*ANXIETY, ELEMENTARY SCHOOL STUDENTS, *SCHOOL ENVIRONMENT,
*SCHOOL CONDITIONS, *PSYCHOLOGICAL PATTERNS, THEORIES,
PSYCHOEDUCATIONAL PROCESSES, *PSYCHOLOGICAL TESTING, FOURTH GRADE,
FIFTH GRADE, METROPOLITAN ACHIEVEMENT TESTS,
CALIFORNIA TEST OF MENTAL MATURITY, CHILDRENa S SCHOOL QUESTIONNAIRE

THE BASIC PURPOSE OF THIS STUDY WAS TO ATTEMPT TO FIND OUT WHETHER
ANXIETY IN ELEMENTARY SCHOOL CHILDREN WAS TO A SIGNIFICANT DEGREE
THE RESULT OF SCHOOL EXPERIENCES AND CONDITIONS. THE ANTECEDENTS AND
CONSEQUENCES OF SCHOOL ANXIETY WERE ALSO TO BE ANALYZED. THE METHOD
OF STUDY INVOLVED OBTAINING MEASURES OF SCHOOL ANXIETY AT THE
BEGINNING AND END OF THE SCHOOL YEAR OVER A PERIOD OF 2 OR MORE
SCHOOL YEARS, AND COMPARING THE TREND WHICH IS FOUND DURING THE TIME
CHILDREN ARE UNDER THE COMBINED INFLUENCE OF IN-SCHOOL AND
OUT-OF-SCHOOL ENVIRONMENT (AND MATURATION) WITH THE TREND DURING THE
TIME THEY ARE UNDER ONLY THE DIRECT INFLUENCE OF OUT-OF-SCHOOL
ENVIRONMENT (AND WERE SELECTED AS SUBJECTS. DATA WERE OBTAINED ON
THE SUBJECTS FROM CUMULATIVE RECORDS, THE CHILDREN, AND THEIR
TEACHERS. THE METROPOLITAN ACHIEVEMENT TESTS, THE CALIFORNIA TEST OF
MENTAL MATURITY, AND THE CHILDRENa S SCHOOL QUESTIONNAIRE WERE
ADMINISTERED TO THE SUBJECTS. TEACHER NOMINATIONS OF CHILDREN WITH A
WIDE VARIETY OF BEHAVIORAL CHARACTERISTICS WERE A MAJOR SOURCE FOR
THE DATA GATHERED. FINDINGS WERE COMPLEX AND REQUIRE STUDY IN
CONTEXT. AT THE METHODOLOGICAL LEVEL, HOWEVER, THE USEFULNESS OF THE
IN-SCHOOL AND OUT-OF-SCHOOL PARADIGM W J DEMONSTRATED. (ED)

51039

FINAL REPORT

Project No. 2616 / Grant No. OE-5-10-0x2

An Analysis of Causes of Anxiety Among Children in School

August 31, 1966

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Office of Education / Bureau of Research

Erratum

The numbers 32 and 33 were inadvertently not used
in numbering the pages of this report.

AN ANALYSIS OF CAUSES OF ANXIETY AMONG CHILDREN IN SCHOOL

Project No. 2616
Contract No. OE-5-10-012

Beeman N. Phillips

August 31, 1966

The University of Texas

Austin, Texas

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Acknowledgements

In the background of a major research endeavor one usually finds a number of professional collaborators and research workers on whom much of the success of the project depends. And this project is no exception for I am especially indebted to Keith McNeil for his extraordinary dedication and achievement in processing and analyzing the data; to Doug Overstreet, who ably assisted in data analysis; to Ed Gotts and Russell Adams for their incisive and timely contributions; and to Dr. Don Veldman for his assistance with computer programming. And it is necessary to recognize the role of Dr. Irby Carruth, Superintendent of the Austin Independent School District; Drs. Hubbard, Bowles, and Baker in his administrative offices; and the eight principals, forty-six fourth and fifth grade teachers, and the hundreds of children in the participating schools - for without their unstinting cooperation, the project would not have been possible. And lastly, my special appreciation extends to Mrs. Barbara Jackson whose secretarial skills are exceptional.

Beeman N. Phillips
The University of Texas

Introduction

The original impetus for this project was the awareness that the school was explicitly or implicitly credited with a highly significant impact on the academic, intellectual, personal, and emotional adjustment of children. Yet the writer could recall no study specifically addressed to the problem of separating the influence of the in-school environment on the child's intellectual and emotional behavior in school from the influence of the out-of-school environment. Coupled to this was the knowledge that the Zeitgeist in American education has demanded greater effort and achievement on the part of children, especially in middle class neighborhoods, and, as a result it had become commonplace in the 1950's and in the early 1960's to speak out on the stresses, anxieties and tensions created in children by these exhortations to excel and to get good grades.

It was out of the juxtaposing of these ideas that this project had its genesis, for its basic purpose was to attempt to find out whether anxiety in elementary school children was to a significant degree the result of school experiences and conditions. Probably as a consequence of the foregoing Zeitgeist and its accompanying concerns about education, Sarason and his co-workers had for several years prior to the inception of this project been studying test anxiety (Sarason, et al., 1960). Anxiety since the time of Freud had been a mainstay in most personality and developmental theories, and it was a significant addition to theory when Sarason applied this concept to test and test-like situations in school. In the context of this development it was not a large intellectual achievement to move to the idea of school anxiety, although as far as the writer knows he was the first to explicate the concept and to begin systematically researching it. (This was in 1962-63).

Beginning with the basic idea that during the school year the child is exposed to and experiences both the in-school and the out-of-school environment, and that during the summer months he is usually exposed to and experiences only his out-of-school environment, it was possible to conceptualize a way in which an

estimate of the effect of the in-school environment on school anxiety could be developed, assuming that maturation did not differentially influence in-school and out-of-school experiences. Briefly, the method involves obtaining measures of school anxiety at the beginning and end of the school year over a period of two or more school years, as shown in the figure below, and comparing the trend which is found during the time when children are under the combined influence of the in-school and out-of-school environment (and maturation) with the trend during the time they are only under the direct influence of the out-of-school environment (and maturation).
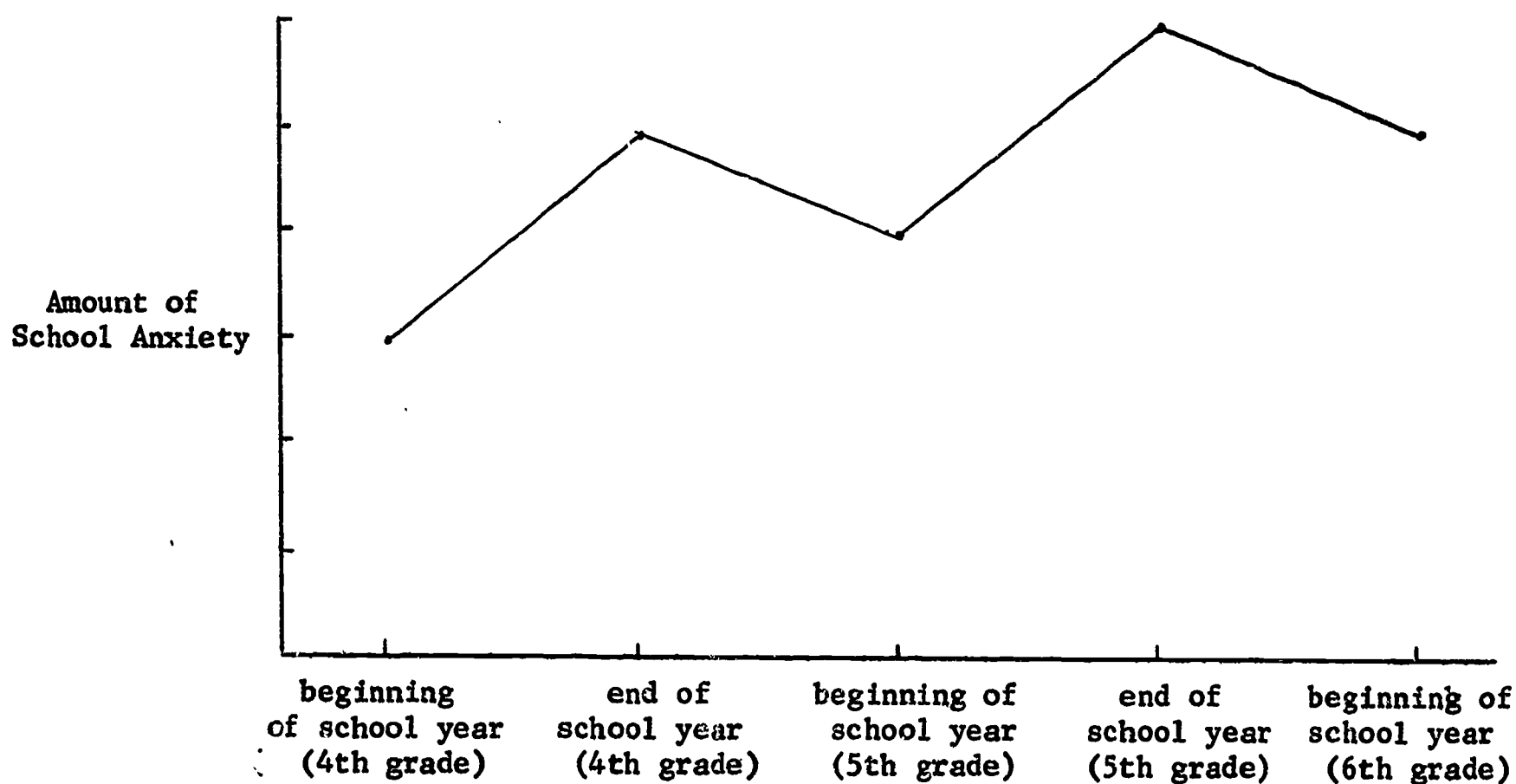
Figure 1. Hypothetical school anxiety group means, assuming the in-school environment increases school anxiety, the out-of-school environment decreases school anxiety, and that all other things are equal.

After formulation in terms of this basic paradigm the problem lent itself to extrapolation and development along several lines. In addition to the possibility that the in-school environment has general, overall effects on the development of school anxiety in children, it is probable that children's personal characteristics

are independently as well as interdependently related to school anxiety, so that individual and subgroup differences in the development of school anxiety are likely to occur. In short, a number of basic personality processes can be logically related to school anxiety and conceptually integrated into a rationale or theory about the antecedents of school anxiety, and this was part of the task accepted in this project.

The project moved in still another direction, and this, too, was buttressed by a great deal of psychological theory and research. This was toward a consideration of the consequences of school anxiety in the context of the school, and in this connection an important issue had to be faced and dealt with, which is whether the effects of school anxiety on academic, intellectual and social functioning are facilitating or debilitating. It is generally held that the effects of anxiety are debilitating; for example, anxiety in most studies has been found to be negatively related to intelligence test performance and this has been interpreted to mean that anxiety interferes with intellectual functioning. While much can be said for this point of view, the empirical evidence is mostly data obtained from concomitant correlational analyses, and reasonable doubt exists as to the validity of some of the arguments advanced (see, e.g., Phillips, 1962).

In summary, then, the project in its inception had a singleness of purpose, which was to investigate the role of the in-school environment in school anxiety, and a multiplicity of purposes, which were to analyze the antecedents and consequences of school anxiety. To these dual aims, and the largely uncharted, winding pathways research so often must follow, the rest of this final report is devoted.

Chapter 1

Conceptualization of the General Problem

We have already stated that the major premises and thrust of the project was in two directions. The first was to determine whether school anxiety and the variables which were hypothesized to be related to school anxiety as antecedents and/or consequences are significantly related to the in-school environment of children. And the second was to determine whether these variables which were selected in terms of the evidence of the psychological literature and grounded in our theoretical developments actually are significantly related as antecedents and/or consequences to school anxiety.

The effects of the in-school and out-of-school environment. The essence of the overall design of this study is the periodic measurement of a number of variables on a group of elementary school children, beginning in fourth grade and continuing on through fifth grade, and the introduction of a quasi-experimental, naturalistic "treatment" into this series of measurements, the effects of this "treatment" being indicated by appropriate changes in the measurements of the variables, or in the relationships between measurements of the variables. The general paradigm which provides the basis for making the determination that a variable is significantly related to the in-school environment and/or the out-of-school environment is shown in Figure 2.

| Beginning of school year (T_1) | End of school year (T_2) | Beginning of school year (T_3) | End of school year (T_4) |

| in-school environment | | in-school environment | |
| out-of-school environment |
| maturation |
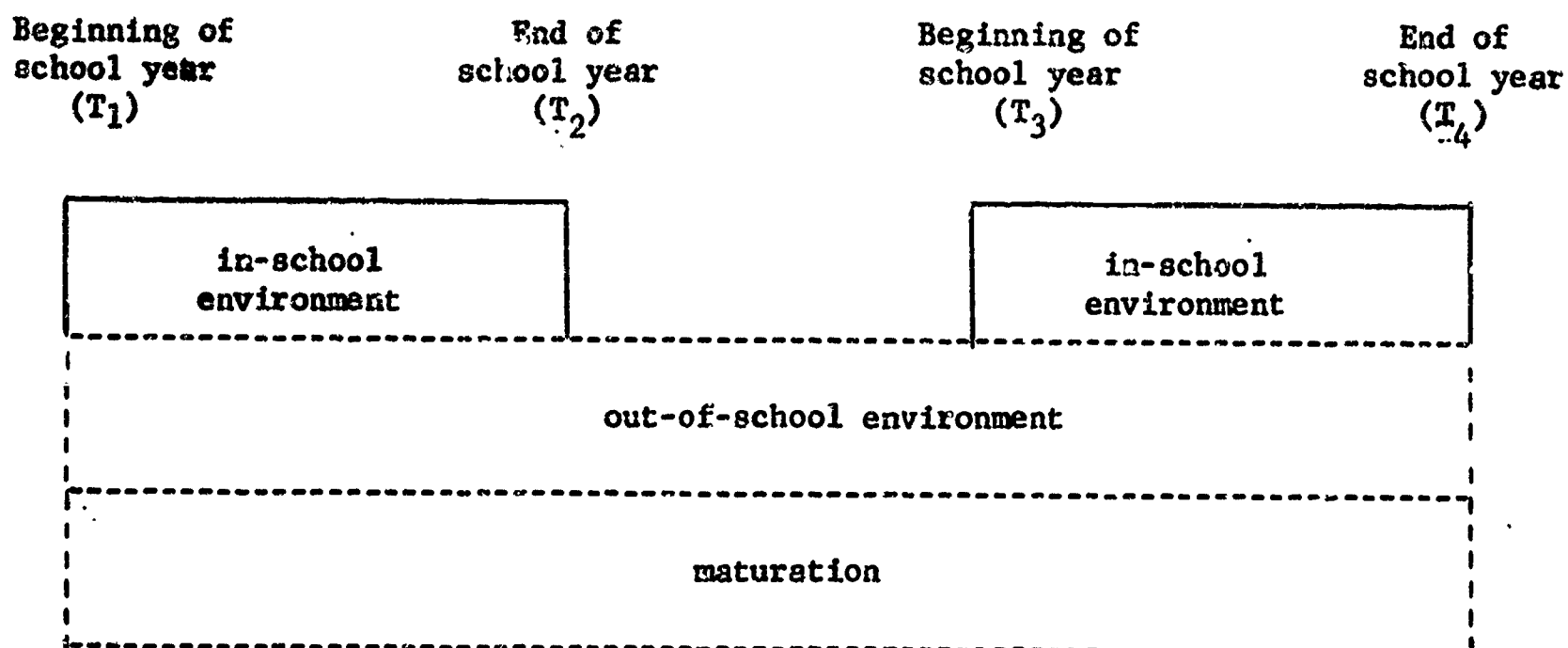
T_1, T_2, T_3, T_4 = times at which school anxiety and other variables hypothesized to be significantly related to the in-school and/or out-of-school environment are measured.

Figure 2. Schematic representation of the in-school and out-of-school environment over a period of two school years.

In a quasi-experimental, naturalistic setting reflected in Figure 2, with measurements of the variables obtained at the beginning and end of each school year, the trend in the measurements between T_1 and T_2, T_2 and T_3, and T_3 and T_4 is an indication of whether any of the variables are significantly associated with the in-school environment. In the usual experimental and quasi-experimental design one introduces a variable, treatment and the like, into the situation, and then sees what happens. However, in this study we take something out, i.e., we remove the children from the direct influence of the in-school environment and see what happens to the variable in question; then we put the children back into the in-school environment, and see what happens again to the variable in question. If the trend of the measurements on the variable in question changes when we take the children out of direct contact with the in-school environment, and again when we put them back into the in-school environment, then we suppose that the variable in question is significantly influenced by the in-school environment, provided that alternative or rival hypotheses can be ruled out. And by examining the nature

of the shifts in trends in the variable in question under these conditions
it is possible to draw inferences about the direction of the influence which
appears to be exerted by the in-school environment. Some possible outcomes of the
results from the measurements described are shown in Figure 3 for illustrative
purposes.
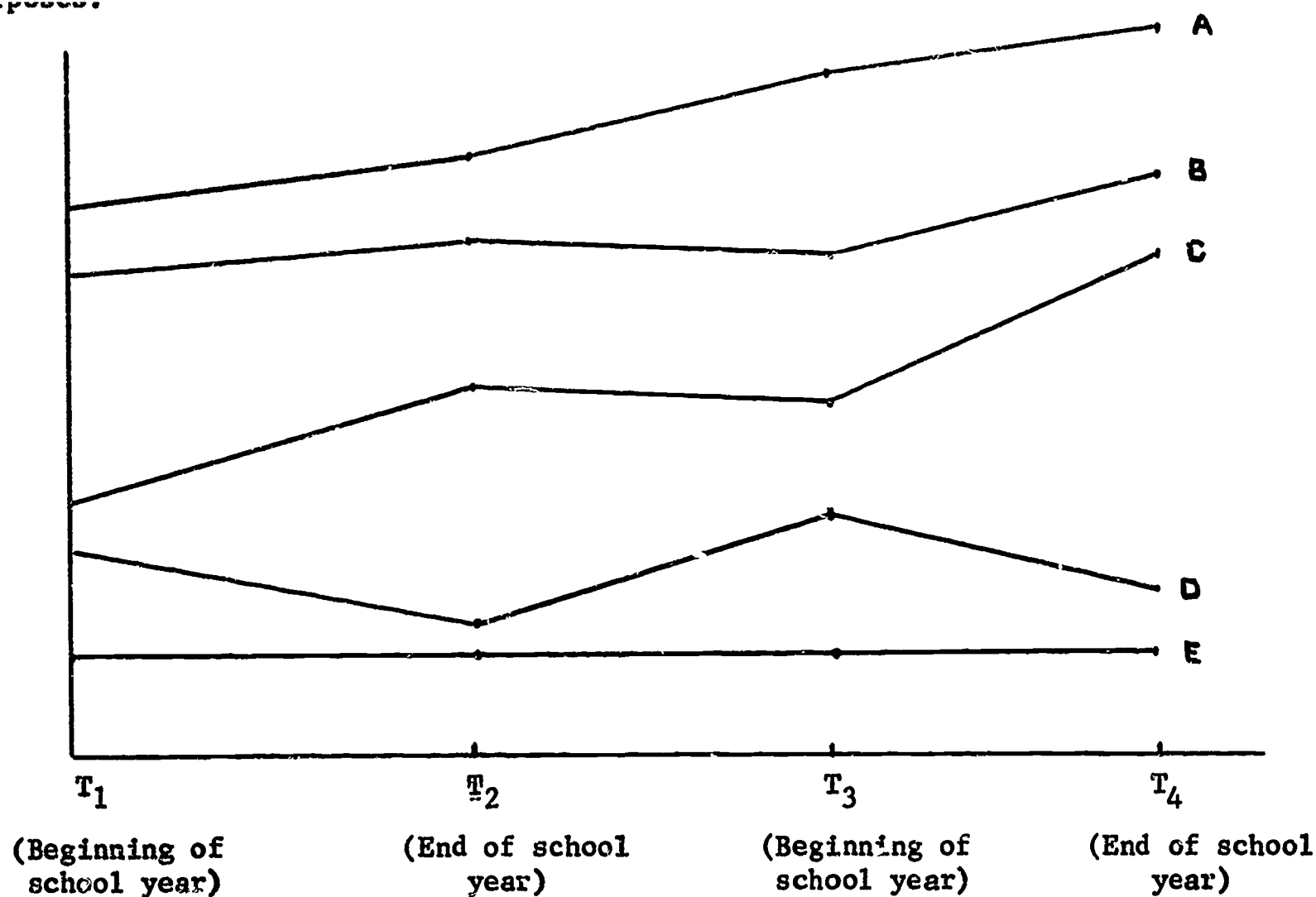
Figure 3. Some possible outcomes for a variable measured at the beginning and
end of two consecutive school years.

If one wanted to infer that the in-school environment had an effect on the
variable depicted in Figure 3 he would be unjustified in doing so if he obtained
the results shown in A and E, since changes in the variable in A are uniform
across the three periods of time, and in E there are no changes in the variable
during the three periods. In B, C, D, however, an inference can tentatively be
made that the in-school environment has a different effect on the variable than
the out-of-school environment, provided, of course, that other interpretations of

the results are not more (or equally) plausible. In B we could conclude that the out-of-school environment decreases status on the variable, while the in-school environment increases it. In C we could say that the out-of-school environment has no effect on the variable, while the in-school environment increases it. And in D it appears that the in-school environment strongly decreases status on the variable and the out-of-school environment strongly increases it.

    The antecedents (causes) and consequences (effects) of school anxiety. Beginning with a number of variables which are correlated with school anxiety, the following questions can then be asked: Is school anxiety the primary cause of the covariation? Is the other variable the primary cause? Or is the covariation the result of a still undetermined third variable? Pursuing the problem a step further there probably are instances where the causal relations are in both directions, as, for example, when a consequence (or effect) of school anxiety is maladaptive and leads to further increases in school anxiety, and thus serves as a secondary "cause" (or antecedent) of school anxiety as shown in Figure 4.
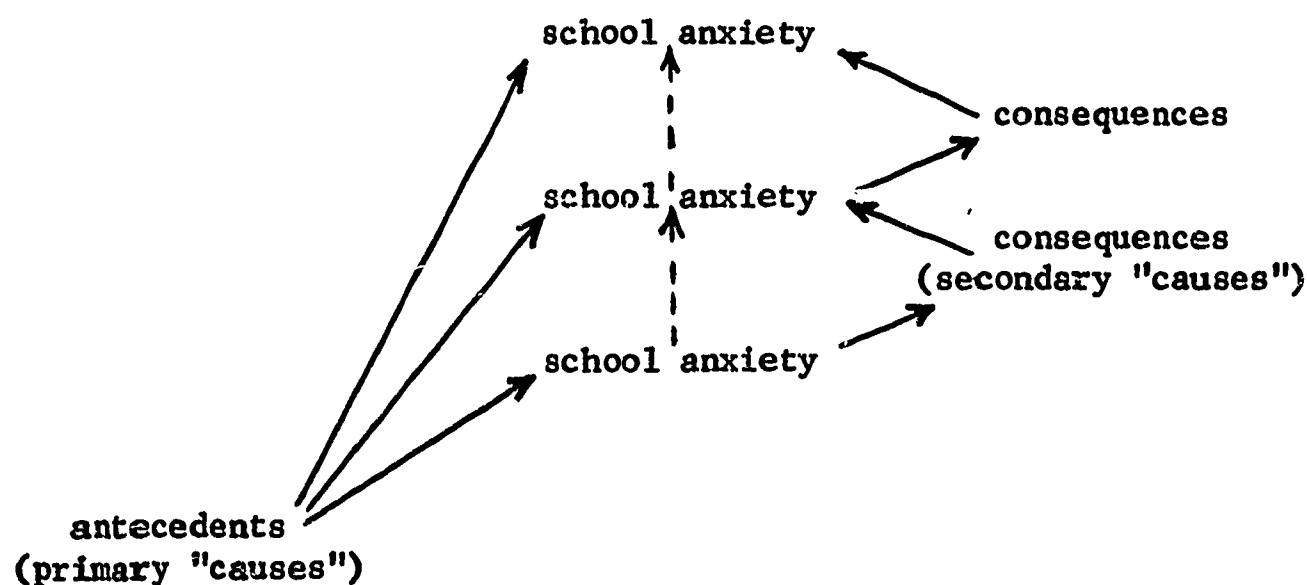
Figure 4. Hypothetical relationship between primary and secondary "causes" of
          school anxiety.

Causal inferences are equivocal with ordinary correlational data, but Campbell and Stanley (see Campbell and Stanley, 1963; and Campbell, 1963) have proposed a quasi-experimental design which allows one to make causal interpretations of appropriately time-lagged correlations. They call this design the "cross-lagged panel correlation," and it is to be applied to the problem of identifying which of the variables related to school anxiety have the best claim to being called antecedents (or causes) of school anxiety and which have the best claim to being called consequences (or effects) of school anxiety. As they note, the rationale of this design is that a presumed cause (or antecedent) should correlate higher with a presumed effect (or consequence) which follows it than with a presumed effect (or consequence) which precedes it. In other words, if a presumed cause and its effect are measured at the beginning and end of fourth grade, $r_{C_1E_2}$ should be greater than $r_{C_2E_1}$, and applying the same logic to a cause and effect measured at the beginning and end of the fifth grade, $r_{C_3E_4}$ should be greater than $r_{C_4E_3}$, as indicated in Table 1. Also, when a cause is significantly related to the in-school environment $r_{C_2E_3}$ should not be different from $r_{C_3E_2}$, since these correlations are across the summer months when the in-school environment is not directly influencing the children.

Table 1.

Anticipated differences in correlations between a cause (C) and its effect (E) cross-lagged across the school year and the summer months

Beginning of 4th	End of 4th	Beginning of 5th	End of 5th
C_1	C_2	C_3	C_4
E_1	E_2	E_3	E_4

$$r_{C_1E_2} > r_{C_2E_1} \qquad r_{C_2E_3} = r_{C_3E_2} \qquad r_{C_3E_4} > r_{C_4E_3}$$

Finally, in conjunction with the cross-lagged correlational approach, it appears that a more complete view of what is happening is obtained by comparing differences in the initial and final levels of the effect (E) when the cause is at an initially high level (HC) or low level (LC). For example, if, as in Table 2, means on an effect (E) are determined for subjects who are initially high (HC) or low (LC) on the cause (C), it is predicted that the effect mean will increase during the school year in the HC group, decrease in the LC group, and remain unchanged in both groups across the summer months. Of course, the logic of this method can be extended to analyze results for a greater number of levels of the cause or to analyze results when the cause changes.

Table 2.

Anticipated mean differences in the effect (E) across the
two school years and the summer months for samples initially
high (HC) or low (LC) in level of the cause (C)

Sample	Beginning of 4th	End of 4th	Beginning of 5th	End of 5th
HC samples	$\bar{x}_{E_1}$	$\bar{x}_{E_2}$	$\bar{x}_{E_3}$	$\bar{x}_{E_4}$
LC samples	$\bar{x}_{E_1}$	$\bar{x}_{E_2}$	$\bar{x}_{E_3}$	$\bar{x}_{E_4}$
HC samples	$\bar{x}_{E_1} > \bar{x}_{E_2}$	$\bar{x}_{E_2} = \bar{x}_{E_3}$	$\bar{x}_{E_3} > \bar{x}_{E_4}$	
LC samples	$\bar{x}_{E_1} < \bar{x}_{E_2}$	$\bar{x}_{E_2} = \bar{x}_{E_3}$	$\bar{x}_{E_3} < \bar{x}_{E_4}$	

Major Concepts in a
Theory of School Anxiety

After being introduced and given major status in psychoanalytic theory by Freud (1936), the concept of anxiety has received increasing attention in many other psychological theories. With the development of a questionnaire for measuring anxiety (Taylor, 1953), there was a serious effort to study anxiety within learning theory, and many studies in this tradition have occurred (Spence and Spence, 1966). Preceding these developments and continuing along side them, anxiety usually has been found among the concepts of the cognitive theorists. Most recently, Atkinson has conceptualized anxiety in terms of the approach-avoidance paradigm, i.e., in terms of the need to avoid failure (Atkinson, and Feather, 1966). And, of course, there has been a continuing interest in anxiety among psychoanalytic theorists, and the comprehensive series of studies by Sarason and his colleagues within the psychoanalytic framework has already been referred to (Sarason et al., 1960). All this, and much more (e.g. Ruebush's 1963 review contains 242 references), stamps anxiety as a central construct in psychological theory; and what will occupy us in the remainder of this section is the theoretical conceptions which guided the present project, and their relation to the foregoing approaches.

