	unsure	good	very good
1	2	3	4	5

5) How interesting was the task?

very interesting	interesting	neither	boring	very boring
1	2	3	4	5

6) Do you think the task was related to intelligence?

completely unrelated	partly unrelated	unsure	partly related	very related

7) After the examiner stopped you in the middle of the task, when you started to work again how did it go?

worked much less	worked less	same as before	worked more	worked much more

8) In comparison to other students in the room, how did you think you did?

very poor	poor	unsure	good	very good
1	2	3	4	5

Code #

9) After the examiner told you how you were doing, how did you feel?

very bad	bad	unsure	good	very good
1	2	3	4	5

10) When you were working on the task, how did you feel?

very nervous	nervous	unsure	relaxed	very relaxed
1	2	3	4	5

11) How did you feel with the examiner?

very uneasy	uneasy	unsure	comfortable	very comfortable
1	2	3	4	5

12) Would you consider taking part in something like this again?

agree	maybe agree	unsure	maybe refuse	refuse
1	2	3	4	5

13) How did you feel about coming here today?

very nervous	nervous	unsure	relaxed	very relaxed
1	2	3	4	5

APPENDIX B.

Instructor's Manuals

Instructor's Manual for Praise Groups

(Instructor, referred to here as E's, will be given special directions on codes and names of individual students. Students will be given special code numbers when the circulation letters are sent to them. The letters will remind them to bring this information with them, however, if they should forget each Examiner will have a separate listing of the students and their corresponding code numbers.)

To be read aloud slowly to the students:

The College Discovery Program is interested in developing new tests to use as a way of understanding more about the students. At present, we are still in the exploratory stages of developing such methods. Your scores, therefore, will not be used to evaluate you, but rather to evaluate the tests. How well you perform on today's tests will in no way affect your college grades or standing. However, we would like you to try your best.

The testing session should take approximately one hour. You will be given several things to do during this time. Please be sure to put your code number on all of the items that you work on. I think we are now ready to begin. There will be no further talking, except that pertaining to the testing situation, once the tests begin.

The first thing that I will ask you to do is to answer some questions about your feelings right now. I will distribute these questions to you now.

(E. passes out the Anxiety Scale.) I will read the directions aloud, while you read them to yourselves:

> On this sheet you will find words which describe different kinds of moods and feelings. Mark an X in the boxes beside the words which describe how you feel now - today. Some of the words may sound alike, but we want you to check all the words that describe your feelings. Work rapidly. When you have completed this, please raise your hand.

(E. collects papers and next hands out digit-symbol plus pencils - should check for code numbers again.)

> I have just passed out digit-symbol tests plus pencils. As you can see at the top of the page there are nine boxes each with a number. Below each box is a mark or symbol. Each number has its own symbol. Your job is to fill in

the empty boxes with the symbol that goes with each number.* Since this is partially a test of speed, you are to answer as rapidly as possible. You start with the first line and continue without skipping any spaces. When you finish one line, go to the next line and continue until I call out STOP. Then when I give the signal I want you to turn the page and do the next set of numbers. Are there any questions concerning what you will be doing on these tests? Alright - BEGIN.

*Blackboard illustration may be used. (E. should note that each trial will be timed for one minute. Booklets should be collected when the first 6 trials of one-minute each are completed.)

STOP WRITING. I am going to collect your task booklets now. They will be given to my assistant who will be scoring your tests. (Collect all booklets, then walk to the door where the assistant will be waiting.) I will be in a position to inform you of your scores on this first part of the procedure before we begin the second part. Please check your pencils now and be sure you have enough lead for the second part. It is a special lead and it enables us to tabulate the results within a few minutes.

The Social Dynamics Research Institute is interested in your achievement in the program. I am sure all of you remember the many different kinds of tests and forms that you worked on when you first entered the College Discovery Program. Well, you may not have realized that the people at Social Dynamics are doing a lot of research in trying to discover what kinds of things help students to learn.