A two-factor theory of school motivation. As we consider what is involved in a theory of school anxiety it is apparent that a good beginning is with motivation, since in most psychological theories it is assumed that motives play a role in what happens when a person "behaves." We are no exception and our starting point is what might be called a two-factor theory of motivation. Patterning our thinking after Lewin, and in more recent times McClelland, Atkinson and others (e.g. Atkinson, 1960), we take the position that motives may be oriented toward pleasure-seeking or toward pain-avoiding behavior, and in the tradition of these

and other psychologists it is appropriate to refer to these two types of motivation as approach and avoidance motivation.

If one raises the question of how such motives are acquired, our answer would be that they are acquired by individuals principally in terms of their experiences in a variety of situations, and when a class of situations, e.g. school situations, regularly produce reward, pleasure, and the hope of success, approach tendencies assume a predominant role. But when the same class of situations regularly produce punishment, pain, and fear of failure, then avoidance tendencies become dominant. Thus, in a general way an individual's history of experiences determines whether he is predominantly approach-oriented in regard to a particular class of situations, or whether he is predominantly avoidance-oriented.

At the level of a specific class of situations, like, for example, school situations, one must consider out-of-school (i.e. extrinsic), as well as in-school (i.e., intrinsic), sources of motivation. A child who is strongly avoidance-oriented in relation to school situations because he has had a history of failure and punishment in school and therefore, in terms of motives <u>intrinsic</u> to these situations, seeks to avoid further failure, may at the same time be strongly approach-oriented in relation to school situations because of motives which are <u>extrinsic</u> to school situations, i.e., he is under parental pressure and other out-of-school influences. Thus it is hypothetically possible to have approach and avoidance tendencies in regard to school situations which include different proportions of in-school and out-of-school influences, as indicated in Figure 5.

avoidance
tendency

| | Child #1 | | in-school |
| | Child #2 | | out-of-school |

approach
tendency

Child #1

Child #2

Strength of tendency
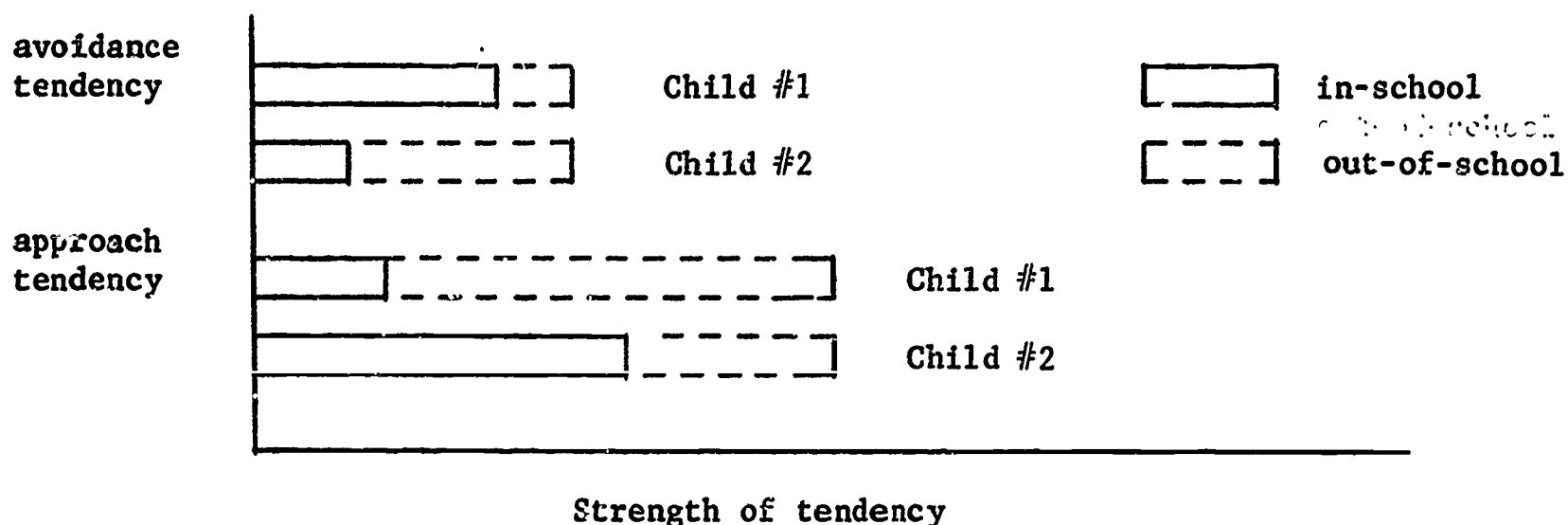
Figure 5. Hypothetical examples of subjects with equally strong approach and avoidance tendencies in school, but where in-school and out-of-school influences contribute different proportions.

In Figure 5 two children are depicted with stronger approach tendencies than avoidance tendencies, but they differ in the extent to which in-school influences are involved. For Child #1 in-school influences are more important in his avoidance tendencies, and out-of-school influences are more important in his approach tendencies. While for Child #2 the opposite is true: his out-of-school experiences contribute proportionately more to his avoidance tendencies than to his approach tendencies. If one wanted to speculate, it would not be difficult to think of differences which are likely to exist in the in-school and out-of-school experiences of these two children, but since such differences are conceptualized in detail later, no further comment is necessary at this time.

School anxiety. In taking up the concept of anxiety one is beset with a plethora of meanings attributed to the concept and a multitude of ways of measuring it. This makes the task of arriving at a definition more difficult and means that there are uncertainties associated with any position that is taken. A widely shared view of anxiety which has its roots in psychoanalytic theory, is that it is consciously experienced affect, including dread, fear, worry and their physiological concomitants, and this view was accepted as a general definition of anxiety in this project. It was also assumed that there are different sources of anxiety, and that this is one of the bases for differentiating situational anxiety from general anxiety. Although

the difference is not entirely clear, general anxiety appears to be more chronic and more internally derived, and is therefore not as highly related to specific external conditions, with the result that the person with general, chronic anxiety appears to be anxious in many different types of situations. On the other hand, situational anxiety is more focused on a specific class of situations, and it thus appears to be less chronic and less internally determined. An obvious example of situational anxiety would be anxiety which is associated with a variety of school situations, i.e., school anxiety. It is probable, of course, that all school situations are not equally involved in the school anxiety of a child. In fact the school situations that are most likely to be sources of school anxiety are test and test-like situations, and Sarason and his co-workers have conceptualized these in terms of test anxiety (Sarason, et al., 1960). Although no one would deny the importance of test anxiety, a measure of school anxiety should take into account anxiety stemming from other situations in school, e.g., situations involving peer relationships. Therefore our concept of school anxiety is meant to encompass all of the situations in school which we consider to be potentially anxiety-producing for children, as indicated in Figure 6.
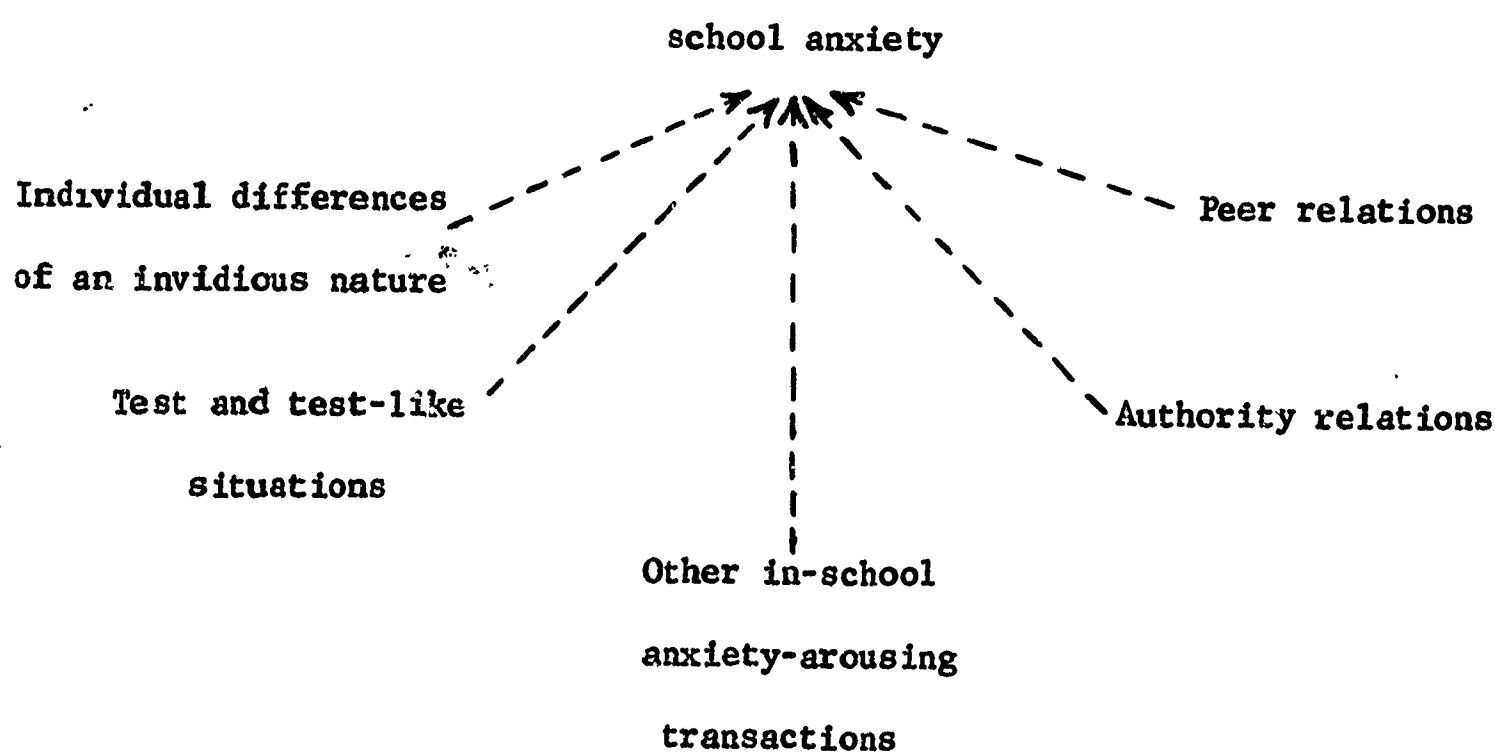
Figure 6. Types of school situations contributing to school anxiety.

Modes of experiencing anxiety. Experiencing involves the interaction of an
individual with his environment, and in analyses of experiencing from a variety of
theoretical viewpoints, there seems to be a common conceptual framework, which is
that experiencing has hierarchically structured, developmental phases. Sullivan
(1953) referred to three modes of experiencing, the prototaxic followed by the parat
taxic and syntaxic. Freud (1949) organized stages of experiencing in terms of
different vital organ systems and their satisfactions. Piaget (Berlyne, 1957)
identifies a sensori-motor, a perceptual, and a conceptual stage of development,
And, recently, Bruner (1965) discussed three levels of experiencing, the enactive,
iconic, and symbolic.

Experiencing is not only conceived in developmentally determined, hierarchical
modes by these theorists, but there is a fair amount of agreement on the general
nature of these phases of experiencing as well. The earliest type of experiencing
is represented in sensori-motor and bodily responses. The intermediate type of
experiencing is represented in perceptual, preconceptual responses heavily infused
with idiosyncratic, egocentric meanings. The third type of experiencing is
represented in conceptual responses which have widely shared symbols and meanings.

If it is reasonable to think of experience on these three levels, then we can
relate them to the experiencing of anxiety, and in interacting with his environment
an individual may experience anxiety in one or more of these modes of experiencing.
In the first level this interaction is fundamentally sensori-motor and physical in
nature, and thus it is a corollary of this position that anxiety would be experienced
in largely motoric, sensory and physical ways. Further, in the basically perceptual
mode of experiencing, anxiety would be experienced in terms of images, fantasies,
and the like; and due to the highly idiosyncratic character of this type of experiencing
and its dependence on internal referents, anxiety experienced at this level is
perhaps best revealed in projective materials where meaning is supplied by the indiv-
idual. The highest level of interaction and experiencing is identified with conceptual
functioning in which there is a community of shared symbolization and meaning, and at

this level anxiety is experienced in terms of worries, negative evaluations, and the like.

Styles of coping with anxiety-arousing situations. Coping style is viewed as a factor mediating between stimulus (situation) and response, and the approach type of coping pattern is based on vigilance for threat, while the avoidance type of coping pattern is based on avoidance of threat. As has been pointed out elsewhere (Goldstein, et. al., 1965), and assuming that one can extrapolate to the present conceptual context, approachers and avoiders can be differentiated in terms of initial reactivity and subsequent adaptation to threatening situations. The avoider is less reactive to the initial experiences of a threatening situation, and shows less adaptation to subsequent experiences in the threatening situation, than the approacher. In addition, in psychoanalytic theory conscious anxiety is usually distinguished from unconscious anxiety, and this is frequently done by labelling unconscious anxiety as defensiveness (Ruebush, 1963). In this perspective, a highly defensive person experiences anxiety only occasionally, and then only when he is in especially threatening circumstances and his defenses are inadequate or break down and expose him to conflicts, dangerous drives, and the like.

Also, it should be noted that research from various sources suggests that defensive styles of coping can be interpreted within a broader framework which includes the so-called response biases. One basis for this point of departure is the research on repression-sensitization as a dimension of personality by Byrne and others (Byrne, 1961, 1963). Another is the shift in emphasis from treating response biases and defensiveness solely as factors mitigating against the validity of anxiety and other questionnaire measures (e.g. Castenada et al., 1956; Davidson and Sarason, 1961) to considering them as coping reactions important in their own right and as broad dimensions of personality (e.g. Wallach and Kogan, 1965; Crowne and Marlowe, 1964). In effect, it is suggested that there are two basic styles of coping with anxiety-producing situations: one is predominantly approach-oriented and is characterised by accentuation of positive characteristics which few people

have, and the other is predominantly avoidance-oriented and is characterized by denial of negative characteristics which most people possess. Of course, these are likely to be interrelated to some degree in some individuals.

Sources of school anxiety. As we have already noted, school anxiety is thought to have its primary origins in the in-school experiences of children, although in recognition of Lewin's programmatic equation B=f (P,E) which is a basic paradigm and point of departure in our theory development and empirical analysis, it is believed that this relationship between school anxiety and in-school experiences is complexly determined. Therefore, in considering its origins, school anxiety is viewed as a constellation of responses which are a function of personality, the in-school (and out-of-school) environment, and the interaction of these two sets of factors.

Patterning our thinking after Lazarus (1964) who has analyzed the dynamics of threat production in a way which makes his arguments and logic appear to be useful in analyzing the problem of the development of school anxiety, it is surmised that the major stepping stone to school anxiety is failure in school. But in order for failure to exist two things must happen: the child must perceive that he has failed, and this failure must be threatening to him. To take these conditions in order, to fail is to fall short of meeting some standard recognized by the child, and accepted by him willingly because he wants to, or because he feels he has no other choice in the matter, since it is imposed by others. However, failure in matters considered unimportant by the child does not produce much threat, for a value of importance to the child must be at stake. Achievement, affiliation, and status needs represent important values to most children, and they are readily threatened by situations in which the satisfaction of these needs is jeopardized. In summary, the initiation of school anxiety depends on the child being in school situations in which needs he sees as important are aroused, and in which it is problematical that these needs will be fulfilled because of difficulties in achieving the standard

of behavior and/or performance required to satisfy the needs.

Utilizing the guidelines of the theory of achievement motivation developed by McClelland, Atkinson and others (see e.g., Atkinson and Feather, 1966), a related but somewhat different view of the development of school anxiety can be conceptualized. The basic idea of their analysis is that a child who is dominated by the need to avoid school failure inhibits or avoids activities in school situations in which his need to avoid failure is aroused. However, when he is constrained by extrinsic influences to engage in activities in these school situations he overcomes this strong inhibitory tendency; but in the process of doing this he experiences anxiety, and the extent of this anxiety is proportionate to the strength of the inhibitory tendency he has overcome.

Finally, moving more definitely into the realm of psychoanalytic theory, a good example of the development of anxiety in school is found in the research by Sarason and his colleagues (Sarason, et al., 1960). Applying their line of reasoning to school anxiety, it would appear that the child who experiences anxiety in school situations in which he is evaluated by teachers, peers, and parents (either explicitly, as in test situations, or implicitly, as in peer relations), is reacting with strong unconscious hostility to the evaluator who he believes is or will in some way pass judgment on his adequacy. This hostility is in conflict with his dependency needs and is not openly expressed, but is frequently turned inward against the self in the form of self-derogatory attitudes, although in some circumstances it may be overtly directed toward others (parents, teachers, and peers). This strengthens the expectations of failure and his desire to escape such school situations. In most instances, the basis for this hostility is the child's early family experience where his behavior and achievements were evaluated unfavorably by parents, and he was frequently punished for failure to meet parental standards. Such results also may occur in school where teachers fulfill essentially the same role as a parent might.

The consequences of school anxiety. A variety of rationales are available for predicting the effects of school anxiety on intellectual, academic, and social functioning. One of these is psychoanalytic theory which, starting with the proposition that the effects of school anxiety are mediated primarily by defensive reactions, leads to predictions as to whether school anxiety will facilitate or interfere with performance in school situations. As Ruebush (1960) has noted, facilitation generally occurs when defensive reactions are compatible with situational requirements, and when they are incompatible the result generally is interference with performance. Furthermore, psychoanalytic theory is a fertile source of predictions concerning aggression, dependency, self disparagement and other personality variables as correlates of school anxiety.

Although the complications of the theory have not been altogether resolved, learning theory, utilizing Hullian constructs, has been used to derive differential predictions concerning the effects of anxiety on simple and complex performance (Spence, 1958). Generally, it has been found that anxiety facilitates performance in simple learning situations, and impedes performance in complex learning situations, although inadequacies in definitions of "complexity" plague much of this latter research (Spence and Spence, 1966). Some implications of school anxiety for learning in school situations can be elaborated within this theoretical framework, with one of the most promising lines of inquiry being the integration of the difficulty (or complexity) dimension with styles of coping, and the investigation of "incidental" learning.

By extrapolating and extending the theory of achievement motivation of Atkinson and others (see Atkinson, 1965), a number of implications for school intellectual, academic, and social behavior can be developed. One of the major concepts of this theory, translated and applied to school anxiety, is the tendency to approach school success (T_{ss}) which may be thought of as interest in both academic and social school situations, coupled with the intention of doing well in such situations. Continuing with the theory as developed by Atkinson and others, this tendency is

considered to be a multiplicative function of the need to achieve school success (M_{ss}), the strength of the expectancy (or subjective probability) of achieving school success (P_{ss}), and the incentive value of school success (I_{ss}). Furthermore, the incentive value of school success is considered to be proportionate to the expectancy of school success, i.e., $I_{ss} = 1 - P_{ss}$.

A second concept derived from this theory of achievement motivation is the tendency to avoid school failure, a conception which is parallel to the preceding one, and which has the same two assumptions, namely, that the tendency to avoid school failure (T-sf) is a multiplicative function of the need to avoid school failure (M_{sf}), the expectancy (or subjective probability) of school failure (P_f), and the incentive value of school failure (I_{sf}).

The third major concept based on this theory is the resultant school-oriented tendency, which occurs when school situations arouse both the tendency to approach school success and the tendency to avoid school failure, the resultant of the conflict between the two simply being the sum of T_{ss} and T_{-af}, remembering that T_{-af} is treated as a minus value. Thus the resultant school-oriented tendency is positive when $M_{ss} > M_{sf}$ and negative when $M_{sf} > M_{ss}$. Also in accordance with Lewin's B=f (P, E), personality is represented by M_{ss} and M_{sf}, and E is represented by P_{ss} and $1 - P_{ss}$.

Also, a special comment needs to be made about the fact that, in the development of the motive X expectancy X incentive theory by Atkinson and others, little attention has been given at the conceptual and empirical level to the role of. extrinsic influences. This is especially important in our consideration of the theory, since anxiety is thought of as the result of constraints from external sources which keep the individual within the achievement-oriented situation.

Finally, as McClelland notes in his analysis of motivation (1951), the intensity of a motive is associated with three hierarchically arranged types of reactions, and considering school anxiety as a motive, activity at very low levels of anxiety intensity is restricted to wish-fulfillment, goal imagery, and similar

thought processes. With increasing intensity of anxiety, goal-oriented, instrumental school activity predominates; and at levels of intense anxiety relief-oriented, defensive school activity predominates. Furthermore, there is an interaction between the intensity of a motive and its approach or avoidance nature, so that when children are basically avoidance-oriented, they shift more quickly to goal-oriented, and to relief-oriented, school activity, and they make these shifts at lower levels of motivation than when they are basically approach-oriented.

Other Major Variables

To be Studied

In preceding sections we have stated two general propositions and the rationale by which data relevant to putting the propositions to an empirical test are to be handled. These propositions are that school anxiety and the other variables to be studied are significantly related to the in-school environment, and that some of these variables may be conceptually viewed as predominantly antecedents (or causes) of school anxiety, while others are more appropriately assigned, conceptually speaking, to the role of being consequences (or effects) of school anxiety. In addition, we have endeavored to discuss key concepts in a theory of school anxiety; and now we proceed to identify major variables which have not already been specifically discussed, and briefly showing, as we go along, the theoretical and empirical raison d'etre of each variables.

1. Sex

Sex differences in anxiety have been consistently obtained, and the most widely accepted explanation for this is that boys are more defensive about admitting anxiety because anxiety is ego-alien to boys and ego-syntonic to girls (e.g. Sarason, et al., 1960). Support for this defensiveness interpretation has been provided through the development of the Defensiveness Scale for Children (DSC) on which boys tend to obtain higher scores. However, equivocal results have been obtained with the Children's Manifest Anxiety Scale using alternative approaches

(Phillips, 1966a; Phillips, 1966), although allowances must be made in comparing these results for the only moderate relationships between the CMAS and the Test Anxiety Scale for Children (the anxiety scale the DSC was used with), and for the older subjects used in the latter studies.

Sex differences in relationships obtained between anxiety and a host of school-related variables are widespread, with the results for both the CMAS and the TASC generally being more predictable for boys (Ruebush, 1968). It appears that this is partly attributable to complicated interdependencies between sex and the other variables which enter into anxiety-school relationships (Phillips, 1962; Phillips, Hindsman Jennings, 1960; Phillips, Hindsman, McGuire, 1960.). For example, girls and boys probably use different defenses against anxiety and the defenses preferred by girls are less likely to be as maladaptive in classroom situations. Also it' appears that achievement is more often stressed in the training of boys than girls, while girls are more often given obedience and responsibility training (e.g. Sears, Maccoby, and Levin, 1957). And, in addition, the achievement of girls seems to be more often oriented toward reactions from others, with the result that they probably are more easily influenced by parents, teachers, and peers (Crandall, 1963).

2. Socio-cultural status

Cross-cultural studies have revealed the importance of social and cultural influences in determining how a child acts, feels and thinks (e.g. Whiting and Whiting, 1960), and studies of social classes and Negro and Mexican-American sub-cultures in this country have delineated many characteristics important to school anxiety and many of the other variables being studied (Riessman, 1962; Rubel, 1966; Landes, 1965; Bloom, Hess, and Davis, 1965; Miller and Swanson, 1960). In addition, there are important sex differences between different ocio-cultural status groups, one illustration of this being the matriarchical family pattern among Negroes and the sex differentiation it produces. Finally, LC and culturally deprived children respond more readily to external stimuli than MC children, and

they may be said to be more other-directed (i.e. Riesman, 1950). One implication of this is that the classroom environment probably is more crucial for them, and this has a number of consequences in relation to school anxiety and other variables being studied.

3. Adaptive requirements of the in-school environment

The interdependence between socio-cultural status and the school system is widely recognized; in fact, this condition is summarized in the often mentioned idea that the schools have a middle class bias (see, e.g., McCandless, 1961). The feminine orientation of the school culture also has not escaped notice, and it probably is associated with differential treatment, expectations, and the like, for boys and girls (especially in elementary schools). In juxtaposing these two ideas one is led to the generalization that sex and socio-cultural status together define different in-school environments, and it is evident that this has many implications for theory development and hypothesis testing in this project. Also, the degree of structuring of school situations seems to be a factor in the facilitating and inter-fering effects of anxiety, with the interfering effects of anxiety generally being less severe in well structured situations, (Sarason, et. al., 1960). It is well to point out, in this connection, that there is evidence that the school experiences of LC, Negro and Mexican-American children are more structured than those of other socio-cultural groups (see Riessman, 1962). Lastly, there probably are differences in the degree of evaluation-orientation of different types of school situations, dif-ferent classroom groups, and different schools. That is, there is a standard of behavior and achievement required which usually is determined by the teacher in conjunction with peers, parents, and others in the school community; and the extent to which success (and failure) in these different situations, classroom groups, and schools are dependent upon judgments made in terms of such standards is the extent to which evaluation-orientation exists in these circumstances. For example, in going from social situations, to academic situations (e.g. seat work, project

activity), to test situations there usually is increasing evaluation-orientation, and the implications of such differences for school anxiety are not difficult to work out.

4. Sex-linked interests, attitudes, and perceptions.

The acquisition of sex-typed behaviors in early childhood, and their pervasive and profound influence on the developing child, have been extensively investigated (e.g. Kagan and Moss, 1962). Also, the essentially feminine orientation of the culture of the school has been widely noted (e.g. Riessman, 1962; Sexton, 1961). This, coupled with studies of masculinity-femininity which indicate that the appropriateness of sex-typed behaviors is more critical for boys (Gotts and Phillips, 1966), suggests that deviancy in sex-related characteristics may be predictive of anxiety-school relationships, especially for boys. Also, it is noteworthy that the LC and racial-ethnic minority child is less likely to have experienced in the behavior of parents and other adults in his non-school environment the essential ingredients of the role of the teacher. In addition, these children acquire parental and adult sex role expectations which are likely to be at variance with the teacher's role, and this is especially true when the teacher is a woman, as is usually the case in the elementary school.

5. Intellectual and academic functioning

A linkage between anxiety and intelligence, achievement tests, and teacher grades is quite consistently reported, and the interpretation of this linkage which is most prevalent is traceable to Sarason et. al., (1960) who take the position that anxiety is the etiologically significant factor. One of the arguments on which their case rests is that the relationship between anxiety and intelligence test performance depends on the situational context; that is, when a test is administered in a highly test-like atmosphere the relationship obtained is greater than when a more neutral, relaxed atmosphere is achieved (Zweibelson, 1956). Another type of argument for interpreting anxiety in this way involves matching children with

high and low anxiety on the basis of intelligence. Then if intelligence is the
causal factor, rather than anxiety, these matched groups should not differ in relevant
intellectual behavior. But Waite, Sarason, Lighthall and Davidson (1958) found a
significant relationship between anxiety and paired associate learning, with low
anxious subjects matched in intelligence learning more rapidly. And in another
later study Davidson (1959) found a significant relationship, limited to boys,
between grades in school and anxiety, with intelligence held constant. However,
the evidence adduced up to now in behalf of this position has been circumstantial,
and there is suggestive evidence that the relationships are complicated by sex and
socio-cultural factors (e.g. Phillips, 1962). And, what is perhaps a more critical
point, there are, to the writer's knowledge, no controlled, systematic studies of
the relation between anxiety and school _learning_. Also, it has been noted that com-
plexity and other characteristics of intellectual and achievement tasks, and the
conditions under which test performance occurs, are significant influences (Ruebush,
1963).

6. Peer acceptance and rejection.

There is considerable evidence of a pervasive peer group influence on social
and academic achievement in school (e.g. Coleman, 1961), and there have been a
number of studies of anxiety and sociometric status (Ruebush, 1963). A recent work
by Katz (1964) is an excellent example of the kinds of theoretical propositions
which can be developed involving peer influence in school. For example, the
desire to affiliate under stress or anxiety is documented in several studies (Schacter,
1959), and it would appear that affiliation with friends is anxiety-reducing,
leading to the anticipation that peer status is more critical to the anxious child
than the non-anxious child. Translated to school anxiety, this suggests the follow-
ing: anxious children should choose the more popular peers and reject the more
unpopular peers, and since highly anxious children are in greater need of peer
affiliation, peer rejection should increase their anxiety, and peer acceptance should
decrease it. A further implication of this trend of thought is that peer rejection

and peer acceptance should be more highly related to intellectual and academic
performance in school among anxious than among non-anxious children.

7. Personality characteristics and processes revealed in observations of school
   behavior.

The self-concept has assumed a central importance in personality theory, and
it has been subjected to a great deal of research (Wylie, 1961), although much
equivocation is required in assessing some of the results and implications. However,
there are two aspects of self-concept, self-disparagement and feelings of inferiority,
which have been consistently related to anxiety (Ruebush, 1963). Likewise, there
have been a number of studies relating dependency, aggression and other dimensions
of interpersonal relations to anxiety (Ruebush, 1963), and there is a large clinical
literature dealing with different types of learning and behavior problems and neurotic
symptoms in school (e.g. Blanchard, 1946; Klein, 1949; Pearson, 1952). Also, there
is some evidence that personality variables behave like moderator variables, and
are more functionally related to the academic and intellectual behavior of girls
and MC children than boys and LC children, respectively (Crandall, 1963). And,
finally, Cattell and his associates (1966) have shown that anxiety is a personality
trait which is distinct from neuroticism, even though it is a major component of
the neurotic syndrome.

Chapter 2

Description of Methods and Instruments Used

The Research Setting

Initially it was apparent that a school system which served the needs of this project was close at hand, and this was the Austin Independent School District. and it was the obvious choice for our endeavors. One of the advantages of working in the Austin public schools was that close coordination and supervision of our research effort was possible, and this was particularly important in view of the large amount of data which needed to be collected according to a prearranged, tightly organized schedule. Another advantage was that the Austin school system was large and diverse enough to have the full range of socio-economic and racial-ethnic groups available and the importance of this lies in the fact that research on anxiety has typically used only MC children or college students as subjects.

The Elementary Schools Selected. Eight Austin elementary schools were involved in this project, and these schools were selected from all the elementary schools available in Austin in each of several classifications at the time the project was initiated in 1964. These classifications, which were derived on the basis of a careful reconnoitering of school attendance areas, consultation with school officials, and the use of achievement test data, included the following: Anglo-American, predominantly MM class socio-economically; Anglo-American, predominantly UL class socio-economically; Negro-American, predominantly LC socio-economically; Mexican-American, predominantly LC socio-economically; racially and ethnically mixed, one LC socio-economically, and the other predominantly MC. Within the two Anglo-American classifications there were two schools selected, one in an older, stable area of the city, and the other in a newly developed area of the city. The next two classifications consist of one school each, and the last classification has two schools, one with a majority of Mexican-American children and strongly LC oriented, and the other with a majority of Anglo-American children and MC oriented. It was not possible to select these schools on a strictly random basis, however; for example,

there were only two schools in the fourth category, so they were both chosen   In

each of the other categories after a pool of 2-4 schools were initially determined

to be representative, one (or two) of these was selected in consultation with Austin

Independent School District officials.   These consultations took into account other

activities and research already going on or contemplated which might interfere with

the project.   Later, the fourth grade achievement test results for the preceding two

years were examined for all elementary schools in Austin to ascertain the representa-

tiveness of the choices made, and these data are shown in Table 3.

Table 3.

Overall Median MAT Grade Equivalent (September testing) of each
Austin Elementary School, based on Data for 1962-63 and 1963-64

Classification of School	Overall Median Grade Equivalent of Each School
Negro, predominantly LC	2.8, 3.0, 3.0, <u>3.2</u>, 3.4, 3.4, 3.4
Mexican-American, predominantly LC	2.8, 3.0, <u>3.3</u>, 3.4, 3.4, 3.4
Racially and ethnically mixed, predominantly Mexican-American and LC	<u>3.2</u>
Racially and ethnically mixed, predominantly Anglo and MC[1]	<u>4.4</u>
Remainder of the Austin Elementary Schools	3.4, 3.6, <u>3.6</u>, 3.8, <u>3.8</u>, 3.8, 3.9, 3.9, 3.9, 4.1, 4.2, 4.2, <u>4.3</u>, 4.4, 4.4, <u>4.4</u>, <u>4.4</u>, 4.4, 4.5, 4.5, 4.5, 4.5, 4.6, <u>4.6</u>, <u>4.7</u>, 4.7, 4.9, 5.0, 5.0, 5.2

Note::The eight project schools are underlined.

[1]When a small Negro school was closed in the second year of the project, the complexion of this school changed somewhat.

With the exception of schools representing upper middle class areas of the

city, it is apparent that other social class and racial-ethnic areas of the city

are adequately represented. The exclusion of these upper middle class schools was deliberate, being based on their already heavy involvement in other projects and special activities.

For reasons of practicality the size of the schools was a factor in the selection process, and an effort was made to select schools with three fourth grade classes, the grade level at which the project was initiated. However, in one school there were only two fourth grade classes, and in another school enrollment was underestimated and an additional combination fourth-fifth grade class was needed, these fourth graders being tested but excluded in analyses. Altogether there were 23 fourth and 23 fifth grade classes involved in the first and second years of the project, and a total of approximately 600 children were involved in each of these two years, about one-fourth of this total being in each of the major socio-cultural status groups. Of course, as a result of in-and-out school mobility the sample in fifth grade was not composed entirely of children who were in the sample in fourth grade, and obviously the degree of mobility varied from one socio-cultural status group to another. In addition, absences on the days on which tests were given further decreased the number of children for whom particular combinations of data were available.

Sources of project data. Data for this project were obtained from three different sources: the cumulative records, the children themselves, and their teachers. The cumulative records were consulted for information concerning the children's previous school experiences in grades 1-3, and for information on some personal characteristics of the children. Also, the children were asked to respond to a self report instrument consisting of 198 items which was administered on four different occasions. In addition, the children were asked to nominate their peers for a variety of situations, and this was done on four different occasions. Also, standardized achievement and intelligence tests were responded to by the children on four different occasions. Finally, the teachers were asked to nominate children for a wide variety of behavioral characteristics, as well as to rank them with respect

to certain school behaviors, and this was done on four different occasions. At the
same time, teachers were asked to repeat certain of these nomination forms so as
to obtain reliability data, and this was done on each of the four occasions.

Schedule of administration of instruments. A decision had to be made with
regard to the order in which the instruments were to be administered, and although
a randomized rotation design was contemplated at the beginning, it soon was apparent
in discussions with teachers and principals that this was not feasible. Nor was it
possible to keep the time between tests completely constant from class to class, and
from occasion to occasion. Actually what was accomplished with only minor exceptions
was a constant order of administration of the instruments and roughly uniform time
periods in the testing sequence. Overall, the administration of all the instruments
was spread out over a period of about three weeks, beginning the third week in
September at the beginning of the school year, and the third week in April at the end
of the school year. The Metropolitan Achievement Tests were administered by the
teachers in all instances with some proctoring and monitoring by the project staff,
and all other instruments were administered by the project staff with one exception,
which was in the Fall, 1964, when psychometrists from the Guidance and Counseling
Office assisted the project staff in administering the California Test of Mental
Maturity. The schedule of administration of the instruments is shown in Table 4,
and it should be noted that, with only minor deviations, the same schedule was followed
during both school years. Also, it should be pointed out that two special instruments
were administered, one in the Fall, 1965, and the other in the Spring, 1966.

The Children's School Questionnaire (CSQ)

One source of data in this project was the Children's School Questionnaire
(see Appendix A) which consists of 198 questions orally read to the children in each
classroom group. Oral presentation was used to take advantage of the children's higher
oral than reading comprehension level, the relatively smaller variability in children
at this age in oral comprehension, compared to reading comprehension, and the greater

Table 4.

Schedule for Administration of Regular Project Instruments
at the beginning and end of the 1964-65 and 1965-66 School Years

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Sequence of administration of instruments

First week of testing

Children's School Questionnaire, Form 1 (administered by project staff
on first day)

Metropolitan Achievement Test (administered by teachers, with some assistance
from project staff, on second - fifth days)

Second week of testing

Children's School Questionnaire, Form 2 (administered by project staff
on first day)

California Test of Mental Maturity (administered by project staff, with
assistance from school psychometrists in Fall, 1964, on second -
fifth days)

Third week of testing

Children's School Questionnaire, Form 3 (administered by project staff on
first day)

Peer nomination form (administered by project staff on second - third
days)

Teacher nomination forms (administered by project staff on second -
fifth days, with selected forms repeated about a week later)

---

control over response rate, etc. which one has in oral administration. The items

for the questionnaire were obtained from various sources, including the Test Anxiety

Scale for Children (Sarason, et al., 1960), the Achievement Anxiety Scale (Stanford,

Dember, and Stanford, 1963), the Audience Anxiety Scale (Paivio, Baldwin, and Berger,

1961), the Defensiveness Scale for Children (Lighthall, 1963), and the Children's

Personality Questionnaire (Porter and Cattell, 1963). In addition, a number of

other items were prepared by the project staff to measure aspects of the concepts of

school anxiety and approach and avoidance styles of defensiveness as delineated in

Chapter 1.

The items representing each of these categories were randomly split into thirds and assigned to Forms 1, 2 or 3 in a random order. After this was accomplished each form of the CSQ consisted of 66 items. One of the purposes in doing this was the practical necessity of dividing the time required for administration of all 198 items into periods of appropriate length for fourth and fifth graders. As a result, each testing session lasted between 20-30 minutes, the time required depending on various factors, including the number of questions orally repeated. A more fundamental reason, however, involved the rationale of the study, which was the desire to "randomize" as much as possible effects peculiar to a particular testing sessions, and effects associated with item position. It seemed especially crucial to obtain measures of school anxiety at the beginning and end of the school year which were maximally representative of these beginning and end periods of time, and minimally representative of the particular situational and positional contexts in which the responses were obtained. These hypothetical relationships are schematically represented in Figure 7.

Change in school anxiety
during the school year

school anxiety

Form 1   Form 2   Form 3

school anxiety measured for
each child in three different
school situational contexts, and
from a variety of positional con-
texts

(beginning of school year)

school anxiety

Form 1   Form 2   Form 3

school anxiety measured for each
child in three different school
situational contexts, and from a
variety of positional contexts

(end of school year)

Figure 7. Hypothetical representation of the derivation of school anxiety scores
which are minimally influenced by differences in situational and posi-
tional contexts.

Procedures used to analyze CSQ item responses. Although items were included
from instruments developed by others, this was not done so that scores derived from
these items could be included in analyses. Instead, these pools of items were included
as benchmarks in the derivation of sets of items measuring concepts which were part
of the project, but which were at the same time related to concepts for which others
had developed instruments. As an illustration of this strategy, the concept of school
anxiety included anxiety associated with test and test-like situations, so it was
likely that items of the TASC would constitute a core of items to which other items
designed to tap additional sources of school anxiety would adhere.

With this composite of 198 items a strategy of empirically determining which
items went together was pursued. Since item responses were dichotomous, a correlation
matrix was determined by computing phi coefficients, realizing, of course, that the
size of phi was severely restricted in cases where proportions were extreme. However,
as Table 5 clearly shows, proportions above .8 and below .2 were the exception
rather than the rule. (In passing it should be noted that Chi square tests of
significance indicated that differences observed in Table 5 between Fall, 1964 and
Fall, 1965 could be attributed to chance.) This correlation matrix (R) then was
converted to its G covariance matrix before a principal-components analysis, and
a Varimax rotation analysis, using a minimum eigen value of 1.00, were carried
out. All these computations were completed on the University CDC 1604 computer
using programs developed by Veldman (1965). But before using these techniques it
was necessary to decide whether to seek factors across the total sample, or factors
common to particular subsamples, especially subsamples based on sex and socio-cultural
status. In terms of the general problems to be investigated, and the requirements
of image and factor analytic techniques, it seemed that the most generally meaningful
factors would be those derived from the total sample. So this is what was done.

However, due to the limitations of the CDC 1604 computer it was not possible
to factor analyze the G covariance matrix of all 198 items at one time; so instead,
all the items on Form 1 and the first half of the items on Form 2 were analyzed together,

Table 5.   35

Distribution of the items of the CSQ in Terms of the
Proportion Responding in the "Yes" (or Comparable) Direction
in the Fall, 1964 and Fall, 1965

Proportion	Fall, 1964				Fall, 1965			
	Form 1	Form 2	Form 3	All	Form 1	Form 2	Form 3	All
.90-.99	3	1	1	5	2	1	1	4
.80-.89	4	3	3	10	5	4	4	13
.70-.79	7	6	7	20	11	3	9	23
.60-.69	7	10	7	24	6	10	2	18
.50-.59	8	7	10	25	7	7	10	24
.40-.49	15	15	19	49	11	14	8	33
.30-.39	10	17	12	39	9	9	18	36
.20-.29	8	7	4	19	10	15	14	39
.10-.19	4	0	3	7	5	3	0	8
0-.09	0	0	0	0	0	0	0	0
Total	66	66	66	198	66	66	66	198

with this process being repeated for the last half of the items on Form 2 and all

the items on Form 3. Then the items with factor loadings of .40 or higher in the

two Varimax rotation analyses were selected for a subsequent analysis. Finally, in

order to check on the stability of the factor structure this procedure was followed

with CSQ data collected in the Fall, 1964 and again in the Fall, 1965. Data concerning

the percent of variance accounted for in this series of image analyses are presented

in Table 6.

To establish the degree of similarity between the Fall, 1964 and Fall, 1965

factor structures, neither Ahmavaara's nor Kaiser's method of comparing factor structures

and studies could be used, for neither the same items nor the same subjects appeared

in each of the series of image analyses. Instead, factors obtained on the two occasions

Table 6.

Percent of Variance Accounted for in
the Fall, 1964 and Fall, 1965
CSQ Image Analyses

Source of Variance	Fall, 1964			Fall, 1965		
	Form 1+½ Form 2	½ Form 2+ Form 3	Composite	Form 1 +½ Form 2	½ Form 2+ Form 3	Composite
Total Common	49.10	51.45	53.95	50.09	53.45	55.84
Common extracted	54.62	58.26	65.47	52.57	58.13	63.34
Total extracted	26.82	29.97	35.32	26.33	31.07	35.37

were examined for common items with factor loadings of .40 or higher. Doing this it was

soon apparent that four factors obtained in the Fall, 1964 were similar to four factors

obtained in the Fall, 1965, since in each of these pairs of factors more than three-fourth

of the items had loadings of .40 or higher on both factors (for school anxiety 90 per

cent did.). Therefore, to select the items to represent each factor, those having .40

or higher loadings on what appeared to be the same factors on the two occasions were put

into the initial pool of items representing the factor. In addition, if an item had a

.40 or higher loading on only one of the two years its loadings in the other year were

examined, and if it had a loading between .30 - .40 on the right factor, and no similarly

high loading on any other factor, it was added to the final pool. In this way sets of

items were obtained for four different factors which had a reasonable claim to stability

across occasions separated by a full year. These factors are tentatively identified,

and the items representing them are listed, in Table 7, and it should be noted that

26 of the 30 items of the TASC appeared in the final pool of items for the school anxiety

factor. And, in general, these items were among those with the highest loadings on this

factor, which supports the contention (in Chapter 1) that test anxiety is of central

importance in school anxiety. Also, it should be pointed out that all factor scores were derived by assigning each item a weight of one and summing the item responses. The simplicity of this method of scoring, and the stability of the results obtained justified its use (Horn, 1965). In addition, it was earlier pointed out that a number of items from the CPQ were included (with permission of the authors) in the CSQ. The purpose of doing this was to obtain a measure of the concept of proneness toward neuroticism (PTN) using the research of Cattell and Scheier (1961) as the rationale for determining which dimensions of the CPQ to select items from. Also, anxiety is a major component of neuroticism, so that it is conceptually permissible to think of the PTN score as heavily infused with general anxiety. In connection with the PTN items one further point needs to be made, which is that these items did not cluster together and form a factor in the image analyses. But this is not surprising, since the dimensions which the PTN items represent were factorially derived, and each dimension was represented in the CSQ by only a few items. Finally, it should be noted that, in accordance with the rationale discussed in Chapter 1, the items of the defensiveness factor were conceptually differentiated into two subgroups, one identified with the approach style of defensiveness, and the other identified with the avoidance style of defensiveness. These items are marked in Table 7, and one item (1-25) was excluded in this conceptual breakdown.

A special problem occurred in conjunction with the CSQ. Since it was split into three forms the chances of being absent on one of the days when a form was administered was increased three-fold, and this created a problem not faced in conjunction with other instruments. After considerable thought and some experimenting it was decided that if a subject responded to two of the three forms of the CSQ on any one of the four occasions, his score on the third, or missed, form could be validly estimated. What was required was the demonstration of the equivalence of the responses of subjects who took all three forms with the responses of subjects who took only two of the three forms. So scores for each of the factors of the CSQ were computed for Form 1, 2, and 3 separately, and these results are shown in Table 8 which provides the means and standard deviations of these separate scores, and their associated t values, for subjects who took all three forms, and for subjects who took combinations of only two of the forms, in the Spring, 1966.

Table 7

Composite of Items Representing the Four Most
Significant Factors Found in Images Analyses of the CSQ

Form and Item No.	Items

Factor A: **School Anxiety**

1-5* Do you worry when the teacher says that she is going to ask you questions to find out how much you know?

1-8* Do you sometimes dream at night that you did poorly on a test you had in school that day?

1-10* Do you worry a lot while you are taking a test?

1-12 Is it hard for you to do as well as the teacher expects you to do in class?

1-16* Do you sometimes dream at night that the teacher is angry because you do not know your lessons?

1-20 Do you often have the fear that other children might think you dumb?

1-27 Do you usually feel nervous when speaking to the principal?

1-30 Are you sometimes afraid of expressing yourself in class because you think you might make a foolish mistake?

1-38 Are you often worried that the teacher will scold or punish you?

1-40 When it is your turn to get up and recite in class, do you feel your heart pounding hard?

1-42* When you are at home and you are thinking about your arithmetic lesson for the next day, do you become afraid that you will get the answers wrong when the teacher calls upon you?

1-56* Do you worry about being promoted, that is, passing from the ---- grade to the ---- grade at the end of the year?

1-62* Do you worry a lot before you take a test?

1-63* Do you think you worry more about school than other children?

1-65* After you have taken a test do you worry about how well you did on the test?

1-66* If you did very poorly when the teacher called on you, would you feel like crying even though you would try not to cry?

11-3 Do you ever worry about knowing your lessons?

11-5* When the teacher asks you to get up in front of the class and read aloud, are you afraid that you are going to make some bad mistake?

11-6 Do your knees shake when you are asked to recite in class?

11-11 Do you sometimes have a fear of fainting in class?

Form and Item No.	Items
11-12*	When you are home and you are thinking about your reading lesson for the next day, do you worry that you will do poorly on the lesson?
11-14	Do you sometimes shake all over when you are asked to recite in class?
11-16	When the teacher fails to notice and comment on your work does it make you unhappy?
11-17*	When you are in bed at night, do you sometimes worry about how you are going to do in class the next day?
11-20	Does your teacher sometimes give you a lower grade than you think you deserve?
11-26	Do you always feel uncomfortable when you do not know what is expected of you in class?
11-28*	Do you sometimes dream at night that you are in school and cannot answer the teacher's question?
11-33	Does your voice sometimes shake when you are asked to recite in class?
11-35	Is it hard for you to tell someone you're scared?
11-38	Do you have a hard time keeping up with the other students in class?
11-45	If anything happens which tends to make you look foolish, do you tend to think about it for a long time afterwards?
11-46	Do you worry that you might forget your lines when you recite a poem in front of the class?
11-47	Do some of your friends think you are a sissy because you make good grades?
11-50	Do you dread choosing up sides to play games because you are usually one of the last ones chosen?
11-52	Do you ever worry about something bad happening to someone you know?
11-53*	When you are taking a hard test, do you forget some things you knew very well before you started taking the test?
11-54*	Do you wish a lot of times that you didn't worry so much about a test?
11-56*	When you are taking a test, does the hand you write with shake a little?
11-58	Have you ever been afraid of getting hurt?

Table 7 cont.

Form and Item No.	Items
11-63	Do the students that do poorly on the tests that the teacher gives lose the approval of the teacher?
111-2	If you think someone doesn't like you, does it bother you?
111-6	When someone is slow, does it bother you; or does it not bother you?
111-11	When you've done something wrong, is it hard for you to say you're sorry?
111-13	Do you sometimes worry about being different from many of the children in your class?
111-14	Do you usually feel awkward meeting new students who have just come into the class?
111-16*	When the teacher says that she is going to find out how much you have learned, does your heart begin to beat faster?
111-17	Are you sometimes afraid of getting into arguments?
111-19	Do some children in the class say things to hurt your feelings?
111-22	Does it seem like most of the children in the class never pay any attention to you?
111-23*	When the teacher says that she is going to give the class a test, do you get a nervous or funny feeling?
111-25	Do you dislike reciting in class because you might make a mistake and others would laugh at you?
111-26	Do you ever worry about what is going to happen?
111-29	When one of your friends won't play with you, do you feel badly?
111-32	Is it hard for you to have a good report card as your parents expect you to have?
111-33	Do some children in the class seem to get angry when you do better than they do?
111-34	Are you afraid that other children will laugh at you when you show your work to them?
111-35	Are you frequently afraid you may make a fool of yourself?
111-36*	Are you afraid of school tests?
111-39	When the teacher says that she is going to give the class a test, do you become afraid that you will do poorly?
111-40	Do you worry a lot about your school work because you are afraid your parents might find out you are not doing as well as they expect you to do?

Table 7 cont.

Form and Item No.	Items

111-41   Do you ever worry about what people think of you?

111-42   Do you feel nervous if the whole class watches you when you are making something?

111-43*   Do you sometimes dream at night that other boys and girls in your class can do things that you cannot do?

111-44   Do your classmates sometimes make fun of the way you look and talk?

111-47   Do you feel nervous when others look at work you have done?

111-49*   When the teacher is teaching you about reading, do you feel that other children in the class understand her better than you?

111-50*   While you are on your way to school do you sometimes worry that the teacher may give the class a test?

111-52   Do you ever worry that you won't be able to do something that you want to do?

111-53   Are you often worried that you might be sick in class?

111-55*   While you are taking a test do you usually think you are doing poorly?

111-58*   When the teacher asks you to write on the blackboard in front of the class, does the hand you write with sometimes shake a little?

111-61   Do you feel cross and grouchy sometimes?

111-62   In your school work, do you often forget; or do you feel sure you can remember things?

111-65   When you recite in class do you often wonder what others are thinking of you?

Factor B: Sex-linked Interests, Attitudes

1-36   Do you sometimes feel like hurting someone?

1-50   Are you as good in games like kickball as other students in class?

11-42   Which story would you like better, how Indians make clothing; or one about killing Indians? (Rs)

1-44   Would you rather read a book; or play ball? (Rs)

11-49   Would you rather collect stamps; or play football? (Rs)

11-55   Would you rather be a tapdancer; or a soldier? (Rs)

111-3   Would you rather listen to music; or ride a bicycle? (Rs)

Table 7 cont.

Form and Item No.	Items

111-8   In a play would you rather be a speed pilot; or a famous writer?

111-18   Would you rather draw pictures of birds; or hunt birds? (Rs)

111-20   If two children were fighting on the playground, would you go tell the teacher; or let them fight? (Rs)

111-57   Would you rather work with books in a library; or be a General in the Army? (Rs)

Factor C: Self Disparagement, in Relation to Peers

1-11   Can others do things better; or can you do most things well?

1-23   Are most children sometimes unkind; or are most children kind to you? (Rs)

1-47   Do people think you make many mistakes; or few mistakes?

1-51   Do your classmates make fun of you for the way you play in school games?

1-55   Do the other children in the class like you? (Rs)

1-59   Since you started school, have you ever felt like crying?

11-36   Does the teacher in class seem to like you?

11-41   When the children are upset and cry because they do not have their lessons do you feel sorry for them?

11-57   If you are in a hurry to finish your lesson and are not sure how to spell a word, do you usually stop and look it up in the dictionary?

11-60   Do you generally do what your friends like to do even though sometimes you want to do something else?

Factor D: Defensiveness

1-2   When you see other children having trouble doing an assignment do you wish you could go over and help them? (Ap)

1-4   Do you always think that mother's way of doing things is better; or do you sometimes think your own way is better? (Ap)

1-15   Do you ever worry? (Av)

1-17   Do you always raise your hand in class when you know the answer? (Ap)

1-24   Are you sorry for some of the things you have done? (Av)

1-25   Do you like to play in the snow?

1-29   Are you ever unhappy? (Av)

Table 7 cont.

Form and Item No.	Items
1-39	Do you pay close attention to what the teacher says when she explains something? (Ap)
1-44	When you are working in a group, do you usually volunteer for more work than anyone else in the group? (Ap)
1-45	When you make something in class, do you try to make sure that all the other children see it? (Av)
1-49	Do you wish that your teacher paid more attention to you? (Av)
1-53	Has anyone ever been able to scare you? (Av)
1-57	Do you often wish the teacher would slow down until you understand what she is saying better? (Av)
1-58	Does your mother bring cookies, help at class parties, and do other things like the mothers of the other children in class? (Ap)
11-2	When someone scolds you, does it make you feel badly? (Av)
11-4	Do you try to be one of the best students in your class? (Ap)
11-13	When you hurt somebody's feelings, does it make you feel badly?
11-19	When the teacher gives an assignment do you get busy on it right away? (Av)
11-22	When someone misses school because of illness do you try to be the first one to help him catch up? (Ap)
11-25	Do you hate to miss school because you don't like to get behind in your work? (Av)
11-29	Do you work hardest when you know that what you do will be compared with what other students in class do? (Av)
11-30	Do you like to go on trips with your mother and father? (Ap)
11-43	Do you get angry when you are working on something important in class and someone interrupts you? (Av)
11-48	Do you lose your temper sometimes? (Av)
111-7	To get others to like you do you try to find nice things to say about them? (Av)
111-9	Do you get as much approval from the teacher in class as you would like to get? (Ap)
111-24	Before turning in school work do you always make a last minute check for mistakes? (Ap)
111-27	Do you expect to do better school work in the future than you have in the past? (Av)

Table 7 cont.

Form and Item No.	Items
111-28	Do you get along well with the teacher in class? (Ap)
111-30	Do you feel it is important to think about how you can get people to like you? (Av)
111-31	Would you like to represent your class in a contest between rooms even if it meant extra work for you? (Ap)
111-37	When you have done well on something, do you feel pleased with yourself even when no one else in class notices what you have done? (Ap)
111-38	If a child is new in class and is having trouble making friends do you make a special effort to be friendly to him? (Av)
111-46	Do you work with others every chance you get in class? (Ap)
111-51	Do you do extra work for the teacher whenever you have the opportunity? (Ap)
111-59	Do you get as much approval from other children in class as you would like to get? (Ap)
111-63	Do you feel terrible if you break something which belongs to somebody else? (Av)

Note: Items of the school anxiety factor marked with an asterisk (*) are in the TASC, and items marked with an Rs were scored in the reverse direction. (In all other instances, the yes or first alternative was assigned a value of one.) Also, items of the defensiveness factor marked by an Ap were included in the approach style of defensiveness score, and items marked by an Av were included in the avoidance style of defensiveness. (Av items are reversed in direction of scoring, a "no" being scored as one.)

Inspection of Table 8 indicates that these separate factor scores are in fact comparable in most instances, so that it is possible to predict a subject's total score on a factor from his responses to two of the three forms. Although these findings apply only to the Spring, 1966 data, it is assumed that similar results would have been obtained on the other three occasions.