As soon as I receive the results, I am going to ask all of you to do some more of these symbol boxes. Before starting the new set and while we are waiting for the results, we will take a few minutes break. However, since this is a test situation, please remain silent.

(E. note - assistant will knock on door and give you a sheet of paper with some numbers. You are to glance at this paper for a minute or two then respond.)

I now have the scores of the tests that you have just worked on. Your scores on this test are very high. We do not know specifically what kinds of abilities the test measures, but we do know that they are closely related to how people do in school. One of the purposes of the research program is to get as much information about this as possible. (Slight pause.)

You did so well on the test you took that I think these are the highest scores I have gotten so far. Now I would like you to go through the task again. Keep up the good work!!!

(E. hands out a new task booklet with the remaining five digit-symbol tasks, each of which will be timed again for 1-minute.)

E. collects the digit-symbol booklets and hands out the Terminal Questionnaire, and states the following:

The last thing that I want you to do is answer this set of questions. Please circle the number and words that tell best how you feel.

(E. collects questionnaire and pencils, then debriefing.)

Instructor's Manual for Reproof Groups

(Instructor, referred to here as E's, will be given special directions on codes and names of individual students. Students will be given special code numbers when the circulation letters are sent to them. The letters will remind them to bring this information with them, however, if they should forget each Examiner will have a separate listing of the students and their corresponding code numbers.)

To be read aloud slowly to the students:

The College Discovery Program is interested in developing new tests to use as a way of understanding more about the students. At present, we are still in the exploratory stages of developing such methods. Your scores, therefore, will not be used to evaluate you, but rather to evaluate the tests. How well you perform on today's tests will in no way affect your college grades or standing. However, we would like you to try your best.

The testing session should take approximately one hour. You will be given several things to do during this time. Please be sure to put your code number on all of the items that you work on. I think we are now ready to begin. There will be no further talking, except that pertaining to the testing situation, once the tests begin.

The first thing that I will ask you to do is to answer some questions about your feelings right now. I will distribute these questions to you now.

(E. passes out the Anxiety Scale.) I will read the directions aloud, while you read them to yourselves:

> On this sheet you will find words which describe different kinds of moods and feelings. Mark an X in the boxes beside the words which describe how you feel now - today. Some of the words may sound alike, but we want you to check all the words that describe your feelings. Work rapidly. When you have completed this, please raise your hand.

(E. collects papers and next hands out digit-symbol plus pencils - should check for code numbers.)

> I have just passed out digit-symbol tests plus pencils. As you can see at the top of the page there are nine boxes each with a number. Below each box is a mark or symbol. Each number has its own symbol. Your job is to fill in the empty boxes with the symbol that goes

with each number.* Since this is partially a test of speed, you are to answer as rapidly as possible. You start with the first line and continue without skipping any spaces. When you finish one line, go to the next line and continue until I call out STOP. Then when I give the signal I want you to turn the page and do the next set of numbers. Are there any questions concerning what you will be doing on these tests? Alright - BEGIN.

*Blackboard illustration may be used. (E. should note that each trial will be timed for one minute. Booklets should be collected when the first 6 trials of one-minute each are completed.)

STOP WRITING. I am going to collect your task booklets now. They will be given to my assistant who will be scoring your tests. (Collect all booklets, then walk to the door where the assistant will be waiting.) I will be in a position to inform you of your scores on this first part of the procedure before we begin the second part. Please check your pencils now and be sure you have enough lead for the second part. It is a special lead and it enables us to tabulate the results within a few minutes.

The Social Dynamics Research Institute is interested in your achievement in the program. I am sure all of you remember the many different kinds of tests and forms that you worked on when you first entered the College Discovery Program. Well, you may not have realized that the people at Social Dynamics are doing a lot of research in trying to discover what kinds of things help students to learn.