Table 8.

Means, Standard Deviations and associated t tests for subjects
who took all three forms in comparison with subjects
who took only two forms of the CSQ in the Spring, 1966

Form and Factor	Ss taking all three forms (N=507)		Ss taking Forms 1 and 2 only (N=25)			Ss taking Forms 1 and 3 only (N=33)			Ss taking Forms 2 and 3 only (N=36)		
	$\overline{X}$	s	$\overline{X}$	s	t	$\overline{X}$	s	t	$\overline{X}$	s	t
Form 1											
Factor A	5.77	4.24	5.12	4.03	.79	8.12	4.82	2.72			
B	1.36	.69	1.32	.69	.26	1.61	.61	2.26			
C	1.45	1.36	1.12	1.24	1.30	1.88	1.62	1.49			
D	9.23	2.26	9.44	1.73	.58	9.52	2.25	.71			
Form 2											
Factor A	7.21	5.56	6.96	5.49	.22				8.06	5.29	.92
B	2.76	1.33	2.84	1.34	.30				2.75	1.36	.03
C	1.13	.87	1.40	.82	1.64				1.28	.97	.91
D	7.01	2.14	7.32	1.75	.86				6.91	2.18	.24
Form 3											
Factor A	10.81	8.20				15.79	8.35	3.30	11.83	7.82	.76
B	3.02	1.58				3.12	1.62	.34	3.03	1.61	.01
C	(No items from this form)										
D	9.15	3.02				9.88	2.71	1.49	9.69	2.52	1.24

Sociometric Nominations

Another source of data was children's nominations of other children in the classroom group for a series of five situations. To do this the usual sociometric approach was employed except that both positive and negative choices were obtained, and choices were restricted to the same sex, i.e.,

boys chose only boys, and girls only girls. The reason for this latter decision is that status with one's own sex, especially at this age level, is likely to be more discriminating than status with the opposite sex. For example, a boy who is nominated positively by six boys probably enjoys more status than a boy with six positive nominations split equally among boys and girls. With regard to obtaining both positive and negative nominations, there is evidence that a positive nomination is not simply opposite in meaning from a negative nomination (e.g. Phillips and DeVault, 1955). For example, poor performance in school may contribute to peer rejection, even though good performance does not contribute to peer acceptance. Obviously, this line of reasoning also rules out the practice of combining positive and negative nominations into a single score. Empirically, however, positive and negative nomination scores may prove to be so highly intercorrelated as to negate most of the preceding logic, but that is a decision which will be dealt with when the relevant data are examined.

The five situations for which positive and negative nominations were asked for are shown in Appendix A. In asking for negative nominations care was taken not to suggest that the children ought to make such nominations. This indirect, oblique approach is illustrated by the following item: "Suppose that the teacher selected someone to work with you, if there is someone you hope she won't select please write his name in the blank." It should be noted that the children were permitted to nominate only one child for each situation, although the same child could be positively, or negatively, nominated for more than one situation, but he could not be nominated for both a positive and negative situation. To facilitate accurate identification of children, first names (and last initials when necessary) were written on the blackboard with boys in one column and girls in the other, and each child's name was pronounced out loud. If a child knew who he wanted to nominate but couldn't find his name on the blackboard he was quietly helped. In a few instances the assistance of the teacher was necessary later in order to decipher nominations because of illegible handwriting, poor spelling, and the use of nicknames.

In deriving a score, the first procedure involved totaling the number of positive nominations, and the number of negative nominations, received from all children (of the same sex). Then the number of positive nominations, and the number of negative nominations received from _different_ children (of the same sex) was tabulated. The difference between these two approaches is that if a child received five positive nominations from the same child, i.e., he was nominated by this child for every positive situation, in the first method of scoring he gets five points, and in the second approach he gets only one point, toward his peer acceptance score. Also, since only same sex choices were made, and class size and the ratio of boys to girls varied, scores from class to class and from boys to girls were made more comparable by dividing the number of nominations by the number of boys (or girls) in class less one. Formulated as a series of equations we have the following: $PA = {}^{PC_T}/N-1$, $PA = {}^{PC_D}/N-1$, $PR = {}^{NC_T}/N-1$, and $PR = {}^{NC_D}/N-1$; where PA is peer acceptance, PR is peer rejection, PC_T and NC_T are the total number of positive, and negative, choices received, respectively, PC_D and NC_D are the number of positive, and negative, choices received, respectively, from _different_ children, and N is the number of boys (or girls) in the classroom group.

These data were gathered near the beginning and end of fourth and fifth grades (actually about five weeks after school started and before school ended), and the same procedures were used each time. In addition, preliminary data gathered in the Fall, 1964 were utilized in deciding whether separate peer acceptance and peer rejection scores were justified, and whether there was a high degree of similarity between scores based on total number of choices received and scores based on the number of choices received from different peers. The results are given in Table 9.

Table 9.

Fall, 1964 Correlations in Different Subgroups
Between Different Sociometric Scores

Subgroups	N	r_{12}	r_{34}	r_{13}	r_{24}
Male	65	92	85	-08	-08
Female	62	89	94	-37	-29
White	50	93	94	-31	-24
Negro	37	92	93	-18	-08
Mex.-Amer.	40	84	86	-36	-24
TOTAL	127	90	90	-25	-20

Note: 1=Total Number of Positive Choices Received/$_{N-1}$;
2=Total Number of Different Positive Choices Received/$_{N-1}$;
3=Total Number of Negative Choices Received/$_{N-1}$;
4=Total Number of Different Negative Choices Received/$_{N-1}$.
Also, decimal points have been omitted.

From the foregoing data (in Table 9) the answers to the two questions which were

raised earlier are obvious. In the first place the total number of positive and

negative nominations received is so highly correlated with the total number of differen

positive and negative choices received, respectively, that there is no point in keeping

both scores, and in subsequent analyses it was decided that sociometric scores based

on the number of nominations received from different children should be used. With

regard to the question concerning the separation of positive and negative choices, it

is quite clear that, although they tend to be negatively related, the correlations

are so low as to necessitate keeping both types of scores. With respect to peer

status, therefore, there are two variables to be studied further: one is peer

acceptance and the other is peer rejection.

Standardized Tests

The California Test of Mental Maturity and the Metropolitan Achievement Test were

administered to children on all four occasions, and they provided the major source of

information on intellectual and academic functioning. As noted elsewhere, the MAT was given by teachers, with test materials, minimal supervision, and scoring performed by t : project staff; and the CTMM was given by the project staff with assistance in the Fall, 1964 from psychometric teams of the Austin public schools. The CTMM was also scored through project facilities. The Elementary level of the MAT was used in the Fall, 1964. (In one school a few students received the Primary II, the scores being converted with data provided by the test publisher.) In the Spring, 1965, the Intermediate level of the MAT, with machine scorable answer sheets, was used in four project schools, and the Elementary level test was continued in the four schools with high concentrations of Negro and Mexican-American children. However, in fifth grade all schools used the Intermediate level of the MAT; and in using the MAT, forms were alternated from one occasion to the next so that the same form was not repeated on successive occasions. In one instance the Iowa Test of Basic Skills was used in a school, and it was necessary to eliminate those scores from analyses. The arithmetic, reading, and language subtests were utilized, rather than the whole battery, and all MAT raw scores were converted into grade equivalents. For the CTMM, separate verbal (language) and nonverbal (nonlanguage) IQ's, as well as a total IQ, were obtained with the Short Form, 1963 Edition of the test; and the same form was used throughout, being, therefore, repeated four times during the two years. Repeating the same form of the CTMM served an important purpose, which was to determine the relationship between school anxiety and learning as represented in improvement in performance on the CTMM. In the first chapter it was pointed out that, although anxiety has been consistently found to be negatively related to intelligence test performance, the role of anxiety in change in performance on intelligence tests has been only obliquely approached (see, e.g., Haggard, 1954 study of test-taking attitudes and administrator rapport).

Teacher Grades

The grades reported by teachers in both subject matter and school conduct were .ized, even though there is considerable evidence from a wide variety of sources that grades do not have the reliability and validity that researchers desire in their instruments. In addition, teacher grades are to some extent a measure of the teacher's

value system, and it is difficult to ascertain the degree to which grades of different teachers are comparable. Nevertheless, grades have been shown to be as good a predic-tor, when grades of a number of different teachers are "averaged," as anything else of future school success. Also, the problem is mitigated by another circumstance, which is that the project is interested in grades both as measures of achievement and behav-ior in school, and as indicators of reward and failure influences. In this latter case, there is little reason to believe that an "invalid" grade of "F" is less threat-ening to the student than a "valid" grade of "F." Similarly, an "A" would probably have about the same rewarding effect whether or not it was "validly" given.

Another matter which enters the picture in regard to interpreting teacher grades is the "grading on the basis of ability" philosophy which appears to be official policy in the Austin Public Schools, at least through third grade, and frequently in Grades 4-6. According to the rationale of this method of grading, intellectual ability is "partialled out" of the grades given by teachers; and since achievement tests like the MAT are highly correlated with intelligence tests this factor also is largely "par-tialled out." The net effect of this is that teacher grades would not be highly corre-lated with intelligence tests or with standardized achievement tests. Based on data gathered in the Fall, 1964, the actual relationships are as shown in Table 10, where teacher grades obtained in Grades 1-3 are correlated with intelligence and achievement tests given in Grade 2 and the beginning of Grade 4.

Table 10.

Correlations between Teacher Grades and
Intelligence and Achievement Test Scores in Various Subgroups

Subgroup	N	$r_{IQ, GPA}$[1]	$r_{Ach, GPA}$[1]
Male	65	54	65
Female	62	70	62
White	50	55	61
Mex.-Amer.	40	44	56
Negro	37	52	57
TOTAL	127	62	61

Note: Decimal points have been omitted.

[1] These coefficients are averages of several correlation
coefficients.

The evidence of Table 10 is clear: intellectual ability and achievement on
standardized tests are highly related to teacher grades. It would appear, therefore,
that teacher grades should not be viewed within the framework of the grading-on-the-
basis-of-ability philosophy. On further analysis, however, these results would be
consistent with grading on the basis of ability if one is willing to assume that the
effectiveness of schools and teachers in reaching children is proportional to the children's
intelligence, i.e., the more intelligent the child the more effective schools and teachers
are in teaching the child. No further effort will be made at this point to untangle
and explore this possibility.

In addition, information on the previous school history of all children in the
project was sought in the cumulative records in the schools. From this record a number
of different kinds of information was obtained, including teacher grades in preceding
school years (Grades 1-3), school attendance, intelligence and achievement test data,

Teacher Nomination Forms

The use of teacher nominations of children for various traits was a major source
of data in the project, and as pointed out earlier in the discussion of teacher grades,
such nominations are probably a measure of the teacher's value system regarding the
classroom behavior of children, as well as being a measure of children's actual behavior
in the classroom. It also is difficult to ascertain whether different teacher's
nominations are comparable. But this is not just the problem of knowing whether children
in different classrooms would receive comparable nominations if they had the opportunity
to interact with two or more of the teachers. There is also the possibility that
different classroom situations bring out different behaviors in different children.
In spite of these limitations, teacher's observations and judgments of the classroom
behavior of children frequently have been significantly related to anxiety (Ruebush,
1963).

One of the instruments developed by the project staff was designed to measure
the desire and effort to do well in school academically and socially, and it is
called a measure of school motivation. The items designed to measure the desire and
effort to do well in school academically were suggested by a study by Sarason et al.,
(1958) and those intended to measure desire and effort to do well in school socially
were developed by the project staff in a form parallel to those involving academic activities.
The content of the instrument is included in Appendix A.

The procedures by which children were assigned to one of five categories is clearly
shown in Appendix A, but it should be noted here that the instrument was designed to
produce very little discrimination between classes. In other words the steps which were
taken produces a distribution of school motivation scores in each class which does not
differ appreciably from the distributions of scores in other classes. In devising the
instrument an attempt was made to minimize the tendencies of some teachers to strongly
skew their distributions, and at the same time to allow room for legitimate differences
between classes. (For a clearer picture of what has been done it is suggested that the
reader refer to the instrument in Appendix A.)

Teacher nominations also were secured for a wide variety of different types of classroom behavior. One of the major sources of these classroom "trait" characteristics is the series of studies of problem behavior in school initiated by Wickman (Wickman, 1928; Stouffer, 1955). Forty of these trait characteristics were utilized, and they are included in Teacher nomination Forms 1 and 2 in Appendix A. A number of other trait characteristics are included in these two forms which were gleaned from a number of sources, especially the clinical literature . In addition, there are a series of sketches which provide detailed descriptions of the classroom behavior of children which were derived from psychoanalytically-oriented views of the learning and school behavior difficulties of children (Blanchard, 1946; Klein, 1949; Pearson, 1952). This teacher nomination form also is included in Appendix A.

These teacher nomination data were handled on two levels in relation to a definition of what was being measured by this multitude of characteristics. Since teachers were asked to nominate the one or two children whom they associated with each of the characteristics.or school behavior traits described, and were asked to work rapidly and freely, only children evidencing a marked degree of a characteristic or trait received nominations (if it can be assumed that success was obtained in getting the information desired from teachers). For this reason, in the empirical determination of which traits went together or formed constellations, nominations received by children on all four occasions were added together. This had the effect of involving more children, and of making the image and factor analyses which were performed more intellectually palatable and defensible. A G covariance matrix was first computed, and this was followed by a principal-components and a varimax rotation analysis. These analyses, however, were limited to the items (i.e., the traits or characteristics) included in teacher nominations Forms 1 and 2, a total of 72 items. All but 10 of the 72 items had loadings of .40 or higher and were assigned to the factor which they best represented. Five factors were obtained, and these factors are identified, and their accompanying items are listed, in Table 11. It should be noted, of course, that the sample on which this image analysis

was carried out consisted of subjects who were present on all four occasions and
thus had the opportunity of being nominated by the teacher on each occasion.
Also, scores were derived for each of these factorially based concepts (or dimen-
sions) by simply adding the number of nominations received on each set of items,
and these scores and the concepts which they represent were used throughout the
project analyses.

As previously noted, information obtained with the sketches was not incorporated
in the preceding analyses. Instead, the sketches were originally developed to
measure three concepts, and these concepts and the items designed to measure them
were as follows: feelings of inferiority (items 2, 4, 6, 9, 11, 12, 13, 21);
neurotic symptoms associated primarily with academic situations (items 1, 3, 8,
10, 15, 16, 19), and neurotic symptoms associated primarily with social situations
(items 5, 7, 14, 17, 18, 20, 22, 23). Scores for these items were arrived at by
weighting the three item description levels three, two, and one, respectively,
and summing across items.

Table 11.

Items Representing the Five Factors Obtained in
an Image Analysis of Teacher Nomination Forms 1 and 2 using
Data from all Four Occasions

Item No.	Item	Item. No.	Item

Factor A: Aggression, with independence strivings (AI)

Item No.	Item	Item. No.	Item
3	Cruelty, Bullying	44	Fights with little provocation
6	Disobedience	47	Provokes hostility from peers and teachers
8	Domineering		
11	Impertinence, Defiance	56	Engages in noisy behavior
12	Impudence, Rudeness	57	Engages in frequent vocal defiance
21	Quarrelsomeness		
22	Resentfulness	62	Stubbornly resists the will and authority of the teacher
28	Stubbornness		
30	Sullenness	68	Constantly challenges and opposes the leadership of the teacher
34	Temper tantrums		

Item No.	Item	Item No.	Item

Factor B: **Active withdrawal (AW)**

Item No.	Item	Item No.	Item
1	Carelessness in work	49	Acts as if the teacher does not exist, is sometimes oblivious to what happens in class
4	Daydreaming		
13	Inattention		
16	Lack of interest in work	51	Has frequent stomach upsets, headaches, and other physical disorders
17	Laziness		
27	Stealing		
32	Tardiness	53	Lies at slightest opportunity
38	Unreliableness	55	Dreads going to school
40	Untruthfulness	58	Makes excuses for failures, and justifies his behavior
43	Uses real or imagined inferiorities as an excuse for not really trying	63	Is accident prone
		72	Uses laziness as a means of attracting attention

Factor C: **Emotional disturbance, with depression (ED)**

Item No.	Item
9	Easily discouraged
10	Fearfulness
20	Physical coward
25	Sensitiveness
26	Shyness
37	Unhappy, depressed
39	Unsocial, withdrawing
64	Is overly seriously minded, unresponsive to fun provoking situations
70	Is sad and apathetic
71	Lacks spontaneity, answers questions in dull voiced monosyllables

Factor D: **Self enhancement, through derogation of others (SE)**

Item No.	Item
15	Inquisitiveness
19	Overcritical of others
33	Tattling
41	Clings to teacher and seeks to be near her and hold her hand
45	Exhibits righteousness, snobbishness
59	Seeks to attract attention, through success
67	Shows jealousy, hatred

Table 11 cont.

Item No.	Item	Item No.	Item

Factor E: Diffuse hyperactivity (DH)

Item No.	Item
7	Disorderliness in class
14	Interrupting
18	Nervousness
23	Restlessness
42	Habitually pulls his hair, picks at his nose, pulls his hair, bites his nails
52	Is a compulsive talker
54	Exhibits facial and body mannerisms, constant gulping and hissing
65	Attracts attention by being a nuisance
66	Exhibits constant movement of fingers or hands, persistent perspiring of parts of the body

Other Instruments Used

The Pupil Perceptions Test[1], a research instrument developed by Gotts (1965), which is essentially an application of Parsons' notions of instrumentality and expressiveness (see Johnson, 1963), and which contains 40 items which describe concrete instances of instrumental and expressive transactions between a child and an adult (see Appendix A), had a limited use in the project. The transactions described in this instrument are in the form of brief statements, some referring to "the child" and "the teacher," and others referring to "the child" and "the parent." For each item the child is asked to specify the sex of the adult and the child mentioned.

The rationale of the instrument is that children may be presented with a series of statements which permit them to demonstrate their sensitivity to existing sex-typed role norms in the culture. Since instrumental and expressive interactions are thought to be a primary source of the development of sex-typing (Johnson, 1963), children's perceptions of these interactions should reflect the extent to which they have been socialized to expect sex-typed behaviors.

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[1]This section is based on a paper presented at ،WPA in April, 1966 by Gotts (see Gotts and Phillips, 1966).

The PPT was administered only in the Fall, 1965 to five fifth grade classes in socio-culturally different sch ols. A discriminant analysis was used to combine the PPT items on which the boys' means differed significantly from the girls' means so as to yield a maximum separation of the sexes. (Cooley and Lohnes, 1962; Veldman, 1965). Masculinity-femininity scores were derived from this discrimination function for this limited sample and were related to school anxiety and other variables in the project.

The Children's Social Desirability Scale (Crandall, Crandall, and Katkovsky, 1965) was administered to a representative sample of five classes in the Spring, 1966. The scale has been developed and tried out with children in different racial and ethnic groups, and in the yes-no format has 47 items (see Appendix A). The purpose of giving this instrument was to provide additional data in the area of response styles.

Chapter 3

Major Findings of the Project

The procedures which will be followed in this chapter are, first, to identify

at a conceptual, analytical, or hypothetical level a problem for which data collected

in the project may have some relevance. Generally, what is involved at this point

is a recapitulation of ideas presented in Chapter 1, followed by a development of

det/'ls of the problem and the questions and hypotheses to be explored. Then there

is a discussion of the statistical analyses to be utilized with an elaboration of

any difficulties and qualifications which might need explaining. Finally, the actual

results will be presented, described and interpreted - leaving, for the most part,

more global considerations of the import of the results to the last chapter.

Reliability of the Tests

In longitudinal studies, and studies of change, one is faced with a special

problem which Bereiter (1963) recently referred to as the "unreliability - invalidity

dilemma." As he points out, it is well known that, other things being equal, as

the correlation between scores obtained on two different occasions increases, the

reliability of the difference score decreases. While at the same time, as the corre-

lation between tests decreases, it becomes increasingly difficult to maintain that

the tests are measuring the same thing. So, when one obtains a low correlation

between pretest and posttest, he is faced with the problem of deciding whether

conditions have changed so much for the posttest that the test is no longer measuring

the same thing, or whether the experiences which have intervened between tests have

not uniformly affected the scores of all subjects.

In dealing with the problem of reliability of the major variables, we have

approached it in two ways. Our first concern was with the degree of homogeneity

of the tests used, and for this criterion we relied in many instances on factorial

techniques. By developing measures which included items similar in factorial content,

it was hoped that a satisfactory degree of homogeneity would be achieved. Here we

obviously were concerned with internal consistency since we wanted all parts of a

test to measure the same thing.

At the same time, we were concerned with the stability of the tests identified as our major variables. That is, we were concerned about the change, or lack of change, in the rank orders of children over time; in particular, we were interested in these rank orders between Fall, 1964 (T_1) and Spring, 1965 (T_2), between Spring, 1965 (T_2) and Fall, 1965 (T_3), and between Fall, 1965 (T_3) and Spring, 1966 (T_4). In other words, we were concerned about stability across fourth grade, across the summer months, and across fifth grade. With a high test-retest correlation we would be assured that children changed very little in status within the sample studied on the variable measured. We could also argue that the test measured essentially the same thing on the two occasions. On the other hand, a low test-retest correlation might mean that children had changed in different directions on the test during the interval of time because they were differentially influenced by the intervening experiences. Or it may mean that what the test measured changed from one occasion to the next. To interpret what is happening in the situation where the test-retest correlation is low, one can make use of information about the means and standard deviations of the test on the two occasions. In addition, correlations with other tests given on the two occasions can be examined and com- pared, and factor analytic techniques can be applied   All of these approaches were utilized, at least to a limited degree, in analyzing the problem of reliability of the major t sts.   In Chapter 2 the details and results of factor analytic studies of many of our variables (in several instances, on both Fall, 1964 and Fall, 1965 data) were described, and these findings will not be repeated here. It is suffi- cient to say that items for 13 of our major variables were the result of factor analyses, 5 being based on factor analyses repeated on the two occasions.

Internal consistency of the tests.   There are several approaches to the computation of internal consistency reliability, and for this project the K-R formula 21 was applied to the data for each test, with the exception of the MAT and the CTMM, the only two commercially-produced, widely used and standardized tests utilized in the project. The reputation of these tests, their speed character, and the way scores were combined in our analyses, led to the decision not to compute

internal consistency values. In addition, the nature of the school motivation and sociometric tests precluded the application of KR21 techniques, although in this instance a specific indication of internal consistency might have been helpful. (However, test-retest reliabilities, with administrations separated by one week, were computed for school motivation in the Fall, 1964 and Spring, 1965, and values of .88 and .92 were obtained, indicating that the short term reliability of this instrument is satisfactory.)

While the results of the KR21 computations shown in Table 12 are not what they might be, in view of two circumstances to be mentioned they are considered to be generally adequate. One of these factors is the length of some of the tests, since the KR21 formula increases in size as the number of items increases (other factors being equal). The other is the point observed by Guilford (1956) which is that KR21 estimates are generally conservative. In addition, one further point should be made in relation to Table 12. Although there are several exceptions, there is a tendency for T_1 reliabilities to be lower, which suggests that the homogeneity of the items varied somewhat from the first occasion to the other three occasions.

Stability of the tests. As previously noted, coefficients of stability across the three time periods were desired; and for this purpose, simple Pearson product-moment correlations were computed between Fall, 1964 and Spring 1965; Spring, 1965 and Fall, 1965; and Fall, 1965 and Spring, 1966. These results are shown as r_{12}, r_{23}, and r_{34}, respectively, in Table 13 for the total sample.

Since a high test-retest coefficient indicates that children pretty much kept their same status within the sample, it would be accurate to note that, with respect to the MAT and the CTMM, the children didn't change much in their status. At the other extreme, several variables, including principally SD, FI, and NS, had very low test-retest reliabilities. And, if one adds the other tests which depend on the teacher's observations and judgments of children, i.e., NA, AI, AW, ED, SE, and DH, it is apparent that tests which depended on the teacher for information had lower test-retest reliabilities than other tests. In addition, there is a tendency for r_{23} to be far lower than r_{12} and r_{34}. Therefore, not only is it evident that children

Table 12.
KR21 Reliabilities for the Variables
At T_1, T_2, T_3, and T_4

Variable	Items	T_1	T_2	T_3	T_4
School Anxiety (SA)	74	96	95	96	96
Sex-linked Interests, Attitudes (S)	11	77	90	82	88
Self Disparagement in Relation to Peers (SD)	10	47	84	78	96
Avoidance Style of Defensiveness (D_{AV})	18	54	63	67	75
Approach Style of Defensiveness (D_{AP})	17	70	83	86	75
Feelings of Inferiority (FI)	8	64	82	81	55
Neurotic Symptoms, Academic (NA)	8	65	80	79	78
Neurotic Symptoms, Social (NS)	7	67	NA	89	90
Aggression with Independence Strivings (AI)	16	86	85	84	84
Self Enhancement through Derogation of Others (SE)	7	40	50	47	31
Diffuse Hyperactivity (DH)	9	64	NA	58	56
Proneness toward Neuroticism (PTN)	25	51	NA	64	50
Active Withdrawal (AW)	17	65	64	74	74
Emotional Disturbance with Depression (ED)	10	61	66	60	60

Note: Decimal points have been omitted.

Table 13.

Stability of Variables across Occasions
For the Total Sample

Variable	r_{12}	r_{23}	r_{34}
School Anxiety (SA)	63	74	68
School Motivation (SM)	66	55	54
Sex-linked Interests, Attitudes (S)	65	63	60
Self Disparagement in Relation to Peers (SD)	23	22	16
Feelings of Inferiority (FI)	28	10	47
Neurotic Symptoms, Academic (NA)	40	25	42
Neurotic Symptoms, Social (NS)	30	10	NA
Aggression with Independence Strivings (AI)	47	25	49
Active Withdrawal (AW)	34	26	44
Emotional Disturbance with Depression (ED)	45	43	44
Self Enhancement through Derogation of Others (SE)	38	30	47
Diffuse Hyperactivity (DH)	41	36	NA
Peer Acceptance (PA)	47	49	59
Peer Rejection (PR)	49	52	56
MAT Achievement (NV)	82	74	80
MAT Achievement (V)	88	71	87
CTMM IQ (NV)	81	82	80
CTMM IQ (V)	85	86	88
Proneness toward Neurotism (PTN)	39	55	56
Grade Point Average (GPA)	83	69	82
Approach Style of Defensiveness (D_{AP})	46	44	41
Avoidance Style of Defensiveness (D_{AV})	28	43	54

Note: Decimal points have been omitted.

changed status on these variables during the school year, but they made an even

greater change in status within the sample across the summer months. Generally,

therefore, on these tests the children either changed in different directions, or

they changed in the same direction at different rates; or these tests did not measure

the same functions before and after these intervals of time. Of course, one could

assume that these variables are intimately linked to in-school conditions, and that

the teacher and classroom group are the prime determiners of school experiences

and behavior. Thus, when children change from one teacher and classroom group to

another, there is a change in their classroom experience and behavior. But one

would have to assume, also, that this change did not affect all children uniformly.

We are, therefore, forced to an interaction point of view which holds that changes

in school conditions interact with children's previous school experience and their

personal characteristics. This, in itself, is not farfetched, since it is increas-

ingly being demonstrated that classroom behavior is the result of complex interactions

(see, e.g., Phillips, 1964).

However, a more parsimonious view of these results at this time is that they

are the consequence of differences in teachers' sensitivity to and accurate obser-

vation of children's behavior; and, it might be added, their willingness to cooperate

to the fullest extent.

Relationship Between Test
Anxiety and School Anxiety

Conceptually, in Chapter 1, and empirically, in Chapter 2, test anxiety was

viewed as a major component of school anxiety, since test and test-like situations

should be one of the most important sources of school anxiety, and 26 of the 30

items of the TASC appear in the school anxiety factor. One further step was taken,

however, in establishing the closeness of this relationship; and this was the cor-

relation of test anxiety (just based on 26 items) with school anxiety.

The results are shown in Table 14, and the most important finding revealed in

the table is that test anxiety and school anxiety are correlated .82, which is not

surprising in view of what has already been pointed out, and the spurious element

Table 14.

Correlates of School Anxiety and Test Anxiety
In the Total Sample, Fall, 1964 (N=434)

Variable	r_{SA}	r_{TA}
School Motivation (SM)	-10*	-07
School Anxiety (SA)	1.00	82*
Sex-linked Interests, Attitudes (S)	-20*	-17*
Self Disparagement in Relation to Peers (SD)	18*	11*
Feelings of Inferiority (FI)	06	04
Neurotic Symptoms, Academic (NA)	09	04
Neurotic Symptoms, Social (NS)	03	-06
Aggression with Independence Strivings (AI)	-03	-06
Active Withdrawal (AW)	03	-03
Emotional Disturbance with Depression (ED)	08	03
Self Enhancement through Derogation of Others (SE)	07	03
Diffuse Hyperactivity (DH)	-06	-11
Peer Acceptance (PA)	02	07
Peer Rejection (PR)	18*	08
MAT Non-verbal Achievement	-42*	-39*
MAT Verbal Achievement	-36*	-38*
CTMM Non-verbal IQ	-29*	-27*
CTMM Verbal IQ	-33*	-33*
Proneness toward Neuroticism (PTN)	56*	45*
Grade Point Average (GPA)	-33*	-30*

Note: Decimal points have been omitted.
*Probability of r being zero less than .05, based on Fisher's transformation.

in part-whole correlations which inflates their value. Using a formula given by
Guilford (1956) for the correlation of a part (test anxiety) with a remainder
(school anxiety - test anxiety), a correlation coefficient of .61 was obtained.
This indicates that test anxiety is substantially correlated with the remaining
elements of school anxiety, i.e., school anxiety associated with situations other
than test and test-like situations. In looking further at Table 14 it is apparent
that the overlap suggested by these correlation coefficients is supported by the
similarity of the correlations obtained with the other variables.

In a further exploration of the nature of school anxiety, an image analysis
was carried out on the Spring, 1966 school anxiety items, using the same procedures
discussed earlier in Chapter 2. And, since the grouping of these items was based
on an earlier series of image analyses, it is not surprising that the first component
in the principal axis analysis had 82 per cent of the common variance extracted
associated with it; and only 7 of the 74 items had loadings on this factor of less
than .40. When the form factors with eigenvalues of 1.00 or higher were rotated,
four factors were obtained accounting for about equal percentages of the variance.
The school anxiety items are listed in Table 15, and the test anxiety items are
marked with an asterisk. Also, factor loadings greater than .30 are listed at the
end of each item for each of the four factors. In general, the results show that
test anxiety items most frequently appear in Factor 2, although they also appear
in the other three factors. There is also a tendency for Factor 1 items to come
from Form 3, but this appears to be due primarily to a concentration of items with
a social orientation in this form. No further analyses using scores derived for
these components of school anxiety were attempted in this project, but two obser-
vations should be made: first, the factors obtained here appear to be similar to
those obtained by Dunn (1964, 1965) in a series of factor analyses of the TASC;
and second, it appears that these factors are more completely and adequately repre-
sented by items of the school anxiety scale than by the items of the TASC alone.

And finally, it should be noted that an item analysis on Fall, 1964 responses
to all the items in the CSQ, and the proportions responding in one way among

Table 15.

Factor loadings obtained for School Anxiety Items
For the Total Sample in the Spring, 1966

Form and Item No.	Item and factor loadings
1-5*	Do you worry when the teacher says that she is going to ask you questions to find out how much you know? 2-50
1-8*	Do you sometimes dream at night that you did poorly on a test you had in school that day? 2-49
1-10*	Do you worry a lot while you are taking a test? 2-55
1-12	Is it hard for you to do as well as the teacher expects you to do in class? 3-39
1-16*	Do you sometimes dream at night that the teacher is angry because you do not know your lessons? 4-38
1-20	Do you often have the fear that other children might think you dumb? 1-31; 3-36
1-27	Do you usually feel nervous when speaking to the principal?
1-30	Are you sometimes afraid of expressing yourself in class because you think you might make a foolish mistake? 2-31; 3-49; 4-30
1-38	Are you often worried that the teacher will scold or punish you? 2-37; 3-31
1-40	When it is your turn to get up and recite in class, do you feel your heart pounding hard? 3-34
1-42*	When you are at home and you are thinking about your arithmetic lesson for the next day, do you become afraid that you will get the answers wrong when the teacher calls upon you? 2-39; 3-42; 4-33
1-56*	Do you worry about being promoted, that is, passing from the ---- grade to the ---- grade at the end of the year? 2-51
1-62*	Do you worry a lot before you take a test? 2-54
1-63*	Do you think you worry more about school than other children? 2-38; 3-35

Table 15.
(Continued)

Form and Item No.	Item and factor loadings
1-65*	After you have taken a test do you worry about how well you did on the test? 2-56
1-66*	If you did very poorly when the teacher called on you, would you feel like crying even though you would not try not to cry? 2-33; 4-32
11-3	Do you ever worry about knowing your lessons? 2-50
11-5*	When the teacher asks you to get up in front of the class and read aloud, are you afraid that you are going to make some bad mistake? 2-39; 3-32; 4-34
11-6	Do your knees shake when you are asked to recite in class? 4-55
11-11	Do you sometimes have a fear of fainting in class? 4-39
11-12*	When you are home and you are thinking about your reading lesson for the next day, do you worry that you will do poorly on the lesson? 2-44; 4-38
11-14	Do you sometimes shake all over when you are asked to recite in class? 4-61
11-16	When the teacher fails to notice and comment c : your work does it make you unhappy? 1-35
11-17*	When you are in bed at night, do you sometimes worry about how you are going to do in class the next day? 2-39; 4-45
11-20	Does your teacher sometimes give you a lower grade than you think you deserve?
11-26	Do you always feel uncomfortable when you do not know what is expected of you in class? 1-30; 2-41; 4-39
11-28*	Do you sometimes dream at night that you are in school and cannot answer the teacher's questions? 4-53
11-33	Does your voice sometimes shake when you are asked to recite in class? 2-35; 4-46
11-35	Is it hard for you to tell someone you're scared? 1-31
11-38	Do you have a hard time keeping up with the other students in class? 3-53

Table 15.
(Continued)

Form and Item No.	Item and factor loadings
11-45	If anything happens which tends to make you look foolish, do you tend to think about it for a long time afterwards? 1-31
11-46	Do you worry that you might forget your lines when you recite a poem in front of the class? 1-33; 2-49
11-47	Do some of your friends think you are a sissy because you make good grades?
11-50	Do you dread choosing up sides to play games because you are usually one of the last ones chosen? 3-34
11-52	Do you ever worry about something bad happening to someone you know? 2-43
11-53*	When you are taking a hard test, do you forget some things you knew very well before you started taking the test? 2-42; 3-33
11-54*	Do you wish a lot of times that you didn't worry so much about a test? 2-54
11-56*	When you are taking a test, does the hand you write with shake a little? 2-36; 4-40
11-58	Have you ever been afraid of getting hurt? 1-31
11-63	Do the students that do poorly on the tests that the teacher gives lose the approval of the teacher?
111-2	If you think someone doesn't like you, does it bother you? 1-34
111-6	When someone is slow, does it bother you; or does it not bother you?
111-11	When you've done something wrong, is it hard for you to say you're sorry? 1-43
111-13	Do you sometimes worry about being different from many of the children in your class? 1-49; 4-33
111-14	Do you usually feel awkward meeting new students who have just come into the class? 1-36; 4-34
111-16*	When the teacher says that she is going to find out how much you have learned, does your heart begin to beat faster? 1-39; 4-48

Table 15.
(Continued)

Form and Item No.	Item and factor loadings
111-17	Are you sometimes afraid of getting into arguments? 1-45
111-19	Do some children in the class say things to hurt your feelings? 1-44
111-22	Does it seem like most of the children in the class never pay any attention to you? 1-40; 3-37
111-23*	When the teacher says that she is going to give the class a test, do you get a nervous or funny feeling? 1-45; 2-37; 4-39
111-25	Do you dislike reciting in class because you might make a mistake and others would laugh at you? 1-44; 3-39
111-26	Do you every worry about what is going to happen? 1-39; 2-41
111-29	When one of your friends won't play with you, do you feel badly? 1-45; 4-35
111-32	Is it hard for you to have a good report card as your parents expect you to have? 3-39
111-33	Do some children in the class seem to get angry when you do better than they do? 1-35
111-34	Are you afraid that other children will laugh at you when you show your work to them? 1-45; 4-39
111-35	Are you frequently afraid you may make a fool of yourself? 1-57
111-36*	Are you afraid of school tests? 1-31; 2-33; 4-36
111-39*	When the teacher says that she is going to give the class a test, do you become afraid that you will do poorly? 1-44; 2-50
111-40	Do you worry a lot about your school work because you are afraid your parents might find out you are not doing as well as they expect you to do? 1-44; 2-40; 3-31
111-41	Do you ever worry about what people think of you? 1-51
111-42	Do you feel nervous if the whole class watches you when you are making something? 1-52; 4-31

Table 15.
(Continued)

Form and Item No.	Item and factor loadings
111-43*	Do you sometimes dream at night that other boys and girls in your class can do things that you cannot do? 1-41
111-44	Do your classmates sometimes make fun of the way you look and talk? 1-57
111-47	Do you feel nervous when others look at work you have done? 1-51; 4-32
111-49*	When the teacher is teaching you about reading, do you feel that other children in the class understand her better than you? 1-39; 3-35
111-50*	While you are on your way to school, do you sometimes worry that the teacher may give the class a test? 1-45; 2-31
111-52	Do you ever worry that you won't be able to do something that you want to do? 1-47; 2-31
111-53	Are you often worried that you might be sick in class? 1-47; 2-36
111-55*	While you are taking a test do you usually think you are doing poorly? 1-34; 2-47
111-58*	When the teacher asks you to write on the blackboard in front of the class, does the hand you write with sometimes shake a little? 1-44
111-61	Do you feel cross and grouchy sometimes?
111-62	In your school work, do you often forget; or do you feel sure you can remember things? 3-40
111-65	When you recite in class do you often wonder what others are thinking of you? 1-51

*These are items from the TASC

Note: Only factor loadings of .30 or higher are listed after the items, and the first number refers to the factor.

MC Anglo, ULC Anglo, Negro, and Mexican children were compared. Using the item clusters determined from the image analysis, it was found that differences between these groups were highly consistent from item to item within the clusters. For example, on most of the school anxiety items the groups were arranged in the same order. But what is equally significant, these same group differences did not appear in the other scales; and when differences occured between these groups, they usually were in the opposite direction. Therefore, it would be difficult to account for the large differences in school anxiety between these groups in terms of acquiescence.

Correlates of Masculinity-Feminity[1]

A general implication of developmental studies of sex-typed socialization practices is that the failure to establish appropriate sex role behaviors is more significant for boys than girls. For example, Kagan and Moss (1962) report that the failure to adopt masculine behavior between the ages of 3 and 10 is more predictive of high sex anxiety for adult males than females. And in a study by Sulton-Smith and Rosenberg (1965) it was found that anxiety is greater at age 10 among children with inappropriate sex-role characteristics. It seemed reasonable, therefore, to expect that masculinity-femininity scores for girls will be unrelated to school anxiety, while masculinity-femininity scores for boys will be significantly associated with school anxiety, with the more school anxious boys being less masculine.

The correlates of M-F for fifth grade boys and girls are presented in Table 16, and in interpreting this table it should be remembered that a high M-F score for boys means low masculinity, and a high M-F score for girls means high femininity. Therefore, it is apparent that high school anxiety is positively associated with low masculinity in boys, and is unrelated to feminity in girls. Thus, it would appear that M-F phenomena are important in the study of anxiety.

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[1] This section is conceptually based on a paper by Ed Gotts prepared with the assistance of the author.

Table 16.

Correlates of M-F for Boys and Girls
In the Fall, 1965

Variable	Boys (N=48)	Girls (N=53)
School Motivation	19	01
School Anxiety	32*	-10
Sex-linked attitudes, interests	-07	-09
Self Disparagement, in relation to peers	-02	-02
Feelings of Inferiority	-13	14
Neurotic Symptoms, academic	01	09
Neurotic Symptoms, social	-16	-02
Aggression, with independence strivings	-16	-21
Active withdrawal	-05	-07
Emotional disturbance with depression	-17	01
Self enhancement, through derogation of others	10	09
Diffuse hyperactivity	06	13
Peer acceptance	-05	-09
Peer rejection	-13	-0S
MAT Verbal	13	04
MAT Non-verbal	15	10
CTMM Non-verbal IQ	00	07
CTMM Verbal IQ	03	-06
Proneness toward Neuroticism	02	01
Grade Point Average	11	-13

Note: Decimal points have been omitted.
*Probability of r being zero less than .05.

Over and Under Achievement[1]

In many of the studies which have associated anxiety with school achievement, and in which results generally have been interpreted as indicating that anxiety interferes with school achievement, there have not been adequate controls for the possible confounding effects of intelligence. This is an important point, since intelligence is negatively related to anxiety in most cases; and the generally obtained negative relationship between anxiety and school achievement may be partially or entirely due to the effects of intelligence. For this reason, the relation between school anxiety and school achievement (as measured by teacher grades) was determined with the effects of intelligence taken into account.

Methodologically, studies of over and under achievement have typically used the research design of contrasting groups, i.e., extreme groups of under and over achievers are selected. As Thorndike (1963) points out, this often means that only a limited and highly restricted sample of the population is studied, and only a restricted range of under and over achievement is investigated. Therefore, the method which he proposes, i.e., part correlation, was utilized with data collected in the Fall, 1965; and the results obtained are presented in Table 17. It should be pointed out, also, that the variables utilized in the analysis were preliminary "editions" of some of the variables actually used throughout the rest of this report, and the results, therefore, may not be strictly comparable to the results which would be obtained with the revised éditions of these variables (based on the later image analyses, etc.). Generally, what is listed as "school anxiety" is quite similar to the revised version; what is listed as "neurotic symptoms in behavior" consists mostly of items from "feelings of inferiority," "neurotic symptoms, academic," and "neurotic symptoms, social;" what is listed as "seriousness of maladaptive behavior" is a measure derived from the 40 items of the teacher nomination Forms 1 and 2, which originally appeared in the studies by Wickman and others (see Chapter 2). What is listed as "reinterpretation" consists of items found mainly

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[1]This section is based on a paper by Russell Adams prepared with the assistance of the author.

in "diffuse hyperactivity." What is listed as "withdrawal" consists mostly of items found in "active withdrawal" and "emotional disturbance with depression;" what is listed as "aggressiveness" consists mostly of items found in "aggression with independence strivings;" and the remainder of the variables are identical with those by the same name in the rest of the project.

The results of Table 17 indicate that school anxiety makes a significant contribution to under achievement (even when the effects of intelligence are controlled), although this contribution is limited to ULC Anglo children. School motivation makes a large contribution to over achievement, but here the problem of criterion contamination must be considered, because the teacher is responsible for both school motivation ratings and grades. Seriousness of maladaptive behavior and withdrawal also contribute substantially to under achievement in all three subsamples. (Of course, criterion contamination may exist here, too.) On the other hand, reinterpretation contributes significantly to under achievement only in the Non-Anglo subsample; aggressiveness contributes to under achievement only in the ULC Anglo and the Non-Anglo subsamples; and neurotic symptoms in behavior contributes to under achievement only in the ULC Anglo and the Non-Anglo subsamples. (Again, criterion contamination may be a factor.) Finally, peer acceptance contributes to over achievement, and peer rejection contributes to under achievement in the MC and ULC Anglo subsamples, indicating that peer status may have a different, less school-oriented basis among Non-Anglo children.

School Anxiety and Proneness toward Neuroticism As Functions of Prior School Experience

When the project was initiated, the children were in fourth grade, so they had already had three years of school experience; and it is possible that early school experience is crucial to the development of school anxiety. In fact, if one accepts a strongly psychoanalytic orientation, there would be an inclination to believe that anxiety is largely acquired in the preschool years as a result of experiences in the family setting (see Chapter 1). But even if one accepts the idea basic to this project, which is that school anxiety is to a significant degree

Table 17.

Correlates of Over and Under Achievement
For Children Classified by Socio-Cultural
Status, Using Part Correlations
For the Fall, 1965

Variable	r(GPA · CTMM) X		
	MC Anglos (N=154)	ULC Anglos (N=210)	Non Anglos (N=207)
School anxiety	-12	-22**	-07
School motivation	47***	55***	40***
Seriousness of maladaptive behavior	-23**	-29**	-26**
Peer acceptance	29**	31**	22**
Peer rejection	-18*	-20**	-01
Reinterpretation (as a defensive reaction)	05	-02	-16**
Withdrawal (as a defensive reaction)	-29**	-33***	-23**
Aggressiveness (as a defensive reaction)	00	-17*	-25**
Neurotic symptoms in behavior (in school)	03	-18*	-23**

Note: Decimal points have been omitted.
*Significant at .05 level.
**Significant at .01 level.
***Significant at .001 level.

the direct result of school experiences, it still would be likely that early school experience would play a role in the development of school anxiety. There is even reason to believe that these early school experiences have a predominant role. Of course, even if one stresses that anxiety is acquired early, this does not obviate the likelihood that there are significant changes in school anxiety from one school year to another which depend on the quality of children's school experiences and their personal characteristics.

In Chapter 1 it was argued that success and failure experiences in school were important determinants of school anxiety, although it was recognized that

individual differences in personality and background experiences probably served
to moderate the influence on success and failure. There is also the question of
what is meant by success and failure, since it is evident that success and failure
are both objectively and subjectively determined. What we mean by this is that to
some degree failure is uniformly defined for all children, as when they receive a
failing grade; while, at the same time, failure is individually determined, as when
children receiving B's see themselves as having "failed" because they were expecting
or hoping for A's, or when they see themselves as having been immensely successful
because they expected to make C's. One appears to be justified, however, in con-
sidering school success and failure as primarily objectively or situationally
determined, for there is evidence that success and failure are "standardized" to a
considerable degree in the typical school system. Although there are strong ideo-
logical and psychological pressures toward individualized standards, expectations,
and systems of reward, most school operate largely on a system in which success
and failure are uniformly defined and indiscriminantly applied to all children.

Therefore, two types of measures which suggested themselves as measures of the
degree of previous success and failure experienced in school were teacher grades
and standardized achievement and intelligence tests. Other measures, such as peer
acceptance and rejection, would be worthy of inclusion except, of course, that they
were not available from the cumulative record from which information on past school
history was obtained (see Chapter 2). Teacher grades in subject matter and conduct
are an obvious indicator of experiences of success and failure; but the use of
achievement and intelligence tests is not so readily justified, although the case
for these indicators rests upon research evidence and its implications and evidence
more circumspect in nature. For instance, it is known that teachers' observations
and evaluations of the behavior of children are strongly influenced by their knowledge
of children's intelligence and achievement test performance (e.g. Sarason. 1966).
And, although no research evidence comes to mind, it is reasonable to believe that
parents' observations and evaluations of their children's behavior is significantly
influenced by their general (and specific) knowledge of their children's intelligence

and achievement test performance. Thus it would appear that teachers and parents interact with and appraise children to some degree in terms of children's intelligence and achievement test performance, and that these interactions and appraisals in various ways contribute to children's experiences of success and failure. It is further surmised that children gain _direct_ knowledge of their intelligence and achievement test performance through parents and teachers (e.g., How many parents and teachers have used expressions like, "A bright boy like you ought to be doing better"?); through the taking of the tests; by comparing "notes" with other children who have taken the same test; and by overhearing discussions by parents and teachers of their performance.

Earlier it was noted that the influence of prior school experiences might be moderated by personality characteristics; an example of this possibility is proneness toward neuroticism, a syndrome which is heavily infused with what might be called generalized anxiety (see Chapter 2). In terms of our rationale, developed in Chapter 1, it is apparent that proneness toward neuroticism should not be as highly related to early school experiences as school anxiety. Also, in terms of the primacy of first experiences, the first grade ought to be more critical than the second and third grades. Therefore, relationships between school anxiety and first grade school experience ought to be higher than relationships with second and third grade experiences, taking into account the difference in length of time over which the data are to be correlated. These differences, if they exist, ought also to be more pronounced for school anxiety than for proneness toward neuroticism, although it is possible that proneness toward neuroticism makes children more vulnerable to the challenges, stresses, and strains of school, especially those in the first year of school.

With regard to experiences o. success and failure in Grades 1-3, as represented by the three variables identified earlier, differences between boys and girls, and between Anglo and Non-Anglo children, ought to occur. From many studies it is evident that girls get better grades than boys in elementary school, although they do not as a rule do better on intelligence and achievement tests; and the feminine orientation

of the elementary school was discussed in Chapter 1. Thus, other factors being equal,
we would expect early school experiences to be more highly related with school anxiety
in fourth grade for boys than girls; and in view of the greater overall readiness of
girls for first grade, it is likely that experiences in first grade are especially
predictive of school anxiety in boys. Applying the same logic, differences in the
amount of failure experienced in school by Non-Anglo children 'n comparison with Anglo
children should be pronounced, from one point of view, and less significant, from
another point of view. To explain, if essentially the same curriculum and standards
of evaluation of learning are found in schools serving large numbers of Negro and
Mexican-American children as are found in other schools, then these children should
experience greater school failure, if other factors are equal. However, one might
argue that success and failure depend on the characteristics of the school and its
student population. For example, there is a quite different chance of success associ-
ated with an IQ of 120 in an UMC school where the average IQ is 120 than there is
associated with an IQ of 120 in a LC school where the average IQ is 90. At the same
time, the degree of utilization of intelligence by children probably varies from
one socio-cultural group to another, so that a particular IQ is not associated with
the same degree of success, even with other factors equal. In summary, it is likely
that schools only partially adjust the curriculum and standards to fit the average
child in the school. So, on balance, it would appear that Negro and Mexican-American
children experience more failure in school, especially in the early grades. Therefore,
relationships between early school experience and school anxiety in fourth grade should
be higher for Non-Anglos than Anglos, other factors being equal. Of course, other
factors are not equal, and so it becomes very difficult to predict how results will
turn out. For example, children's need for school success is important in the develop-
ment of school anxiety, since failure in matters which are unimportant, and to which
children are indifferent, is not likely to be anxiety-producing. Therefore, although
in an objective sense boys and Non-Anglo children fail more often and in more ways
in school than girls and Anglo children, they may actually experience less failure in
school on a subjective basis. In addition, it is likely that there are differences

in reaction to failure, and that these different reactions are differentially effective in reducing school anxiety. For instance, aggression appears to be a mode of response which has anxiety-reducing properties (McClelland, 1951); and it is well known that boys are much more aggressive in school than girls. So, it is likely that the differential child-rearing practices associated with sex-role training give boys advantages over girls in coping with some of the situations in school in which anxiety is most likely to occur.

Table 18 presents the data for selected prior school experience variables which were studied as predictors of school anxiety and proneness toward neuroticism at the beginning of fourth grade. The first thing which is evident, on inspection of these results, is that school anxiety is generally more highly related to teacher grades and standardized test performance in Grades 1-3 than is proneness toward neuroticism. This, of course, was not unexpected, since, as noted earlier, our conceptualization of school anxiety requires this. With regard to the possibility of a trend in the relationships across Grades 1-3, there are grade level differences in a number of instances, but no general and uniform trend seems to be present. For example, the number of U's and X's given by teachers for conduct correlates significantly with both SA and PTN only in Grade 1 in the total sample; and, in addition, among females this variable correlates significantly with SA only in Grade 1. Similarly, the number of E's given by teachers for conduct generally correlates higher with SA and PTN in Grade 3 than in the other two grades. Thus, it appears that the significance of teacher evaluations of conduct changes: poor conduct in Grade 1 is more predictive of later SA and PTN than good conduct; but good conduct in Grade 3 is more predictive of later SA and PTN than poor conduct. As to sex differences, it appears that prior school experience is generally more predictive of later SA for girls than boys, with the exception of conduct where predictions are better for boys. With regard to PTN, the only systematic differences between the sexes occurs for the CTMM and the MAT given in Grade 2, where predictions tend to be better for girls. In addition, a number of specific sex differences ought to be noted. For instance, good conduct in Grades 1 and 2 is predictive of later SA for boys, but not for girls. On

Table 18.

Prior School Experience as a Predictor of School Anxiety and Proneness Toward Neuroticism in Fourth Grade (Fall, 1964) for Children Classified into Male, Female, Anglo, and Non-Anglo Subsamples

Variable	School Anxiety (SA)					Proneness toward Neuroticism (PTN)				
	Anglo	Non-Anglo	Male	Female	Total Sample	Anglo	Non-Anglo	Male	Female	Total Sample
Teacher Grades in Subject Matter										
Grade 1	-17*	-05	-18*	-25*	-20*	-19*	-12	-16*	-23*	-20*
Grade 2	-23*	-05	-25*	-29*	-24*	-15*	06	-15*	-11	-11
Grade 3	-25*	02	-24*	-29*	-23*	-23*	14	-14*	-16*	-13
Teacher Grades in Conduct, Number of E's										
Grade 1	-15	-23	-27*	-12	-20*	-03	05	03	-10	-04
Grade 2	-17	-13	-29*	-06	-17*	-04	36*	-01	08	04
Grade 3	-31*	-21	-49*	-33*	-40*	-12	05	-18	-24	-23*
Teacher Grades in Conduct, Number of U's,X's										
Grade 1	18	23	16	43*	24*	07	28	20	23	18*
Grade 2	-07	06	07	11	03	-04	16	04	13	03
Grade 3	15	-19	-01	15	-02	06	-08	01	05	01
Basal Reading Level										
Grade 1	-03	-36*	-04	-49*	-29*	02	-16	01	-22*	-12
Grade 2	-21*	-14	-32*	-26*	-27*	-08	06	-09	-10	-09
Grade 3	-16*	-26*	-38*	-28*	-31*	-09	-09	-17*	-14	-15*
Readiness Test, Grade 1										
Reading	-20	09	-12	-26*	-13	04	16	08	-03	06
Number	-18	-12	-28*	-29*	-25*	-04	03	-11	-07	-07
Total	-17	-02	.14	-32*	-21*	-01	09	-01	-05	-02

Prior School Experience as a Predictor of School Anxiety and Proneness Toward Neuroticism in Fourth Grade (Fall, 1964) for Children Classified into Male, Female, Anglo, and Non-Anglo Subsamples

Variable	School Anxiety (SA)					Proneness toward Neuroticism (PTN)				
	Anglo	Non-Anglo	Male	Female	Total Sample	Anglo	Non-Anglo	Male	Female	Total Sample
CTMM, Grade 2										
Language (V)	-21*	-18*	-34*	-36*	-34*	-10	-03	-13	-16*	-15*
Non Language (NV)	-21*	-11	-25*	-34*	-29*	-15*	-07	-11	-24*	-18*
Total	-25*	-20*	-36*	-37*	-36*	-14*	-07	-16*	-20*	-18*
MAT, Grade 2										
Reading, Vocabulary	-20*	-19*	-26*	-44*	-32*	-14*	-01	-14*	-25*	-18*
Reading, Comprehension	-24*	05	-15*	-40*	-24*	-18*	08	-12	-24*	-16*
Reading, Total	-22*	-18*	-25*	-47*	-34*	-17*	-04	-15*	-28*	-21*
Arithmetic, Total	-20*	-01	-13	-40*	-25*	-16*	06	-05	-27*	-16*

Note: Decimal points have been omitted. Also subsample N's vary from one variable to another, although the total number of subjects is as follows: Anglo=217, Non-Anglo=145, Male=181, and Total=362.

* Probability of r being zero is less than .05, based on Fisher's transformation.

the other hand, basal reading level in Grade 1 is strongly predictive of later SA

for girls, but not for boys; and this is also true for reading readiness in Grade 1,

which predicts later SA better for girls. Also, strong sex differences occur for the

MAT, administered in Grade 2, since performance is much more predictive of later SA

for girls. Turning now to differences between Anglo and Non-Anglo children, it is

obvious that prior school experience is generally more predictive of later SA, and to

a lesser degree later PTN, for Anglos than for Non-Anglos. One major exception to

this general trend, however, should be pointed out. This is the tendency for Grade 1

indicators to more frequently favor Non-Anglos, the outstanding example of this being

basal reading level in Grade 1, which is predictive of later SA only for Non-Anglo

children. In summary, it would appear that prior school experience, as indicated by

teacher grades and standardized achievement and intelligence tests, is more predictive

of later SA for girls than for boys, and for Anglos than for Non-Anglos. While

differences occur with regard to PTN, they are not as consistent and as pronounced

as those for SA.