As soon as I receive the results, I am going to ask all of you to do some more of these symbol boxes. Before starting the new set and while we are waiting for the results, we will take a few minutes break. However, since this is a test situation, please remain silent.

(E. note - assistant will knock on door and give you a sheet of paper with some numbers. You are to glance at this paper for a minute or two then respond.)

I now have the scores of the tests that you have just worked on. Your scores on this test are very low. We do not know specifically what kinds of abilities the test measures, but we do know that they are closely related to how people do in school. One of the purposes of the research program is to get as much information about this as possible. (Slight pause.)

You did so poorly on the test you took that I think these are the lowest scores I have gotten so far. Why don't you finish up the rest of the test anyway.

(E. hands out a new task booklet with the remaining five digit-symbol tasks, each of which will be timed again for 1-minute.)

E. collects the digit-symbol booklets and hands out the Terminal Questionnaire, and states the following:

The last thing that I want you to do is answer this set of questions. Please circle the number and words that tell best how you feel.

(E. collects questionnaire and pencils, then debrief.)

Instructor's Manual for Control Groups

(Instructor, referred to here as E's, will be given special directions on codes and names of individual students. Students will be given special code numbers when the circulation letters are sent to them. The letters will remind them to bring this information with them, however, if they should forget each Examiner will have a separate listing of the students and their corresponding code numbers.)

To be read aloud slowly to the students:

The College Discovery Program is interested in developing new tests to use as a way of understanding more about the students. At present, we are still in the exploratory stages of developing such methods. Your scores, therefore, will not be used to evaluate you, but rather to evaluate the tests. How well you perform on today's tests will in no way affect your college grades or standing. However, we would like you to try your best.

The testing session should take approximately one hour. You will be given several things to do during this time. Please be sure to put your code number on all of the items that you work on. I think we are now ready to begin. There will be no further talking, except that pertaining to the testing situation, once the tests begin.

The first thing that I will ask you to do is to answer some questions about your feelings right now. I will distribute these questions to you now.

(E. passes out the Anxiety Scale.) I will read the directions aloud, while you read them to yourselves:

On this sheet you will find words which describe different kinds of moods and feelings. Mark an X in the boxes beside the words which describe how you feel now - today. Some of the words may sound alike, but we want you to check all the words that describe your feelings. Work rapidly. When you have completed this, please raise your hand.

(E. collects papers and next hands out digit-symbol plus pencils - should check for code numbers.)

I have just passed out digit-symbol tests plus pencils. As you can see at the top of the page there are nine boxes, each with a number. Below each box is a mark or symbol. Each number has its own symbol. Your job is to fill in the empty boxes with the symbol that goes

with each number.* Since this is partially a test of speed, you are to answer as rapidly as possible. You start with the first line and continue without skipping any spaces. When you finish one line, go to the next line and continue until I call out STOP. Then when I give the signal I want you to turn the page and do the next set of numbers. Are there any questions concerning what you will be doing on these tests? Alright - BEGIN.

*Blackboard illustration may be used. (E. should note that each trial will be timed for one minute. Booklets should be collected when the first 6 trials of one-minute each are completed.)

STOP WRITING. I am going to collect your task booklets now and give them to my assistant who will be scoring your tests. (Pause - collect booklets.) I will not be in a position to inform you of your scores. However, I think you should know these scores vary. For example, the score that you receive today may be somewhat different from one that you would get on another day. However, there probably would not be a great deal of difference.

In any case, the Social Dynamics Research Institute is interested in your achievement in the program. I am sure that all of you remember the many different kinds of tests and forms that you worked on when you first entered the College Discovery Program. Well, you may not have realized that the people at Social Dynamics are doing a lot of research in trying to discover what kinds of things help students to learn.

Now, I am going to ask all of you to do some more of these symbol boxes. I will pass out some new pages for you to work on. Before starting the new set we will take a few minutes break. Since this is a test situation, please remain silent.