Styles of Defensiveness

Approach and avoidance tendencies in general (as developed in Chapter 1), and

test-taking attitudes specifically, may exist at both a conscious and an unconscious

level, i.e., children may knowingly and with forethought distort their responses, or

they may do it without awareness. The most extensive earlier investigation of test-

taking attitudes is the work on the F, L, and K Scales of the MMPI (Meehl and Hathaway,

1946). Giving subjects the opportunity to distort their responses was their direct

approach to the problem of test-taking attitudes, and we have applied this method as

our approach to the problem of styles of defensiveness. Actually, we gave children

the opportunity to respond in a very favorable way with regard to school situations,

but in a way which could not really be true for the large majority of children. That

is, we presented children with a number of school behaviors, attitudes, traits, and

situations which are highly desirable but _infrequently_ performed, manifested, or

present in the school life and personal characteristics of the majority of children.

At the same time, we presented them with a number of school behaviors, attitudes, traits, and situations which are generally thought to be undesirable, but are _frequently_ performed, manifested, or present in the school life and personal characteristics of the majority of children. Thus, they had the opportunity to accentuate the positive, or to diminish the negative, and the first of these tendencies we refer to as an aspect of the approach style of defensiveness and the second we think of as an aspect of the avoidance style of defensiveness. Or to put it another way, if behaviors, attitudes, traits, and situations can be put on a good-bad continuum, then the first set of characteristics tend to be good, and the second set tend to be bad. So, as children report on themselves they can distort their responses in either direction or in both directions at the same time. However, if one considers the true position of children in relation to desirable and undesirable characteristics, one might suppose that children, in terms of their true position, fall along this good-bad continuum in a more or less normal distribution. Thus, some children actually are closer to the "good" than the "bad" end of the continuum, while others are closer to the "bad" than the "good" end. Therefore, we might expect children on the "bad" side of the continuum to distort their responses by moving away from negative characteristics, i. e. by evidencing an avoidance pattern. And those who are nearer the "good" end might be prone to distort their responses by moving toward positive characteristics, i. e., by evidencing an approach pattern. Specifically, if one considers the "true" characteristics of children, and assumes that these serve as a reference point, then two predictions are feasible: first, those who have mostly undesirable characteristics will distort their responses by "moving away" from negative characteristics in self reports; and second, those who have mostly desirable characteristics will distort their responses by "moving toward" positive characteristics in self reports. Thus, we are led to expect that D_{AP} and D_{AV} will be negatively related.

Another approach to the problems of defensiveness would be analogous to the rationale of the F scale of the MMPI, which consists of items answered in one direction by most people and which is scored for deviant responses, i.e., answering in the opposite direction. The items making up the defensiveness factor (which were redistributed

into sets conceptually identified with approach and avoidance tendencies - See Chapter 2) generally were responded to in the same direction by two-thirds or more of the children. Also, it is a fact that the approach tendency items were scored in the popular direction, while the avoidance tendency items were scored in the nonpopular direction. Thus, considering the two sets of items together, one has a measure of deviancy of response which is similar to the F scale, with the exception that the F scale contains few items describing virtues, positive situations, and the like. Furthermore, high deviancy scores of this type might reflect carelessness in responding, random responding, and so forth; but, as in the case of the F scale, they might also have a significance in personality processes.

In more recent research of this type, social desirability is a construct which has come in for much attention; and it is obvious that the approach tendency, as defined and measured in this project, may overlap considerably with social desirability, since the approach items describe positive characteristics, and children's scores depend on the number endorsed or agreed to. However, avoidance items describe negative characteristics which actually are endorsed by the big majority of children, although a high avoidance tendency depends on failure to endorse the items. Also, it should be noted that social desirability scales usually contain a broad range of content, while the approach and avoidance tendency scales in this project are more narrowly focused on school-related content. Furthermore, since a high avoidance tendency is in reality made up of responses in a socially desirable direction, it, too, should be positively correlated with social desirability, if social desirability is actually what is being measured by the avoidance scale. To check on these specific possibilities, and to examine the correlates of variables of this type, the Children's Social Desirability Scale (Crandall, Crandall, and Katkovsky, 1965) was administered in the Spring, 1966 to a small, representative sample of children.

The relationships between approach (D_{AP}) and avoidance (D_{AV}) styles of defensiveness and the major variables of this project are given in Table 19. There we see that D_{AP} is consistently negatively related to D_{AV}, as predicted. In addition, D_{AV} is strongly negatively related to SA, which is consistent with most of the research which has

Table 19.

Correlates of Approach (D$_{AP}$) and Avoidance (D$_{AV}$) Styles of Defensiveness in Total Sample

Variables	Defensiveness (Av)				Defensiveness (Ap)			
	T$_1$	T$_2$	T$_3$	T$_4$	T$_1$	T$_2$	T$_3$	T$_4$
School Anxiety (SA)	-58*	-48*	-49*	-38*	20*	19*	10*	07
School Motivation (SM)	-08	-07	-12*	-07	14*	18*	22*	14*
Sex-linked Attitudes, Interests (S)	08	12*	28*	22*	-19*	-23*	-28*	-21*
Self Disparagement, in Relation to Peers (SD)	02	06	30*	29*	-31*	-34*	-48*	-38*
Feelings of Inferiority (FI)	-02	-01	04	-07	-07	-03	-07	-02
Neurotic Symptoms, Academic (NA)	02	04	08	01	-03	-05	-07	-01
Neurotic Symptoms, Social (NS)	03	08	07	NA	-09	-09	-08	NA
Aggression with Independence Strivings (AI)	00	02	15*	09	-06	-05	-19*	-12*
Active Withdrawal (AW)	-02	00	11*	02	-12*	-09	-18*	-05
Emotional Disturbance with Depression (ED)	06	00	-02	-07	01	-08	02	-10*
Self Enhancement through Derogation of Others (SE)	00	00	-06	-10*	-04	-02	06	11*
Diffuse Hyperactivity (DH)	04	02	13*	NA	-09	-10*	-18*	NA
Peer Acceptance	-19*	04	-12*	05	20*	02	15*	04
Peer Rejection	10*	05	06	04	-01	-07	-09	-01
MAT Non-Verbal Achievement	10*	01	06	05	-03	-08	-06	03
MAT Verbal Achievement	06	-05	00	00	-02	-08	00	05
CTMM Non-Verbal IQ	03	-07	07	04	00	-01	01	-03
CTMM Verbal IQ	08	-09	05	-03	-03	-03	01	00
Proneness toward Neuroticism (PTN)	-34*	-14*	-10*	-17*	-12*	-23*	-29*	-23*

Table 19.
(Continued)

Correlates of Approach (D$_{AP}$) and Avoidance (D$_{AV}$) Styles of Defensiveness in Total Sample

Variables	Defensiveness (Av)				Defensiveness (Ap)			
	T_1	T_2	T_3	T_4	T_1	T_2	T_3	T_4
Grade Point Average (GPA)	-05	08	-03	-05	-01	05	08	16*
Avoidance Style of Defensiveness (D$_{AV}$)					-40*	-44*	-55*	-59*

Note: Decimal points have been omitted.
* Probability that r is not zero is beyond .05 level, using Fisher's transformation.

been reported. However, D_{AP} is positively related to SA, although the relationship

is not nearly as strong as it was for D_{AV}. To explain this positive relationship,

one could raise the possibility of acquiescence, since high SA and D_{AP} scores could

be obtained that way. But if this were true, then S and SD should be correlated with

D_{AP} in the same way, and this obviously is not the case, since the correlations actually

are reversed. Perhaps a clue to the real significance of D_{AP} is found in its r's with

SM which are positive. Here we have different sources of information - D_{AP} being

based on self reports and SM being based on teacher observation. What appears to

be a more reasonable explanation is that children who "move toward" positive character-

istics in responding to self reports, i.e., who evidence an approach pattern, tend to

display the positive characteristics identified with being a good student. Such

children also tend to have less masculine attitudes and interests (S) and tend to

disparage themselves less in relation to peers (SD). They also are somewhat less

aggressive (and independent), are better accepted by peers (PA), and show fewer indica-

tions of active withdrawal (AW) and diffuse hyperactivity (DH). And lastly, they have

fewer indications of a proneness toward neuroticism (PTN). All in all, it appears that

the approach style of defensiveness is not highly specific, for there are a number of

classroom behaviors which are related to it.

D_{AV}, on the other hand, is consistent in showing contrasting relationships. High

D_{AV} children tend to be less motivated (SM), to have more masculine interests and

attitudes (S), to disparage themselves more, and to be less accepted by peers (PA).

However, they have fewer indications of a proneness toward neuroticism, the same as

D_{AP} children.

In Table 20 the correlates of social desirability are shown, although it should

be remembered that the CSD was administered in the Spring, 1966 to only a small

representative sample of children. Although a number of the r's are as large as they

are in Table 19, most do not reach an acceptable level of statistical significance.

However, social desirability is positively related to peer rejection (but not among

Non-Anglo children), and positively related to the approach style of defensiveness.

And, it is negatively related to proneness toward neuroticism, CTMM Verbal IQ, and

Table 20.

Correlates of Social Desirability (SD)
In Spring, 1966

Variable	Anglo (N=33)	Non Anglo (N=30)	Total (N=63)
School Anxiety (SA)	-17	-18	-23
School Motivation (SM)	-20	08	-10
Sex-linked Attitudes, Interest (S)	16	12	14
Self Disparagement in Relation to Peers(SD)	-05	-05	-10
Feelings of Inferiority (FI)	03	03	01
Neurotic Symptoms, Academic (NA)	04	-03	03
Neurotic Symptoms, Social (NS)	03	-12	-08
Aggression with Independence Strivings(AI)	-18	-03	-09
Active Withdrawal (AW)	23	-14	05
Emotional Disturbance with Depression (ED)	-03	-11	-16
Self Enhancement Through Derogation of Others (SE)	25	28	19
Diffuse Hyperactivity (DH)	16	-12	-03
Peer Acceptance (PA)	-18	-15	-17
Peer Rejection (PR)	46*	18	40*
MAT Non-Verbal Achievement	07	-23	-08
MAT Verbal Achievement	01	-24	-30*
CTMM Non-Verbal IQ	01	04	-19
CTMM Verbal IQ	01	-16	-29*
Proneness toward Neuroticism (PTN)	-44*	-40*	-33*
Grade Point Average (GPA)	-16	-10	01
Approach Style of Defensiveness(D_{AP})	06	22	28*
Avoidance Style of Defensiveness(D_{AV})	-29	-02	-11

Note: Decimal points have been omitted.
*Probability of r being zero is less than .05

MAT verbal achievement.

Cross-lagged Correlational
Analyses of Variables as Antecedents
And Consequences of School Anxiety

In Chapter 1 the application of the cross-lagged correlational design as a means of identifying antecedents (causes) and consequences (effects) of school anxiety was discussed in detail, and it would be redundant to repeat that discussion here. It should be remembered, however, that the essence of this quasi-experimental design is that a cause measured at T_1 should correlate higher with an effect measured at T_2 than the same cause measured at T_2 correlates with the same effect measured at T_1. Another point which should be remembered is that a cross-lagged correlation, when appropriately used in this way, represents only the primary direction of the cause-effect relationship. That is, A may be a cause of B, and B may be a cause of A; but if A is primarily the cause, and B is primarily the effect, then this should be reflected in the cross-lagged results. Of course, interactive relationships of this kind are to be expected in regard to antecedents and effects of school anxiety, since the responses to school anxiety by their nature ought to frequently function as secondary causes of school anxiety.

In Table 21 cross-lagged correlations are presented for the total sample for the three time periods of interest, which are T_1 to T_2, T_2 to T_3, and T_3 to T_4. For each pair of these cross-lagged r's (i.e., r_{12} and r_{21}, r_{23} and r_{32}, and r_{34} and r_{43}), the significance of the difference between the two r's was computed using Olkin's (1965) test. However, none of the differences reached an acceptable level of significance; and so further discussion of Table 21 is unnecessary at this time.

Changes in Variables under
In-school and Out-of-School Influences

In Chapter 1 a general conceptual model was developed for relating observed changes in school anxiety and other variables to the conditions of being in school and not being in school; and in this section the first step in implementing this rationale is taken. What we plan to do is to show whether there are significant

Table 21.

Variables Cross-lagged with School Anxiety
In the Total Sample

Variable	r_{12}	r_{21}	r_{23}	r_{32}	r_{34}	r_{43}
School Motivation (SM)	03	-08	-10*	-07	-08	-10*
Sex-linked Interests, Attitudes (S)	-24*	-12*	-21*	-25*	-13*	-22*
Self Disparagement in Relation to Peers(SD)	10*	11*	09	07	11*	25*
Avoidance Style of Defensiveness (D_{AV})	-24*	-31*	NA	-29*	-38*	-49*
Approach Style of Defensiveness (D_{AP})	07	07	NA	09	14*	10*
Feelings of Inferiority (FI)	-07	02	-01	07	04	-02
Neurotic Symptoms, Academic (NA)	04	13*	08	13*	07	01
Neurotic Symptoms, Social (NS)	00	07	-03	00	00	-02
Agression with Independence Strivings (AI)	03	09	-01	01	00	-01
Active Withdrawal (AW)	03	07	03	06	12*	04
Emotional Disturbance with Depression(ED)	-01	04	01	05	12*	-02
Self Enhancement Through Derogation of Others (SE)	00	07	00	05	05	00
Diffuse Hyperactivity (DH)	01	06	01	01	00	00
Peer Acceptance (PA)	01	-04	-02	00	-17*	-01
Peer Rejection (PR)	15*	12*	15*	16*	08	15*
MAT Non-Verbal (NV)	-42*	-35*	-26*	-40*	-29*	-29*
MAT Verbal (V)	-38*	-29*	-35*	-33*	-31*	-32*
CTMM Non-Verbal (NV)	-33*	-26*	-29*	-34*	-34*	-37*
CTMM Verbal (V)	-35*	-26*	-31*	-3*	-35*	-37*
Proneness toward Neuroticism (PTN)	24*	23*	32*	35*	39*	46*
Grade Point Average (GPA)	-27*	-26*	-26*	-28*	-18*	-23*

Note: Decimal points have been omitted
*Probability of r being zero is less than .05

changes in the means of these variables over the four periods of measurement, and, if

so, to identify the nature of these changes and whether they fit the requirements of

the conceptual model. It will be remembered, also, that a conceptual basis was developed

in Chapter 1 for the belief that there are systematic differences in the in-school

and out-of-school environment of children with different sex and socio-cultural status.

So, for this reason, subsequent analyses of changes in variables under in-school and

out-of-school conditions were carried out separately for each of these sex and socio-

cultural status subsamples.

The Treatments X Subjects Design. One of our major interests in this project

was in the differentiation of two types of "treatments" to which children are exposed

in the course of their schooling. In the first of these, children are under the direct

influence of maturation, the in-school environment, and the out-of-school environment;

and this is the state of affairs during the school years. While in the other treatment,

children are just under the direct influence of maturation and the out-of-school

environment; and this is the state of affairs during the summer months. (Parentheti-

cally, a check revealed that practically none of the children in our sample attended

summer school in 1965, so no effort was made to take this into account.) Although

these treatments are not controlled and manipulated, the children in fact have moved

through these treatments as they might under a program of planned, experimental

manipulation, if that were possible. It appears, therefore, that data gathered in

regard to these treatments are amenable to a treatments X subjects design (Edwards,

1964), and we will now proceed to discuss its application to the problem.

Actually, these two treatments were repeated twice, and data on the variables

studied were gathered at the end of each treatment (of course the end of one treatment

is the beginning of the next). Specifically, data were gathered at the beginning of

fourth grade (i.e., the end of the first "maturation + out-of-school environment"

treatment), at the end of fourth grade (i.e., the end of the first "maturation +

in-school environment + out-of-school environment" treatment), at the beginning of

the fifth grade (i.e., the end of the second "maturation + out-of-school environment"

treatment), and the end of fifth grade (i.e. the end of the second "maturation +

in-school environment + out-of-school environment" treatment). More accurately speaking, the first set of measurements at the beginning of 4th grade may be considered the result of cumulations of maturation, and in-school and out-of-school environmental effects prior to this time, and the subsequent sets of measurements are the results of incre-ments of change supposedly associated with the continued influence of maturation and the in-school and out-of-school environment.

Basing our use of the treatments X subjects design on Lindquist's (1953, Chapter 6) presentation, the first point of interest is to establish whether there are differences in the means of the four sets of data obtained for each criterion measure. For example, if we have measured school achievement, using a standardized test, on the four occasions the thing we want to know is whether the means for the four occasions differ. More specifically, however, we want to know whether the differences between T_1 and T_2, T_2 and T_3, and T_3 and T_4 are significant, since it is these differences which we want to check against our rationale. In general, if in-school influences are making a significant contribution to the criterion variable and out-of-school influences are not, the differences between T_1 and T_2, and T_3 and T_4 will be significant, and the difference between T_2 and T_3 will not be - assuming all other factors are equal, and that the criterion variable is functionally related to in-school (and out-of-school) conditions in accordance with the underlying rationale. If both are making a signifi-cant contribution, the differences between each of these pairs of means (i.e. T_1 and and T_2, T_2 and T_3, and T_3 and T_4) will be significant; but the difference between T_1 and T_2, and T_3 and T_4 will be significantly larger than the difference between T_2 and T_3 - although a direct statistical test of this possibility has not been carried out. Finally, it should be noted that the in-school influence might, in some instances, be in a direction opposite to that of the out-of-school influence, and the extent to which this is true is the extent to which the differences will be obliterated. In this event, the rationale concerns only the relative strengths of the in-school and out-of-school influences and the statistical tests will reflect only the relative strengths of these incompatible influences.

The results of all the analyses of variance which are pertinent to this problem are presented in Tables 22-33, although it should be pointed out that these tables are primarily used in the section dealing with interactions between shifts in school anxiety (during T_1 and T_2, T_2 and T_3, and T_3 and T_4) and treatments. Separate T X S analyses were carried out for the following subsamples: Anglo males (Tables 22-24), Anglo females (Tables 25-27), Non-Anglo males (Tables 28-30), and Non-Anglo females (Tables 31-33). In addition, for each of these subsamples there are separate analyses of variance for the T_1 and T_2 period, the T_2 and T_3 period, and the T_3 and T_4 period. Altogether, therefore, there are twelve analyses of variance tables, each containing a separate analysis of variance for each of the major variables studied. Since data concerning the shifts in school anxiety between T_1 and T_2, T_2 and T_3, and T_3 and T_4 are not to be used until a later section, no further information on the nature of these groups will be given here. All we are interested in at this point are the means on all the variables at T_1, T_2, T_3, and T_4; and these data (which also appear in scattered form in Tables 22-33) are brought together to facilitate inspection, comprehension, and interpretation in Table 34.

In dealing with the results of Table 34 we will discuss differences across time, which have been tested for statistical significance; and, in addition, we will discuss differences between sex and socio-cultural status groups, although (as we previously noted) no direct statistical tests of these differences were computed.

1. School Anxiety (SA)

With respect to SA two points should be made: one of these concerns the large differences between Anglo and Non-Anglo children in SA, and the other concerns the variation in sex differences among Anglos and Non-Anglos. Generally, Anglo sex differences are smaller, as we would expect in terms of what is known about sex-role differences between boys and girls in Anglo and Non-Anglo cultures, and the association of defensiveness with sex differences - see Chapter 1. Also, these sex differences are fully in accord with what others have found, and, although studies of Negro and Mexican-American children are more difficult to find, the higher anxiety of these

TABLE 22.

T X S ANALYSES OF VARIANCE FOR
ANGLO MALES CLASSIFIED BY SHIFT
IN SCHOOL ANXIETY BETWEEN T_1 AND T_2

GROUP 1	17 SUBJECTS.	ANGLO MALE	HI SHIFT
GROUP 2	19 SUBJECTS.	ANGLO MALE	HI....NO SHIFT
GROUP 3	21 SUBJECTS.	ANGLO MALE	LO....NO SHIFT
GROUP 4	21 SUBJECTS.	ANGLO MALE	LO SHIFT

NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.7628	155.		
BETWEEN	0.7591	77.		
GROUPS	0.4007	3.	0.518	0.6754
ERROR (G)	0.7736	74.		
WITHIN	0.7666	78.		
TRIALS	50.8898	1.	435.272	0.0000
G BY T	0.0843	3.	0.721	0.5456
ERROR (T)	0.1169	74.		

G MEAN	1	2	3	4
	4.5588	4.5789	4.7810	4.6310

T MEAN	1	2
	4.0718	5.2141

G BY T	1	2
1	4.0529	5.0647
2	3.9684	5.1895
3	4.2238	5.3381
4	4.0286	5.2333

MAT VERBAL (V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	3.2409	155.		
BETWEEN	4.8715	77.		
GROUPS	1.8655	3.	0.374	0.7753
ERROR (G)	4.9934	74.		
WITHIN	1.6311	78.		
TRIALS	75.3242	1.	111.507	0.0000
G BY T	0.6391	3.	0.946	0.5754
ERROR (T)	0.6755	74.		

G MEAN	1	2	3	4
	5.0765	5.3763	5.4643	5.6095

T MEAN	1	2
	4.7026	6.0923

G BY T	1	2
1	4.5176	5.6353
2	4.7211	6.0316
3	4.6000	6.3286
4	4.9381	6.2810

GROUP 1	24 SUBJECTS.	ANGLO MALE	HI SHIFT	
GROUP 2	26 SUBJECTS.	ANGLO MALE	HI....NO SHIFT	
GROUP 3	26 SUBJECTS.	ANGLO MALE	LO....NO SHIFT	
GROUP 4	25 SUBJECTS.	ANGLO MALE	LO SHIFT	

TOTAL =   101 SUBJECTS.

DEGREES OF FREEDOM

3 AND   97 FOR GROUPS.

1 AND   97 FOR TREATMENTS.

3 AND   97 FOR INTERACTION.

SCHOOL ANXIETY (SA)

GROUPS F RATIO = 17.281   P = .0000

MEANS.   26.2708   32.4038   11.5769   26.5800

TREATMENTS F RATIO =   1.172   P = .2814

MEANS.   23.7822   24.5050

INTERACTION F RATIO = 125.852   P = .0000

GROUP 1   16.5417   36.0000

GROUP 2   32.5000   32.3077

GROUP 3   10.5385   12.6154

GROUP 4   35.4400   17.7200

SEX-LINKED INTERESTS, ATTITUDES (S)

GROUPS F RATIO =   .247   P = .8640

MEANS.   10.1667   10.1538   9.9615   9.7200

TREATMENTS F RATIO =   26.893   P = .0000

MEANS.   9.2574   10.7426

INTERACTION F RATIO =   .471   P = .7074

GROUP 1   9.1250   11.2083

GROUP 2   9.4615   10.8462

GROUP 3   9.3077   10.6154

GROUP 4   9.1200   10.3200

SELF DISPARAGEMENT, IN RELATION TO PEERS (SD)

GROUPS F RATIO =   1.935   P = .1275

MEANS.   4.3333   4.5769   3.5962   3.7400

TREATMENTS F RATIO =   14.170   P = .0005

MEANS.   3.5644   4.5545

INTERACTION F RATIO =   1.204   P = .3120

GROUP 1   3.5000   5.1667

GROUP 2   4.2308   4.9231

GROUP 3   2.9615   4.2308

GROUP 4   3.5600   3.9200

AVOIDANCE STYLE OF DEFENSIVENESS (DA_v)

GROUPS F RATIO =   2.194   P = .0923

MEANS.   12.9375   13.8462   12.2308   13.2600

TREATMENTS F RATIC =   .182   P = .6746

MEANS.   13.0099   13.1287

INTERACTION F RATIC =   11.443   P = .0000

GROUP   1   11.9167   13.9583

GROUP   2   13.9615   13.7308

GROUP   3   11.6923   12.7692

GROUP   4   14.4400   12.0800

APPROACH STYLE OF DEFENSIVENESS (DA_p)

GROUPS F RATIC =   .766   P = .5184

MEANS.   13.3958   13.2885   14.3269   13.4400

TREATMENTS F RATIC =   7.488   P = .0074

MEANS.   14.0693   13.1485

INTERACTION F RATIC =   1.051   P = .3745

GROUP   1   13.7500   13.0417

GROUP   2   13.7692   12.8077

GROUP   3   14.4231   14.2308

GROUP   4   14.3200   12.4800

GROUP 1   22 SUBJECTS.

GROUP 2   18 SUBJECTS.

GROUP 3   15 SUBJECTS.

GROUP 4   16 SUBJECTS.

G MEAN   1   2   3   4
              12.9375 13.8462 108.5393 103.9063

CTMM VERBAL (V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	193.8372	121.		
BETWEEN	323.7549	60.		
GROUPS	137.8594	3.	0.413	0.7476
ERROR (G)	333.5389	57.		
WITHIN	66.0492	61.		
TRIALS	1285.3750	1.	28.689	0.0000
G BY T	63.2656	3.	1.412	0.2476
ERROR (T)	44.8040	57.		

G MEAN	1	2	3	4
	105.8750	105.4167	109.4667	109.0625

T MEAN	1	2
	104.2131	110.7049

G BY T	1	2
1	100.5833	111.1667
2	103.5556	107.2778
3	106.8000	112.1333
4	105.2500	112.8750

CTMM NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	196.5910	121.		
BETWEEN	302.0753	60.		
GROUPS	332.4896	3.	1.107	0.3544
ERROR (G)	300.4745	57.		
WITHIN	92.8361	61.		
TRIALS	2872.6563	1.	59.549	0.0000
G BY T	13.5521	3.	0.281	0.8403
ERROR (T)	48.2401	57.		

G MEAN	1	2	3	4
	109.2083	103.0556	108.5333	109.9063

T MEAN   1   2
102.5574   112.2623

G BY T	1	2
1	104.2500	114.1667
2	98.1111	108.0000
3	104.6000	112.4667
4	104.3750	115.4375

GROUP 1   21 SUBJECTS.

GROUP 2   25 SUBJECTS.

GROUP 3   24 SUBJECTS.

GROUP 4   21 SUBJECTS.

GRADE POINT AVERAGE (GPA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	8.8228	181.		
BETWEEN	15.1769	90.		
GROUPS	14.2256	3.	0.935	0.5709
ERROR (G)	15.2097	87.		
WITHIN	2.5385	91.		
TRIALS	48.5493	1.	24.025	0.0000
G BY T	2.2148	3.	1.096	0.3556
ERROR (T)	2.0208	87.		

G MEAN	1	2	3	4
	12.1190	12.8600	13.3750	13.2857

T MEAN   1   2
12.4066   13.4396

G BY T	1	2
1	11.5714	12.6667
2	12.6400	13.0800
3	12.7500	14.0000
4	12.5714	14.0000

GROUP 1   23 SUBJECTS.

GROUP 2   25 SUBJECTS.

GROUP 3   26 SUBJECTS.

GROUP 4   23 SUBJECTS.

SCHOOL MOTIVATION (SM)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	51.8627	193.		
BETWEEN	91.0522	96.		
GROUPS	38.1960	3.	0.412	0.7485
ERROR (G)	92.7572	93.		
WITHIN	13.0773	97.		
TRIALS	1.8604	1.	0.139	0.7115
G BY T	7.2731	3.	0.543	0.6581
ERROR (T)	13.3852	93.		

G MEAN	1	2	3	4
	23.3478	25.2000	23.6538	23.3496

T MEAN	1	2
	24.0103	23.8144

G BY T	1	2
1	23.8261	22.8696
2	25.4400	24.9600
3	23.7692	23.5385
4	22.9130	23.8261

GROUP 1   24 SUBJECTS.

GROUP 2   26 SUBJECTS.

GROUP 3   26 SUBJECTS.

GROUP 4   25 SUBJECTS.

FEELINGS OF INFERIORITY (FI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.8474	201.		
BETWEEN	1.0034	100.		
GROUPS	0.4617	3.	0.453	0.7200
ERROR (G)	1.0201	97.		
WITHIN	0.6931	101.		
TRIALS	0.3168	1.	0.457	0.5076
G BY T	0.8306	3.	1.199	0.3140
ERROR (T)	0.6927	97.		

G MEAN	1	2	3	4
	1.2292	1.4615	1.3462	1.3800

T MEAN	1	2
	1.3168	1.3960

G BY T	1	2
1	1.1250	1.3333
2	1.4231	1.5000
3	1.1923	1.5000
4	1.5200	1.2400

NEUROTIC SYMPTOMS, ACADEMIC (NA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.2064	201.		
BETWEEN	1.7398	100.		
GROUPS	0.6629	3.	0.374	0.7752
ERROR (G)	1.7731	97.		
WITHIN	0.6782	101.		
TRIALS	0.1238	1.	0.179	0.6769
G BY T	0.4154	3.	0.600	0.6204
ERROR (T)	0.6921	97.		

G MEAN	1	2	3	4
	1.3958	1.6538	1.4615	1.4400

T MEAN	1	2
	1.4653	1.5149

G BY T	1	2
1	1.5000	1.2917
2	1.6154	1.6923
3	1.3462	1.5769
4	1.4000	1.4800

NEUROTIC SYMPTOMS, SOCIAL (NS)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.1021	201.		
BETWEEN	0.5152	100.		
GROUPS	0.8359	3.	1.654	0.1803
ERROR (G)	0.5053	97.		
WITHIN	1.6832	101.		
TRIALS	117.4059	1.	224.636	0.0000
G BY T	0.6323	3.	1.210	0.3099
ERROR (T)	0.5227	97.		

G MEAN	1	2	3	4
	0.8125	0.6731	0.6731	0.9400

T MEAN	1	2
	1.5347	0.0099

G BY T	1	2
1	1.6250	-0.0000
2	1.3462	-0.0000
3	1.3462	-0.0000
4	1.8400	0.0400

REGRESSION WITH INDEPENDENCE STRIVINGS (AI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.6735	201.		
BETWEEN	2.2638	100.		
GROUPS	2.2111	3.	0.976	0.5912
ERROR (G)	2.2654	97.		
WITHIN	1.0891	101.		
TRIALS	0.0198	1.	0.018	0.8881
G B\ T	1.5112	3.	1.390	0.2493
ERROR (T)	1.0871	97.		

G MEAN	1	2	3	4
	1.5417	1.7885	1.2885	1.4800

T MEAN	1	2
	1.5149	1.5347

G BY T	1	2
1	1.7083	1.3750
2	1.6154	1.9615
3	1.1538	1.4231
4	1.6000	1.3600

ACTIVE WITHDRAWAL (AW)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.3954	201.		
BETWEEN	1.9248	100.		

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P	
GROUPS	1.2102	3.	0.622	0.6066	104
ERROR (G)	1.9469	97.			
WITHIN	0.8713	101.			
TRIALS	0.7129	1.	0.849	0.6379	
G BY T	1.9311	3.	2.299	0.0810	
ERROR (T)	0.8401	97.			

G MEAN	1	2	3	4
	1.8958	1.6731	1.5385	1.8000

T MEAN	1	2
	1.7822	1.6634

G BY T	1	2
1	2.0000	1.7917
2	1.6154	1.7308
3	1.4231	1.6538
4	2.1200	1.4800

EMOTIONAL DISTURBANCE WITH DEPRESSION (ED)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.2830	201.		
BETWEEN	1.9288	100.		
GROUPS	0.2148	3.	0.108	0.9542
ERROR (G)	1.9818	97.		
WITHIN	0.6436	101.		
TRIALS	0.0792	1.	0.124	0.7253
G BY T	1.0683	3.	1.679	0.1751
ERROR (T)	0.6362	97.		

G MEAN	1	2	3	4
	1.2917	1.4231	1.3846	1.4400

T MEAN	1	2
	1.3663	1.4059

G BY T	1	2
1	1.2083	1.3750

2	1.5000	1.3462
3	1.1923	1.5769
4	1.5600	1.3200

SELF ENHANCEMENT, THROUGH DEROGATION OF OTHERS (SE)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.2262	201.		
BETWEEN	0.2897	100.		
GROUPS	0.0948	3.	0.321	0.8127
ERROR (G)	0.2957	97.		
WITHIN	0.1634	101.		
TRIALS	0.0050	1.	0.029	0.8584
G BY T	0.0592	3.	0.352	0.7906
ERROR (T)	0.1682	97.		

G MEAN	1	2	3	4
	1.1667	1.2500	1.1538	1.2000

T MEAN	1	2
	1.1980	1.1881

G BY T	1	2
1	1.2083	1.1250
2	1.2692	1.2308
3	1.1538	1.1538
4	1.1600	1.2400

DIFFUSE HYPERACTIVITY (DH)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.8027	201.		
BETWEEN	0.3285	100.		
GROUPS	0.1657	3.	0.497	0.6896
ERROR (G)	0.3336	97.		
WITHIN	1.2723	101.		
TRIALS	95.6485	1.	286.759	0.0000

G BY T	0.1657	3.	0.497	0.6896
ERROR (T)	0.3336	97.		

G MEAN	1	2	3	4
	0.7083	0.7500	0.6154	0.6800

T MEAN	1	2
	1.3762	0.0000

G BY T	1	2
1	1.4167	-0.0000
2	1.5000	-0.0000
3	1.2308	-0.0000
4	1.3600	-0.0000

GROUP 1	22 SUBJECTS.	ANGLO MALE	HI SHIFT
GROUP 2	23 SUBJECTS.	ANGLO MALE	HI....NO SHIFT
GROUP 3	26 SUBJECTS.	ANGLO MALE	LO....NC SHIFT
GROUP 4	25 SUBJECTS.	ANGLO MALE	LO SHIFT

PEER ACCEPTANCE

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0305	191.		
BETWEEN	0.0460	95.		
GROUPS	0.0427	3.	0.925	0.5662
ERROR (G)	0.0461	92.		
WITHIN	0.0151	96.		
TRIALS	0.0019	1.	0.122	0.7283
G BY T	0.0089	3.	0.574	0.6378
ERROR (T)	0.0154	92.		

G MEAN	1	2	3	4
	1.1666	1.2398	1.1902	1.1930

T MEAN	1	2
	1.2005	1.1943

G BY T	1	2
1	1.1818	1.1514
2	1.2426	1.2370
3	1.1754	1.2050
4	1.2044	1.1816

PEER REJECTION

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0354	191.		
BETWEEN	0.0559	95.		
GROUPS	0.0704	3.	1.271	0.2882
ERROR (G)	0.0554	92.		
WITHIN	0.0151	96.		
TRIALS	0.0219	1.	1.432	0.2325
G BY T	0.0085	3.	0.554	0.6512
ERROR (T)	0.0153	92.		

G MEAN	1	2	3	4
	1.1477	1.2220	1.1519	1.2100

T MEAN	1	2
	1.1935	1.1722

G BY T	1	2
1	1.1427	1.1527
2	1.2313	1.2126
3	1.1608	1.1431
4	1.2376	1.1824

GROUP 1   11 SUBJECTS.

GROUP 2   18 SUBJECTS.

GROUP 3   18 SUBJECTS.

GROUP 4   17 SUBJECTS.

PRONENESS TOWARD NEUROTICISM (PTN)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	9.8351	127.		
BETWEEN	14.0723	53.		
GROUPS	48.0364	3.	3.882	0.0132
ERROR (G)	12.3741	60.		
WITHIN	5.6641	64.		
TRIALS	0.0078	1.	0.001	0.9689
G BY T	10.4862	3.	1.901	0.1378
ERROR (T)	5.5172	60.		

G MEAN	1	2	3	4
	9.7727	10.6389	7.8611	9.5294

T MEAN	1	2
	9.4063	9.4219

G BY T	1	2
1	9.0000	10.5455
2	10.4444	10.8333
3	7.8333	7.8889
4	10.2353	8.8235

TABLE 23.

T X S ANALYSES OF VARIANCE FOR
ANGLO MALES CLASSIFIED BY SHIFT
IN SCHOOL ANXIETY BETWEEN T_2 AND T_3

GROUP 1	17 SUBJECTS.	ANGLO MALE	HI SHIFT
GROUP 2	20 SUBJECTS.	ANGLO MALE	HI....NO SHIFT
GROUP 3	22 SUBJECTS.	ANGLO MALE	LO....NO SHIFT
GROUP 4	19 SUBJECTS.	ANGLO MALE	LO SHIFT.

NV NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.4134	155.		
BETWEEN	0.7489	77.		
GROUPS	0.9899	3.	1.339	0.2672
ERROR (G)	0.7391	74.		
WITHIN	0.0822	78.		
TRIALS	0.6669	1.	8.807	0.0043
G BY T	0.0462	3.	0.611	0.6141
ERROR (T)	0.0757	74.		

G MEAN	1	2	3	4
	5.4676	5.1325	5.3705	5.1605

T MEAN	1	2
	5.2141	5.3449

G BY T	1	2
1	5.3765	5.5588
2	5.0650	5.2000
3	5.3500	5.3909
4	5.0684	5.2526

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	4.0410	155.		
BETWEEN	7.5692	77.		
GROUPS	15.1908	3.	2.092	0.1072
ERROR (G)	7.2602	74.		
WITHIN	0.5581	78.		
TRIALS	0.1734	1.	0.318	0.5815
G BY T	0.9932	3.	1.820	0.1495
ERROR (T)	0.5456	74.		

G MEAN	1	2	3	4
	6.3647	6.2825	6.6000	5.1974

T MEAN	1	2
	6.0923	6.1590

G BY T	1	2
1	6.1176	6.6118
2	6.4350	6.1300
3	6.5864	6.6136
4	5.1368	5.2579

GROUP 1	25 SUBJECTS.	ANGLO MALE	HI SHIFT
GROUP 2	26 SUBJECTS.	ANGLO MALE	HI.....NO SHIFT
GROUP 3	25 SUBJECTS.	ANGLO MALE	LO.....NO SHIFT
GROUP 4	25 SUBJECTS.	ANGLO MALE	LO SHIFT

... ANXIETY (SA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	231.0459	201.		
BETWEEN	376.5672	100.		
GROUPS	3991.8900	3.	15.078	0.0000
ERROR (G)	264.7531	97.		
WITHIN	86.9653	101.		
TRIALS	1459.6484	1.	79.007	0.0000
G BY T	1843.9245	3.	99.806	0.0000
ERROR (T)	18.4750	97.		

G MEAN	1	2	3	4
	24.9400	26.9231	8.4600	26.7400

T MEAN	1	2
	24.5050	19.1287

G BY T	1	2
1	20.2000	29.6800
2	30.1154	23.7308
3	10.6400	6.2800
4	36.8400	16.6400

... INTERESTS, ATTITUDES (S)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	6.0621	201.		
BETWEEN	8.2998	100.		
GROUPS	6.8997	3.	0.827	0.5151
ERROR (G)	8.3431	97.		
WITHIN	3.8465	101.		
TRIALS	10.9355	1.	2.840	0.0913
G BY T	1.3416	3.	0.348	0.7931
ERROR (T)	3.8509	97.		

G MEAN	1	2	3	4
	10.0000	10.5192	10.6400	10.8800

T MEAN	1	2
	10.7426	10.2772

G BY T	1	2
1	10.0400	9.9600
2	10.9231	10.1154
3	10.8000	10.4800
4	11.2000	10.5600

DISPARAGEMENT, IN RELATION TO PEERS (SD)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	6.9920	201.		
BETWEEN	8.9239	100.		
GROUPS	14.2631	3.	1.628	0.1864
ERROR (G)	8.7587	97.		
WITHIN	5.0792	101.		
TRIALS	3.3465	1.	0.770	0.6137
G BY T	29.3522	3.	6.753	0.0006
ERROR (T)	4.3464	97.		

G MEAN	1	2	3	4
	4.8400	4.3077	3.7200	4.8400

T MEAN	1	2
	4.5545	4.2970

G BY T	1	2
1	3.8800	5.8000
2	4.6154	4.0000
3	4.0400	3.4000
4	5.6800	4.0000

STYLE OF DEFENSIVENESS (DA_V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	10.2990	201.		
BETWEEN	14.2810	100.		
GROUPS	83.1436	3.	6.842	0.0005
ERROR (G)	12.1512	97.		
WITHIN	6.3564	101.		
TRIALS	91.5645	1.	18.927	0.0001
G BY T	27.0559	3.	5.593	0.0018
ERROR (T)	4.8378	97.		

G MEAN	1	2	3	4
	12.4400	13.6154	10.6600	13.0600

T MEAN	1	2
	13.1287	11.7822

G BY T	1	2
1	12.5200	12.3600
2	13.7308	13.5000
3	11.5600	9.7600
4	14.6800	11.4400

STYLE OF DEFENSIVENESS (DA_p)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	15.0949	201.		
BETWEEN	22.4658	100.		
GROUPS	12.8939	3.	0.566	0.6426
ERROR (G)	22.7619	97.		
WITHIN	7.7970	101.		
TRIALS	44.6782	1.	5.934	0.0158
G BY T	4.1463	3.	0.551	0.6532
ERROR (T)	7.5297	97.		

G MEAN	1	2	3	4
	12.4000	13.3269	12.7800	12.1800

T MEAN	1	2
	13.1485	12.2079

G BY T	1	2
1	12.8000	12.0000
2	13.5000	13.1538
3	13.2400	12.3200
4	13.0400	11.3200

GROUP 1   15 SUBJECTS.

GROUP 2   15 SUBJECTS.

GROUP 3   18 SUBJECTS.

GROUP 4   13 SUBJECTS.

COMM NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	203.5668	121.		
BETWEEN	358.7763	60.		
GROUPS	216.7031	3.	0.592	0.6270
ERROR (G)	366.2538	57.		
WITHIN	50.9016	61.		
TRIALS	130.1250	1.	2.526	0.1136
G BY T	12.8906	3.	0.250	0.8617
ERROR (T)	51.5123	57.		

G MEAN	1	2	3	4
	113.1333	107.4000	111.4167	113.1923

T MEAN	1	2
	112.2623	110.1967

G BY T	1	2
1	114.8000	111.4667
2	108.1333	106.6667
3	111.7778	111.0556
4	114.7692	111.6154

CTRM VERBAL (V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	217.1135	121.		
BETWEEN	400.4956	60.		
GROUPS	76.9844	3.	0.184	0.9064
ERROR (G)	417.5225	57.		
WITHIN	36.7377	61.		
TRIALS	92.1094	1.	2.533	0.1132
G BY T	25.2500	3.	0.694	0.5626
ERROR (T)	36.3709	57.		

G MEAN	1	2	3	4
	109.8333	108.1333	111.7500	109.1538

T MEAN	1	2
	110.7049	108.9672

G BY T	1	2
1	111.4667	108.2000
2	107.6667	108.6000
3	112.8889	110.6111
4	110.3077	108.0000

GROUP 1	23 SUBJECTS.	ANGLO MALE	HI SHIFT
GROUP 2	23 SUBJECTS.	ANGLO MALE	HI....NO SHIFT
GROUP 3	22 SUBJECTS.	ANGLO MALE	LO....NO SHIFT
GROUP 4	23 SUBJECTS.	ANGLO MALE	LO SHIFT

GRADE POINT AVERAGE (GPA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	9.3642	181.		
BETWEEN	15.5658	90.		
GROUPS	27.6848	3.	1.828	0.1466
ERROR (G)	15.1479	87.		

	MEAN SQUARE	D.F.	F-RATIO	P
WITHIN	3.2308	91.		
TRIALS	48.5493	1.	17.721	0.0002
G BY T	2.3691	3.	0.865	0.5349
ERROR (T)	2.7396	87.		

G MEAN	1	2	3	4
	13.6087	12.6087	13.5227	11.9783

T MEAN	1	2
	13.4396	12.4066

G BY T	1	2
1	13.9565	13.2609
2	13.4348	11.7826
3	13.8636	13.1818
4	12.5217	11.4348

GROUP 1   24 SUBJECTS.

GROUP 2   25 SUBJECTS.

GROUP 3   23 SUBJECTS.

GROUP 4   24 SUBJECTS.

SCHOOL MOTIVATION (SM)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	48.6793	191.		
BETWEEN	74.3815	95.		
GROUPS	143.3939	3.	1.988	0.1198
ERROR (G)	72.1311	92.		
WITHIN	23.2448	96.		
TRIALS	0.6299	1.	0.027	0.8650
G BY T	19.3519	3.	0.819	0.5108
ERROR (T)	23.6175	92.		

G MEAN	1	2	3	4
	25.4375	23.3400	22.8696	22.8125

T MEAN	1	2
	23.9271	23.8125

G BY T	1	2
1	27.2917	25.5833
2	22.8000	23.8800
3	22.5217	23.2174
4	23.0833	22.5417

GROUP 1   25 SUBJECTS.

GROUP 2   26 SUBJECTS.

GROUP 3   25 SUBJECTS.

GROUP 4   25 SUBJECTS.

FEELINGS OF INFERIORITY (FI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.8465	201.		
BETWEEN	2.2665	100.		
GROUPS	1.9081	3.	0.838	0.5209
ERROR (G)	2.2776	97.		
WITHIN	1.4307	101.		
TRIALS	10.9356	1.	8.049	0.0057
G BY T	0.5922	3.	0.436	0.7317
ERROR (T)	1.3586	97.		

G MEAN	1	2	3	4
	1.6000	1.8462	1.3800	1.6800

T MEAN	1	2
	1.3960	1.8614

G BY T	1	2
1	1.2400	1.9600
2	1.7308	1.9615
3	1.2000	1.5600
4	1.4000	1.9600

NEUROTIC SYMPTOMS, ACADEMIC (NA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	2.0528	201.		
BETWEEN	2.4912	100.		
GROUPS	1.0455	3.	0.412	0.7482
ERROR (G)	2.5359	97.		
WITHIN	1.6188	101.		
TRIALS	3.0941	1.	1.908	0.1668
G BY T	1.0397	3.	0.641	0.5941
ERROR (T)	1.6215	97.		

G MEAN	1	2	3	4
	1.6200	1.8269	1.6200	1.4800

T MEAN	1	2
	1.5149	1.7624

G BY T	1	2
1	1.5200	1.7200
2	1.8846	1.7692
3	1.4400	1.8000
4	1.2000	1.7600

NEUROTIC SYMPTOMS, SOCIAL (NS)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	2.3659	201.		
BETWEEN	2.3754	100.		
GROUPS	1.6859	3.	0.703	0.5555
ERROR (G)	2.3968	97.		
WITHIN	2.3564	101.		
TRIALS	14.4356	1.	6.306	0.0131
G BY T	0.5089	3.	0.222	0.8811
ERROR (T)	2.2890	97.		

G MEAN	1	2	3	4
	1.6600	2.0577	1.9400	1.7400

T MEAN	1	2
	1.5842	2.1188

BY T	1	2
1	1.4800	1.8400
2	1.6923	2.4231
3	1.6000	2.2800
4	1.5600	1.9200

..GGRESSION WITH INDEPENDENCE STRIVINGS (AI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	2.9408	201.		
BETWEEN	3.6159	100.		
GROUPS	4.2688	3.	1.187	0.3184
ERROR (G)	3.5957	97.		
WITHIN	2.2723	101.		
TRIALS	8.3218	1.	3.673	0.0551
G BY T	0.4768	3.	0.210	0.8891
ERROR (T)	2.2654	97.		

G MEAN	1	2	3	4
	1.5200	2.1154	1.8000	1.5000

T MEAN	1	2
	1.5347	1.9406

G BY T	1	2
1	1.3600	1.6800
2	2.0000	2.2308
3	1.6000	2.0000
4	1.1600	1.8400

ACTIVE WITHDRAWAL (AW)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.8165	201.		
BETWEEN	2.2261	100.		

GROUPS	3.2423	3.	1.477	0.2242	120
ERROR (G)	2.1947	97.			
WITHIN	1.4109	101.			
TRIALS	1.7871	1.	1.253	0.2648	
G BY T	0.8035	3.	0.564	0.6446	
ERROR (T)	1.4258	97.			

G MEAN	1	2	3	4
	1.4400	2.0577	1.7600	1.7600

T MEAN	1	2
	1.6634	1.8515

G BY T	1	2
1	1.5200	1.3600
2	1.8846	2.2308
3	1.5600	1.9600
4	1.6800	1.8400

EMOTIONAL DISTURBANCE WITH DEPRESSION (ED)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.3831	201.		
BETWEEN	2.2050	100.		
GROUPS	2.0224	3.	0.915	0.5611
ERROR (G)	2.2107	97.		
WITHIN	0.5693	101.		
TRIALS	0.4010	1.	0.694	0.5883
G BY T	0.3640	3.	0.630	0.6009
ERROR (T)	0.5774	97.		

G MEAN	1	2	3	4
	1.2200	1.3654	1.6800	1.5400

T MEAN	1	2
	1.4059	1.4950

G BY T	1	2
1	1.1200	1.3200

2	1.3077	1.4231
3	1.7600	1.6000
4	1.4400	1.6400

SELF ENHANCEMENT, THROUGH DEROGATION OF OTHERS (SE)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.3061	201.		
BETWEEN	0.4152	100.		
GROUPS	0.1439	3.	0.340	0.7993
ERROR (G)	0.4236	97.		
WITHIN	0.1980	101.		
TRIALS	0.3168	1.	1.624	0.2029
G BY T	0.2521	3.	1.292	0.2808
ERROR (T)	0.1951	97.		

G MEAN	1	2	3	4
	1.2800	1.2115	1.1600	1.2600

T MEAN	1	2
	1.1881	1.2673

G BY T	1	2
1	1.2000	1.3600
2	1.2692	1.1538
3	1.1200	1.2000
4	1.1600	1.3600

DIFFUSE HYPERACTIVITY (DH)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.7091	201.		
BETWEEN	0.8402	100.		
GROUPS	2.4640	3.	3.119	0.0290
ERROR (G)	0.7900	97.		
WITHIN	0.5792	101.		
TRIALS	0.1238	1.	0.209	0.6534

G BY T	0.3111	3.	0.525	0.6702
ERROR (T)	0.5922	97.		

G MEAN	1	2	3	4
	1.1800	1.6154	1.5600	1.2400

T MEAN	1	2
	1.3762	1.4257

G BY T	1	2
1	1.1200	1.2400
2	1.6538	1.5769
3	1.6000	1.5200
4	1.1200	1.3600

GROUP 1	23 SUBJECTS.	ANGLO MALE	HI SHIFT
GROUP 2	24 SUBJECTS.	ANGLO MALE	HI....NO SHIFT
GROUP 3	25 SUBJECTS.	ANGLO MALE	LO....NO SHIFT
GROUP 4	24 SUBJECTS.	ANGLO MALE	LO SHIFT

PEER ACCEPTANCE

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0320	191.		
BETWEEN	0.0461	95.		
GROUPS	0.0061	3.	0.129	0.9416
ERROR (G)	0.0474	92.		
WITHIN	0.0181	96.		
TRIALS	0.0349	1.	1.910	0.1668
G BY T	0.0074	3.	0.405	0.7532
ERROR (T)	0.0183	92.		

G MEAN	1	2	3	4
	1.1937	1.2215	1.2094	1.2058

T MEAN	1	2
	1.1943	1.2212

G BY T	1	2
1	1.1983	1.1891
2	1.2042	1.2387
3	1.1940	1.2248
4	1.1808	1.2308

PEER REJECTION

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0342	191.		
BETWEEN	0.0505	95.		
GROUPS	0.0486	3.	0.961	0.5838
ERROR (G)	0.0506	92.		
WITHIN	0.0181	96.		
TRIALS	0.0117	1.	0.639	0.5681
G BY T	0.0114	3.	0.619	0.6082
ERROR (T)	0.0183	92.		

G MEAN	1	2	3	4
	1.1550	1.2248	1.1596	1.1804

T MEAN	1	2
	1.1722	1.1878

G BY T	1	2
1	1.1635	1.1465
2	1.2146	1.2350
3	1.1584	1.1608
4	1.1525	1.2083

GROUP 1   16 SUBJECTS.

GROUP 2   16 SUBJECTS.

GROUP 3   20 SUBJECTS.

GROUP 4   12 SUBJECTS.

PRONENESS TOWARD NEUROTICISM (PTN)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	11.4079	127.		
BETWEEN	16.7985	63.		
GROUPS	23.7474	3.	1.444	0.2380
ERROR (G)	16.4510	60.		
WITHIN	6.1016	64.		
TRIALS	27.1953	1.	4.676	0.0325
G BY T	4.7807	3.	0.822	0.5104
ERROR (T)	5.8160	60.		

G MEAN	1	2	3	4
	9.0938	9.1563	8.0000	10.1250

T MEAN	1	2
	9.4219	8.5000

G BY T	1	2
1	9.1250	9.0625
2	9.9375	8.3750
3	8.3000	7.7000
4	11.0000	9.2500

TABLE 24.

T X S ANALYSES OF VARIANCE FOR
ANGLO MALES CLASSIFIED BY SHIFT
IN SCHOOL ANXIETY BETWEEN T_3 AND T_4

GROUP 1	20 SUBJECTS.	ANGLO MALE	HI SHIFT
GROUP 2	19 SUBJECTS.	ANGLO MALE	HI....NO SHIFT
GROUP 3	22 SUBJECTS.	ANGLO MALE	LO....NO SHIFT
GROUP 4	17 SUBJECTS.	ANGLO MALE	LO SHIFT

HAT NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.6345	155.		
BETWEEN	0.9479	77.		
GROUPS	0.7009	3.	0.732	0.5394
ERROR (G)	0.9579	74.		
WITHIN	0.3251	78.		
TRIALS	14.8926	1.	109.527	0.0000
G BY T	0.1349	3.	0.992	0.5974
ERROR (T)	0.1360	74.		

G MEAN	1	2	3	4
	5.5600	5.5316	5.7091	5.8294

T MEAN	1	2
	5.3449	5.9628

G BY T	1	2
1	5.1650	5.9550
2	5.2421	5.8211
3	5.4318	5.9864
4	5.5588	6.1000

MAT VERBAL (V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	4.1573	155.		
BETWEEN	7.5017	77.		
GROUPS	4.1456	3.	0.543	0.6587
ERROR (G)	7.6377	74.		
WITHIN	0.8559	78.		
TRIALS	12.9807	1.	18.354	0.0002
G BY T	0.4804	3.	0.679	0.5710
ERROR (T)	0.7073	74.		

G MEAN	1	2	3	4
	6.1450	6.2211	6.5977	6.8618

T MEAN	1	2
	6.1590	6.7359

G BY T	1	2
1	5.7600	6.5300
2	5.8789	6.5632
3	6.3136	6.8818
4	6.7412	6.9824

GROUP 1	26 SUBJECTS.	ANGLO MALE	HI SHIFT
GROUP 2	25 SUBJECTS.	ANGLO MALE	HI....NO SHIFT
GROUP 3	25 SUBJECTS.	ANGLO MALE	LO....NO SHIFT
GROUP 4	25 SUBJECTS.	ANGLO MALE	LO SHIFT

SCHOOL ANXIETY (SA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	223.7413	201.		
BETWEEN	369.8451	100.		
GROUPS	4225.4092	3.	16.861	0.0000
ERROR (G)	250.6008	97.		
WITHIN	79.0842	101.		
TRIALS	35.7676	1.	1.464	0.2271
G BY T	1860.5911	3.	76.152	0.0000
ERROR (T)	24.4326	97.		

G MEAN	1	2	3	4
	24.8654	21.8200	5.9400	25.3600

T MEAN	1	2
	19.1287	19.9703

G BY T	1	2
1	17.0000	32.7308
2	21.4800	22.1600
3	5.8400	6.0400
4	32.2800	18.4400

SEX-LINKED INTERESTS, ATTITUDES (S)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	4.4977	201.		
BETWEEN	5.2954	100.		
GROUPS	12.1773	3.	2.396	0.0717
ERROR (G)	5.0826	97.		
WITHIN	3.7079	101.		
TRIALS	1.1138	1.	0.292	0.5971
G BY T	0.9912	3.	0.260	0.8554
ERROR (T)	3.8187	97.		