(E. after the break passes out new task booklets. Note there are 5 tasks left, each of which will be timed again for one-minute.)

E. collects the digit-symbol booklets and hands out the Terminal Questionnaire, and states the following:

The last thing that I want you to do is answer this set of questions. Please circle the number and words that tell best how you feel.

(E. collects questionnaire and pencils.)

APPENDIX C.

Table A

Cell Means and Analysis of Variance of Anxiety Responses on the MAACL for Male Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
Praise	7.5	7.4	8.8	6.5
Reproof	8.4	7.7	8.4	8.5
Control	8.2	8.2	7.8	8.2
Combined	8.0	7.7	8.3	7.7

n = 10 for each cell; N = 120.

Analysis of Variance

Source	df	MS	F
Race (R)	1	0.53	0.04
Sex (S)	1	5.63	0.51
Incentive (I)	2	5.43	0.49
R x S	1	0.83	0.07
R x I	2	0.93	0.08
S x I	2	5.03	0.45
R x S x I	2	6.63	0.60
Within	108	10.97	
Total	119		

Table B

Cell Means and Analysis of Variance of Anxiety Responses on the MAACL for Female Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
Praise	7.0	7.2	5.9	5.6
Reproof	6.9	5.9	6.7	5.8
Control	5.1	7.3	6.7	7.2
Combined	6.3	6.8	6.4	6.2

n = 10 for each cell; N = 120.

Analysis of Variance

Source	df	MS	F
Race (R)	1	1.87	0.09
Sex (S)	1	0.04	0.01
Incentive (I)	2	0.63	0.03
R x S	1	3.67	0.17
R x I	2	11.09	0.53
S x I	2	13.43	0.64
R x S x I	2	2.10	0.10
Within	108	20.71	
Total	119		

Table C

Cell Means and Analysis of Variance of Responses to Anxiety Related to Task Item (Item 10) for Male Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
Praise	3.8	4.0	3.4	3.6
Reproof	3.0	3.2	2.9	3.6
Control	3.3	3.7	3.2	3.0
Combined	3.3	3.6	3.1	3.3

n = 10 for each cell; N = 120.

Analysis of Variance

Source	df	MS	F
Race (R)	1	1.40	1.42
Sex (S)	1	1.87	1.89
Incentive (I)	2	3.00	3.03
R x S	1	0.00	0.00
R x I	2	1.00	1.01
S x I	2	0.32	0.32
R x S x I	2	0.75	0.76
Within	108	0.99	
Total	119		

Table D

Cell Means and Analysis of Variance of Responses to Anxiety Related to Testing Item (Item 13) for Male Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
Praise	3.5	3.9	3.8	4.0
Reproof	3.4	3.6	3.1	3.6
Control	3.7	3.8	3.8	3.6
Combined	3.5	3.7	3.5	3.7

n = 10 for each cell; N = 120.

Analysis of Variance

Source	df	MS	F
Race (R)	1	0.00	0.00
Sex (S)	1	1.20	1.52
Incentive (I)	2	1.57	2.00
R x S	1	0.03	0.04
R x I	2	0.32	0.41
S x I	2	0.47	0.60
R x S x I	2	0.25	0.32
Within	108	0.78	
Total	119		

Table E

Cell Means and Analysis of Variance of Responses to Anxiety Related to Task Item (Item 10) for Female Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
Praise	3.2	3.0	3.4	3.5
Reproof	3.2	3.6	3.2	3.5
Control	3.6	3.1	3.7	2.5
Combined	3.3	3.2	3.4	3.1

n = 10 for each cell; N = 120.

Analysis of Variance

Source	df	MS	F
Race (R)	1	0.00	0.00
Sex (S)	1	1.00	0.93
Incentive (I)	2	0.23	0.21
R x S	1	0.20	0.19
R x I	2	0.93	0.86
S x I	2	3.73	3.46
R x S x I	2	0.63	0.58
Within	108	1.07	
Total	119		

Table F

Cell Means and Analysis of Variance of Responses to Anxiety Related to Testing Item (Item 13) for Female Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
	a	b	c	d
Praise	3.1	3.7	3.5	3.7
	e	f	g	h
Reproof	3.4	3.7	3.6	3.7
	i	j	k	l
Control	4.3	3.2	3.3	3.2
Combined	3.6	3.5	3.4	3.5

n = 10 for each cell; N = 120.

Multiple range test:
i significantly higher than a,c,e,j,k,l ($p < .05$).

Analysis of Variance

Source	df	MS	F
Race (R)	1	0.13	0.20
Sex (S)	1	0.00	0.00
Incentive (I)	2	0.13	0.20
R x S	1	0.13	0.20
R x I	2	1.43	2.21
S x I	2	2.79	4.31*
R x S x I	2	1.43	2.21
Within	108	0.64	
Total	119		

*$p < .05$

Table G

Cell Means and Analysis of Variance of Responses to Task Enjoyment Item (Item 1) for Female Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
Praise	2.7	2.2	3.0	2.4
Reproof	3.2	2.6	2.5	2.4
Control	3.9	3.4	2.8	2.8
Combined	3.2	2.7	2.7	2.5

n = 10 for each cell; N = 120.

Analysis of Variance

Source	df	MS	F
Race (R)	1	3.67	2.55
Sex (S)	1	4.40	3.06
Incentive (I)	2	4.90	3.40
R x S	1	0.67	0.46
R x I	2	3.09	2.15
S x I	2	0.23	0.16
R x S x I	2	0.30	0.20
Within	108	1.43	
Total	119		

Table H

Cell Means and Analysis of Variance of Responses to Attitude Towards Own Performance Item (Item 4) for Male Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
Praise	4.1	3.6	3.3	3.8
Reproof	3.4	3.1	3.5	3.4
Control	3.4	3.6	3.0	3.6
Combined	3.6	3.4	3.2	3.6

n = 10 for each cell; N = 120.

Analysis of Variance

Source	df	MS	F
Race (R)	1	0.30	0.46
Sex (S)	1	0.13	0.21
Incentive (I)	2	1.40	2.13
R x S	1	2.08	3.16
R x I	2	0.67	1.02
S x I	2	0.91	1.38
R x S x I	2	0.43	0.66
Within	108	0.65	
Total	119		

Table I

Cell Means and Analysis of Variance of Responses to Attitude Toward Other Subjects Item (Item 8) for Female Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
	a	b	c	d
Praise	3.5	3.5	3.2	3.7
	e	f	g	h
Reproof	3.5	3.3	2.8	3.1
	i	j	k	l
Control	3.7	3.2	3.4	3.1
Combined	3.5	3.3	3.1	3.3

n = 10 for each cell; N = 120.

Multiple range test:
g significantly lower than a,b,d,e,i,k ($p<.05$).

Analysis of Variance

Source	df	MS	F
Race (R)	1	1.63	3.34†
Sex (S)	1	0.03	0.06
Incentive (I)	2	0.90	1.85
R x S	1	1.20	2.45
R x I	2	0.40	0.83
S x I	2	1.10	2.26
R x S x I	2	0.07	0.15
Within	108	0.48	
Total	119		

†$p<.10$

Table J

Cell Means and Analysis of Variance of Responses to Task Involvement Postincentive Item (Item 7) for Female Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
Praise	3.5	3.2	3.3	3.7
Reproof	3.3	3.0	3.1	3.1
Control	3.4	3.5	3.4	3.5
Combined	3.4	3.2	3.2	3.4

n = 10 for each cell; N = 120.

Analysis of Variance

Source	df	MS	F
Race (R)	1	0.03	0.03
Sex (S)	1	0.00	0.00
Incentive (I)	2	1.30	1.57
R x S	1	0.83	1.00
R x I	2	0.10	0.13
S x I	2	0.17	0.21
R x S x I	2	0.30	0.36
Within	108	0.83	
Total	119		

Table K

Cell Means and Analysis of Variance of Responses to Interest Level of the Task Item (Item 5) for Male Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
Praise	3.2	2.1	2.7	2.7
Reproof	2.8	3.0	2.6	2.6
Control	2.5	2.4	3.3	2.4
Combined	2.8	2.5	2.8	2.5

n = 10 for each cell; N = 120.

Analysis of Variance

Source	df	MS	F
Race (R)	1	0.07	0.06
Sex (S)	1	3.00	2.45
Incentive (I)	2	0.10	0.08
R x S	1	0.00	0.00
R x I	2	1.22	0.99
S x I	2	1.30	1.06
R x S x I	2	2.35	1.92
Within	108	1.22	
Total	119		

Table L

Cell Means and Analysis of Variance of Responses to Meaning of the Task Item (Item 6) for Male Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
Praise	2.4	3.7	3.2	3.6
Reproof	3.0	3.3	3.0	3.5
Control	1.4	2.9	3.9	3.8
Combined	2.2	3.3	3.3	3.6

n = 10 for each cell; N = 120.

Analysis of Variance

Source	df	MS	F
Race (R)	1	4.40	2.63
Sex (S)	1	3.00	1.79
Incentive (I)	2	1.10	0.66
R x S	1	0.07	0.04
R x I	2	0.90	0.54
S x I	2	3.35	2.00
R x S x I	2	1.22	0.73
Within	108	1.67	
Total	119		

Table M

Cell Means and Analysis of Variance of Responses to Interest Level of the Task Item (Item 5) for Female Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
Praise	2.9	3.2	2.5	3.2
Reproof	2.6	3.2	2.7	3.1
Control	1.8	2.3	3.2	2.8
Combined	2.7	2.9	2.8	3.0

n = 10 for each cell; N = 120.

Analysis of Variance

Source	df	MS	F
Race (R)	1	1.87	1.70
Sex (S)	1	3.67	3.34
Incentive (I)	2	2.15	1.96
R x S	1	0.40	0.37
R x I	2	3.77	3.44
S x I	2	0.67	0.61
R x S x I	2	1.05	0.96
Within	108	1.09	
Total	119		

Table N

Cell Means and Analysis of Variance of Responses to Meaning of the Task Item (Item 6) for Female Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
Praise	3.4	3.3	3.5	3.2
Reproof	3.1	3.3	3.7	2.6
Control	3.4	2.8	2.7	3.6
Combined	3.3	3.1	3.3	3.1

n = 10 for each cell; N = 120.

Analysis of Variance

Source	df	MS	F
Race (R)	1	0.00	0.00
Sex (S)	1	0.83	0.43
Incentive (I)	2	0.55	0.29
R x S	1	0.00	0.00
R x I	2	0.02	0.01
S x I	2	0.90	0.47
R x S x I	2	4.97	2.62
Within	108	1.89	
Total	119		

Table 0

Cell Means and Analysis of Variance of Responses to Reaction to Entire Experimental Situation Item (Item 12) for Male Subjects

	Negro Examiners		White Examiners	
Incentive	Male	Female	Male	Female
Praise	3.6	1.7	2.6	2.3
Reproof	2.8	2.8	2.8	3.0
Control	2.3	2.2	2.2	2.4
Combined	2.9	2.2	2.5	2.5

n = 10 for each cell; N = 120.

Analysis of Variance

Source	df	MS	F
Race (R)	1	0.00	0.00
Sex (S)	1	3.00	2.01
Incentive (I)	2	3.30	2.21
R x S	1	3.67	2.45
R x I	2	0.25	0.17
S x I	2	4.60	3.08
R x S x I	2	1.52	1.01
Within	108	1.49	
Total	119		