G MEAN	1	2	3	4
	10.5769	10.4200	10.7600	9.6400

T MEAN	1	2
	10.2772	10.4257

G BY T	1	2
1	10.6538	10.5000
2	10.1600	10.6800
3	10.6800	10.8400
4	9.6000	9.6800

SELF DISPARAGEMENT, IN RELATION TO PEERS (SD)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	8.0712	201.		
BETWEEN	8.9532	100.		
GROUPS	35.0256	3.	4.299	0.0071
ERROR (G)	8.1468	97.		
WITHIN	7.1980	101.		
TRIALS	19.0297	1.	3.223	0.0721
G BY T	45.0691	3.	7.633	0.0003
ERROR (T)	5.9048	97.		

G MEAN	1	2	3	4
	5.0000	4.4600	3.5000	5.4400

T MEAN	1	2
	4.2970	4.9109

G BY T	1	2
1	3.5385	6.4615
2	4.1600	4.7600
3	3.2400	3.7600
4	6.2800	4.6000

AVOIDANCE STYLE OF DEFENSIVENESS (DA_v)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	12.8299	201.		
BETWEEN	20.6532	100.		
GROUPS	58.4563	3.	3.000	0.0336
ERROR (G)	19.4840	97.		
WITHIN	5.0842	101.		
TRIALS	2.6187	1.	0.500	0.5117
G BY T	0.8845	3.	0.169	0.9168
ERROR (T)	5.2395	97.		

G MEAN	1	2	3	4
	12.3846	12.8000	10.3400	12.0400

T MEAN	1	2
	11.7822	12.0099

G BY T	1	2
1	12.2692	12.5000
2	12.8000	12.8000
3	10.0400	10.6400
4	12.0000	12.0800

APPROACH STYLE OF DEFENSIVENESS (DA_p)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	16.4836	201.		
BETWEEN	26.5671	100.		

GROUPS	24.0344	3.	0.902	0.5546	130
ERROR (G)	26.6455	97.			
WITHIN	6.5000	101.			
TRIALS	18.4207	1.	3.009	0.0822	
G BY T	14.7361	3.	2.407	0.0707	
ERROR (T)	6.1224	97.			

G MEAN	1	2	3	4
	11.1538	12.7400	12.1600	11.6000

T MEAN	1	2
	12.2079	11.6040

G BY T	1	2
1	11.9231	10.3846
2	13.1600	12.3200
3	12.6400	11.6800
4	11.1200	12.0800

GROUP 1   13 SUBJECTS.

GROUP 2   19 SUBJECTS.

GROUP 3   17 SUBJECTS.

GROUP 4   12 SUBJECTS.

CEMM NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	200.9068	121.		
BETWEEN	332.7786	60.		
GROUPS	432.3802	3.	1.320	0.2760
ERROR (G)	327.5365	57.		
WITHIN	71.1967	61.		
TRIALS	992.6563	1.	18.419	0.0002
G BY T	92.8385	3.	1.723	0.1712
ERROR (T)	53.8917	57.		

G MEAN	1	2	3	4
	107.8462	112.3947	114.5294	117.625°

T MEAN	1	2
	110.1967	115.9016

G BY T	1	2
1	104.6154	111.0769
2	110.2632	114.5263
3	113.1176	115.9412
4	112.0000	123.2500

CTBS VERBAL (V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	238.7590	121.		
BETWEEN	433.5307	60.		
GROUPS	64.5156	3.	0.142	0.9334
ERROR (G)	452.9526	57.		
WITHIN	47.1803	61.		
TRIALS	259.7031	1.	6.566	0.0125
G BY T	121.3125	3.	3.067	0.0344
ERROR (T)	39.5502	57.		

G MEAN	1	2	3	4
	109.5385	112.1842	109.1471	110.4167

T MEAN	1	2
	108.9672	111.8852

G BY T	1	2
1	107.2308	111.8462
2	109.9474	114.4211
3	110.4118	107.8824
4	107.2500	113.5833

GROUP 1   26 SUBJECTS.   ANGLO MALE   HI SHIFT

GROUP 2   23 SUBJECTS.   ANGLO MALE   HI....NO SHIFT

GROUP 3   21 SUBJECTS.   ANGLO MALE   LO....NO SHIFT

GROUP 4   22 SUBJECTS.   ANGLO MALE   LO SHIFT

GRADE POINT AVERAGE (GPA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	9.4306	183.		
BETWEEN	16.9319	91.		
GROUPS	15.8652	3.	0.935	0.5708
ERROR (G)	16.9683	88.		
WITHIN	2.0109	92.		
TRIALS	4.8914	1.	2.504	0.1132
G BY T	2.7412	3.	1.403	0.2461
ERROR (T)	1.9532	88.		

G MEAN	1	2	3	4
	11.8654	12.4348	13.2619	12.7273

T MEAN	1	2
	12.3696	12.6957

G BY T	1	2
1	12.0385	11.6923
2	12.1304	12.7391
3	12.9524	13.5714
4	12.4545	13.0000

GROUP 1   25 SUBJECTS.

GROUP 2   25 SUBJECTS.

GROUP 3   22 SUBJECTS.

GROUP 4   24 SUBJECTS.

SCHOOL MOTIVATION (SM)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	47.6791	191.		
BETWEEN	81.7495	95.		
GROUPS	34.4395	3.	0.413	0.7473
ERROR (G)	83.2922	92.		
WITHIN	13.9635	96.		
TRIALS	1.1719	1.	0.083	0.7716
G BY T	11.1963	3.	0.789	0.5060
ERROR (T)	14.1928	92.		

G MEAN	1	2	3	4
	22.7400	24.2400	24.7273	23.9583

T MEAN	1	2
	23.8125	23.9688

G BY T	1	2
1	22.0000	23.4800
2	24.6000	23.8800
3	24.8636	24.5909
4	23.9167	24.0000

GROUP 1   26 SUBJECTS.

GROUP 2   25 SUBJECTS.

GROUP 3   25 SUBJECTS.

GROUP 4   25 SUBJECTS.

FEELINGS OF INFERIORITY (FI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	3.0910	201.		
BETWEEN	4.7529	100.		
GROUPS	4.0955	3.	0.858	0.5317
ERROR (G)	4.7732	97.		
WITHIN	1.4455	101.		
TRIALS	1.2673	1.	0.861	0.6417
G BY T	0.6635	3.	0.451	0.7213
ERROR (T)	1.4716	97.		

G MEAN	1	2	3	4
	2.0192	2.0600	1.5200	2.1600

T MEAN	1	2
	1.8614	2.0198

G BY T	1	2
1	1.8462	2.1923
2	1.8800	2.2400
3	1.5200	1.5200
4	2.2000	2.1200

NEUROTIC SYMPTOMS, ACADEMIC (NA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	2.5782	201.		
BETWEEN	4.1072	100.		
GROUPS	4.6112	3.	1.127	0.3422
ERROR (G)	4.0916	97.		
WITHIN	1.0644	101.		
TRIALS	0.5990	1.	0.547	0.5319
G BY T	0.2244	3.	0.205	0.8928
ERROR (T)	1.0951	97.		

G MEAN	1	2	3	4
	1.8462	1.4200	1.8400	2.1600

T MEAN	1	2
	1.7624	1.8713

G BY T	1	2
1	1.7308	1.9615
2	1.3600	1.4800
3	1.7600	1.9200
4	2.2000	2.1200

NEUROTIC SYMPTOMS, SOCIAL (NS)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	3.3086	201.		
BETWEEN	4.1403	100.		
GROUPS	3.9422	3.	0.951	0.5790
ERROR (G)	4.1464	97.		
WITHIN	2.4851	101.		
TRIALS	0.4950	1.	0.195	0.6640
G BY T	1.4647	3.	0.577	0.6355
ERROR (T)	2.5372	97.		

G MEAN	1	2	3	4
	2.4615	1.8200	1.9600	2.0200

T MEAN	1	2
	2.1188	2.0198

G BY T	1	2
1	2.6923	2.2308
2	1.6400	2.0000
3	2.0400	1.8800
4	2.0800	1.9600

AGGRESSION WITH INDEPENDENCE STRIVINGS (AI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	3.1422	201.		
BETWEEN	4.9058	100.		
GROUPS	3.2488	3.	0.655	0.5852
ERROR (G)	4.9571	97.		
WITHIN	1.3960	101.		
TRIALS	2.8515	1.	2.011	0.1557
G BY T	0.2072	3.	0.146	0.9313
ERROR (T)	1.4178	97.		

G MEAN	1	2	3	4
	2.1346	1.7800	1.5200	1.8400

T MEAN	1	2
	1.9406	1.7030

G BY T	1	2
1	2.1923	2.0769
2	1.9200	1.6400
3	1.7200	1.3200
4	1.9200	1.7600

ACTIVE WITHDRAWAL (AW)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	2.5783	201.		
BETWEEN	3.5474	100.		

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
GROUPS	3.6616	3.	1.033	0.3823
ERROR (G)	3.5439	97.		
WITHIN	1.6188	101.		
TRIALS	0.0050	1.	0.003	0.9553
G BY T	1.0919	3.	0.661	0.5816
ERROR (T)	1.6517	97.		

G MEAN	1	2	3	4
	2.1346	1.6800	1.5600	2.0000

T MEAN	1	2
	1.8515	1.8416

G BY T	1	2
1	2.0385	2.2308
2	1.5600	1.8000
3	1.7600	1.3600
4	2.0400	1.9600

EMOTIONAL DISTURBANCE WITH DEPRESSION (ED)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.4254	201.		
BETWEEN	2.3700	100.		
GROUPS	3.3108	3.	1.414	0.2421
ERROR (G)	2.3409	97.		
WITHIN	0.4901	101.		
TRIALS	0.0049	1.	0.010	0.9174
G BY T	0.4809	3.	0.971	0.5887
ERROR (T)	0.4954	97.		

G MEAN	1	2	3	4
	1.6154	1.1600	1.7600	1.4600

T MEAN	1	2
	1.4950	1.5050

G BY T	1	2
1	1.6923	1.5385

2	1.2400	1.0800		
3	1.6800	1.8400		
4	1.3600	1.5600		

SELF ENHANCEMENT, THROUGH DEROGATION OF OTHERS (SE)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.3486	201.		
BETWEEN	0.4756	100.		
GROUPS	0.5512	3.	1.165	0.3272
ERROR (G)	0.4733	97.		
WITHIN	0.2228	101.		
TRIALS	0.2426	1.	1.075	0.3028
G BY T	0.1246	3.	0.553	0.6515
ERROR (T)	0.2256	97.		

G MEAN	1	2	3	4
	1.2308	1.1800	1.1400	1.3800

T MEAN	1	2
	1.2673	1.1980

G BY T	1	2
1	1.2692	1.1923
2	1.2000	1.1600
3	1.2400	1.0400
4	1.3600	1.4000

DIFFUSE HYPERACTIVITY (DH)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.6550	201.		
BETWEEN	0.9766	100.		
GROUPS	0.9388	3.	0.960	0.5835
ERROR (G)	0.9778	97.		
WITHIN	0.3366	101.		
TRIALS	0.0198	1.	0.057	0.8076

G BY T	0.0065	3.	0.018	0.9961
ERROR (T)	0.3501	97.		

G MEAN	1	2	3	4
	1.5577	1.2400	1.4600	1.4800

T MEAN	1	2
	1.4257	1.4455

G BY T	1	2
1	1.5385	1.5769
2	1.2400	1.2400
3	1.4400	1.4800
4	1.4800	1.4800

GROUP 1   14 SUBJECTS.

GROUP 2   20 SUBJECTS.

GROUP 3   19 SUBJECTS.

GROUP 4   13 SUBJECTS.

PEER ACCEPTANCE

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0913	131.		
BETWEEN	0.1193	65.		
GROUPS	0.0860	3.	0.711	0.5521
ERROR (G)	0.1209	62.		
WITHIN	0.0638	66.		
TRIALS	0.8528	1.	16.048	0.0004
G BY T	0.0221	3.	0.415	0.7462
ERROR (T)	0.0531	62.		

G MEAN	1	2	3	4
	1.2746	1.3075	1.3092	1.1935

T MEAN	1	2
	1.1982	1.3589

G BY T	1	2
1	1.1807	1.3686
2	1.2025	1.4125
3	1.2411	1.3774
4	1.1477	1.2392

PEER REJECTION

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.1744	131.		
BETWEEN	0.2449	65.		
GROUPS	0.6418	3.	2.844	0.0440
ERROR (G)	0.2257	62.		
WITHIN	0.1049	66.		
TRIALS	0.6164	1.	6.822	0.0109
G BY T	0.2361	3.	2.613	0.0581
ERROR (T)	0.0903	62.		

G MEAN	1	2	3	4
	1.4954	1.1715	1.2237	1.2335

T MEAN	1	2
	1.1991	1.3358

G BY T	1	2
1	1.2886	1.7021
2	1.1480	1.1950
3	1.1721	1.2753
4	1.2208	1.2462

GROUP 1   19 SUBJECTS.

GROUP 2   15 SUBJECTS.

GROUP 3   16 SUBJECTS.

GROUP 4   14 SUBJECTS.

PRONENESS TOWARD NEUROTICISM (PTN)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	10.7222	127.		
BETWEEN	16.9162	63.		
GROUPS	84.2091	3.	6.214	0.0013
ERROR (G)	13.5515	60.		
WITHIN	4.6250	64.		
TRIALS	0.2813	1.	0.062	0.7995
G BY T	7.9920	3.	1.765	0.1623
ERROR (T)	4.5290	60.		

G MEAN	1	2	3	4
	9.3158	8.3333	6.3750	10.2143

T MEAN	1	2
	8.5000	8.5938

G BY T	1	2
1	8.6316	10.0000
2	8.5333	8.1333
3	6.4375	6.3125
4	10.6429	9.7857

TABLE 25.

T X S ANALYSES OF VARIANCE FOR
ANGLO FEMALES CLASSIFIED BY SHIFT
IN SCHOOL ANXIETY BETWEEN T_1 AND T_2

GROUP 1	15 SUBJECTS.	ANGLO FEMALE	HI SHIFT
GROUP 2	20 SUBJECTS.	ANGLO FEMALE	HI...NO SHIFT
GROUP 3	20 SUBJECTS.	ANGLO FEMALE	LO...NO SHIFT
GROUP 4	17 SUBJECTS.	ANGLO FEMALE	LO SHIFT

MAT NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.8839	143.		
BETWEEN	0.8610	71.		
GROUPS	1.3845	3.	1.652	0.1842
ERROR (G)	0.8379	68.		
WITHIN	0.9066	72.		
TRIALS	58.1406	1.	574.230	0.0000
G BY T	0.0830	3.	0.820	0.5099
ERROR (T)	0.1012	68.		

G MEAN	1	2	3	4
	4.5867	4.6725	4.8475	4.3794

T MEAN	1	2
	3.9986	5.2694

G BY T	1	2
1	3.8733	5.3000
2	4.0500	5.2950
3	4.2500	5.4450
4	3.7529	5.0059

MAT VERBAL (V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	3.3736	143.		
BETWEEN	4.9034	71.		
GROUPS	14.0147	3.	3.113	0.0312
ERROR (G)	4.5014	68.		
WITHIN	1.8651	72.		
TRIALS	89.9336	1.	148.418	0.0000
G BY T	1.0503	3.	1.733	0.1670
ERROR (T)	0.6059	68.		

G MEAN	1	2	3	4
	4.9267	5.6650	6.1075	4.7912

T MEAN	1	2
	4.6375	6.2181

G BY T	1	2
1	4.2667	5.5867
2	4.7450	6.5850
3	5.1850	7.0300
4	4.1941	5.3882

GROUP 1   17 SUBJECTS.

GROUP 2   15 SUBJECTS.

GROUP 3   19 SUBJECTS.

GROUP 4   14 SUBJECTS.

CTMM NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	201.4492	129.		
BETWEEN	325.9446	64.		
GROUPS	154.8073	3.	0.463	0.7131
ERROR (G)	334.3612	61.		
WITHIN	78.8692	65.		
TRIALS	2088.0156	1.	43.308	0.0000
G BY T	32.5000	3.	0.674	0.5747
ERROR (T)	48.2129	61.		

G MEAN	1	2	3	4
	112.2647	112.1000	112.1316	107.5714

T MEAN	1	2
	107.1692	115.1846

G BY T	1	2
1	108.0588	116.4706
2	109.6000	114.6000
3	107.7895	116.4737
4	102.6429	112.5000

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	175.7821	129.		
BETWEEN	311.4827	64.		
GROUPS	249.8125	3.	0.794	0.5045
ERROR (G)	314.5156	61.		
WITHIN	42.1692	65.		
TRIALS	858.1250	1.	29.616	0.0000
G BY T	38.4688	3.	1.328	0.2728
ERROR (T)	28.9749	61.		

G MEAN	1	2	3	4
	110.7353	113.2667	113.5789	107.3929

T MEAN	1	2
	108.8615	114.0000

G BY T	1	2
1	106.7059	114.7647
2	111.8000	114.7333
3	111.4211	115.7368
4	104.8571	109.9286

GROUP 1   22 SUBJECTS.

GROUP 2   22 SUBJECTS.

GROUP 3   22 SUBJECTS.

GROUP 4   21 SUBJECTS.

GRADE POINT AVERAGE (GPA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	10.7972	173.		
BETWEEN	18.8478	86.		
GROUPS	63.2701	3.	3.670	0.0153
ERROR (G)	17.2421	83.		
WITHIN	2.8391	87.		
TRIALS	42.5059	1.	18.003	0.0002
G BY T	2.8421	3.	1.204	0.3132
ERROR (T)	2.3611	83.		

G MEAN	1	2	3	4
	13.6591	13.5909	15.1136	12.1429

T MEAN	1	2
	13.1494	14.1379

G BY T	1	2
1	13.4091	13.9091
2	12.7727	14.4091
3	14.7727	15.4545
4	11.5714	12.7143

GROUP 1   13 SUBJECTS.

GROUP 2   12 SUBJECTS.

GROUP 3   20 SUBJECTS.

GROUP 4   18 SUBJECTS.

PRONENESS TOWARD NEUROTICISM (PTN)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	10.5817	125.		
BETWEEN	13.7775	62.		
GROUPS	102.7073	3.	11.097	0.0000
ERROR (G)	9.2557	59.		
WITHIN	7.4365	63.		
TRIALS	62.8651	1.	10.907	0.0020
G BY T	21.8587	3.	3.792	0.0147
ERROR (T)	5.7637	59.		

G MEAN	1	2	3	4
	9.8846	11.9583	7.5000	9.5278

T MEAN	1	2
	10.1270	8.7143

G BY T	1	2
1	9.8462	9.9231
2	12.1667	11.7500
3	8.0000	7.0000
4	11.3333	7.7222

GROUP 1   21 SUBJECTS.

GROUP 2   22 SUBJECTS.

GROUP 3   23 SUBJECTS.

GROUP 4   22 SUBJECTS.

SCHOOL MOTIVATION (SM)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	48.2026	175.		
BETWEEN	82.3787	87.		
GROUPS	59.9736	3.	0.721	0.5453
ERROR (G)	83.17'	84.		
WITHIN	14.4148	88.		
TRIALS	35.4600	1.	2.620	0.1053
G BY T	32.0049	3.	2.364	0.0756
ERROR (T)	13.5360	84.		

G MEAN	1	2	3	4
	25.4762	26.4318	28.2391	27.1591

T MEAN	1	2
	26.4091	27.3068

G BY T	1	2
1	25.8095	25.1429
2	26.5909	26.2727
3	27.5217	28.9565
4	25.6364	28.6818

GROUP 1   22 SUBJECTS.

GROUP 2   23 SUBJECTS.

GROUP 3   23 SUBJECTS.

GROUP 4   23 SUBJECTS.

FEELINGS OF INFERIORITY (FI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.6868	181.		
BETWEEN	0.8701	90.		
GROUPS	2.1895	3.	2.655	0.0524
ERROR (G)	0.8246	87.		
WITHIN	0.5055	91.		
TRIALS	1.4066	1.	2.847	0.0912
G BY T	0.5364	3.	1.086	0.3600
ERROR (T)	0.4941	87.		

G MEAN	1	2	3	4
	1.5000	1.0217	1.0870	1.3261

T MEAN	1	2
	1.1429	1.3187

G BY T	1	2
1	1.4091	1.5909
2	1.0000	1.0435
3	1.0870	1.0870
4	1.0870	1.5652

NEUROTIC SYMPTOMS, ACADEMIC (NA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.1495	181.		
BETWEEN	1.5563	90.		
GROUPS	7.4861	3.	5.538	0.0019
ERROR (G)	1.3518	87.		
WITHIN	0.7473	91.		
TRIALS	5.6264	1.	8.985	0.0038
G BY T	2.6321	3.	4.203	0.0081
ERROR (T)	0.6262	87.		

G MEAN	1	2	3	4
	1.9773	1.1739	1.0870	1.2391

T MEAN	1	2
	1.1868	1.5385

G BY T	1	2
1	1.4545	2.5000
2	1.2174	1.1304
3	1.0000	1.1739
4	1.0870	1.3913

NEUROTIC SYMPTOMS, SOCIAL (NS)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.3815	181.		
BETWEEN	0.0784	90.		
GROUPS	0.0845	3.	1.081	0.3619
ERROR (G)	0.0782	87.		
WITHIN	0.6813	91.		
TRIALS	54.9451	1.	702.830	0.0000
G BY T	0.0845	3.	1.081	0.3619
ERROR (T)	0.0782	87.		

G MEAN	1	2	3	4
	0.6136	0.5217	0.5435	0.5217

T MEAN	1	2
	1.0989	0.0000

G BY T	1	2
1	1.2273	-0.0000
2	1.0435	-0.0000
3	1.0870	-0.0000
4	1.0435	-0.0000

AGGRESSION WITH INDEPENDENCE STRIVINGS (AI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.4072	181.		
BETWEEN	1.6579	90.		
GROUPS	3.5110	3.	2.203	0.0922
ERROR (G)	1.5940	87.		
WITHIN	1.1593	91.		
TRIALS	2.9066	1.	2.489	0.1143
G BY T	0.3256	3.	0.279	0.8420
ERROR (T)	1.1680	87.		

G MEAN	1	2	3	4
	1.6818	1.0870	1.0870	1.2826

T MEAN	1	2
	1.1538	1.4066

G BY T	1	2
1	1.5455	1.8182
2	1.0435	1.1304
3	1.0000	1.1739
4	1.0435	1.5217

ACTIVE WITHDRAWAL (AW)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.1317	181.		
BETWEEN	1.4816	90.		

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
GROUPS	0.9251	3.	0.616	0.6101
ERROR (G)	1.5007	87.		
WITHIN	0.7857	91.		
TRIALS	5.9835	1.	8.231	0.0053
G BY T	0.7585	3.	1.043	0.3784
ERROR (T)	0.7269	87.		

G MEAN	1	2	3	4
	1.5000	1.4348	1.1739	1.4130

T MEAN	1	2
	1.1978	1.5604

G BY T	1	2
1	1.3182	1.6818
2	1.1739	1.6957
3	1.1739	1.1739
4	1 1304	1.6957

EMOT ONAL DISTURBANCE WITH DEPRESSION (ED)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.8642	181.		
BETWEEN	1.2769	90.		
GROUPS	2.0534	3.	1.643	0.1840
ERROR (G)	1.2501	87.		
WITHIN	0.4560	91.		
TRIALS	0.0495	1.	0.108	0.7419
G BY T	0.5916	3.	1.297	0.2798
ERROR (T)	0.4560	87.		

G MEAN	1	2	3	4
	1.6818	1.5217	1.2391	1.2609

T MEAN	1	2
	1.4066	1.4396

G BY T	1	2
1	1.5000	1.8636

2	1.6087	1.4348
3	1.2609	1.2174
4	1.2609	1.2609

SELF ENHANCEMENT, THROUGH DEROGATION OF OTHERS (SE)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.5046	181.		
BETWEEN	0.6816	90.		
GROUPS	1.2878	3.	1.949	0.1262
ERROR (G)	0.6607	87.		
WITHIN	0.3297	91.		
TRIALS	3.1648	1.	10.747	0.0019
G BY T	0.4052	3.	1.376	0.2544
ERROR (T)	0.2945	87.		

G MEAN	1	2	3	4
	1.4773	1.0652	1.2826	1.2391

T MEAN	1	2
	1.1319	1.3956

G BY T	1	2
1	1.2273	1.7273
2	1.0435	1.0870
3	1.1739	1.3913
4	1.0870	1.3913

DIFFUSE HYPERACTIVITY (DH)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.7807	181.		
BETWEEN	0.4089	90.		
GROUPS	1.4930	3.	4.019	0.0101
ERROR (G)	0.3715	87.		
WITHIN	1.1484	91.		
TRIALS	67.6978	1.	182.213	0.0000

G BY T	1.4930	3.	4.019	0.0101
ERROR (T)	0.3715	87.		

G MEAN	1	2	3	4
	0.8864	0.5000	0.5435	0.5217

T MEAN	1	2
	1.2198	0.0000

G BY T	1	2
1	1.7727	-0.0000
2	1.0000	-0.0000
3	1.0870	-0.0000
4	1.0435	-0.0000

GROUP 1   22 SUBJECTS.   ANGLO FEMALE   HI SHIFT

GROUP 2   21 SUBJECTS.   ANGLO FEMALE   HI...NO SHIFT

GROUP 3   23 SUBJECTS.   ANGLO FEMALE   LO...NO SHIFT

GROUP 4   22 SUBJECTS.   ANGLO FEMALE   LO SHIFT

PEER ACCEPTANCE

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0297	175.		
BETWEEN	0.0471	87.		
GROUPS	0.0429	3.	0.908	0.5569
ERROR (G)	0.0473	84.		
WITHIN	0.0124	88.		
TRIALS	0.0128	1.	1.010	0.3190
G BY T	0.0050	3.	0.392	0.7621
ERROR (T)	0.0127	84.		

G MEAN	1	2	3	4
	1.1650	1.2105	1.2220	1.2375

T MEAN	1	2
	1.2174	1.2003

G BY T	1	2
1	1.1800	1.1500
2	1.2300	1.1910
3	1.2265	1.2174
4	1.2332	1.2418

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0322	175.		
BETWEEN	0.0519	87.		
GROUPS	0.0924	3.	1.832	0.1461
ERROR (G)	0.0505	84.		
WITHIN	0.0128	88.		
TRIALS	0.0022	1.	0.175	0.6803
G BY T	0.0243	3.	1.938	0.1283
ERROR (T)	0.0125	84.		

G MEAN	1	2	3	4
	1.2475	1.1583	1.1457	1.1718

T MEAN	1	2
	1.1842	1.1772

G BY T	1	2
1	1.2336	1.2614
2	1.1919	1.1248
3	1.1578	1.1335
4	1.1550	1.1886

GROUP 1   22 SUBJECTS.   ANGLO FEMALE   FI SHIFT

GROUP 2   23 SUBJECTS.   ANGLO FEMALE   HI...NO SHIFT

GROUP 3   23 SUBJECTS.   ANGLO FEMALE   LC...NO SHIFT

GROUP 4   23 SUBJECTS.   ANGLO FEMALE   LO SHIFT

TOTAL =   91 SUBJECTS.

DEGREES OF FREEDOM

    3 AND   87 FOR GROUPS.

    1 AND   87 FOR TREATMENTS.

    3 AND   87 FOR INTERACTION.

SCHOOL ANXIETY (SA)

GROUPS F RATIO = 15.485   P = .0000

MEANS.   30.6364   32.2609   11.2826   30.5000

TREATMENTS F RATIO = 45.375   P = .0000

MEANS.   28.8462   23.3956

INTERACTION F RATIO = 105.128   P = .0000

GROUP   1   24.0909   37.1818

GROUP   2   33.9130   30.6087

GROUP   3   13.0000   9.5652

GROUP   4   44.1739   16.8261

SEX-LINKED INTERESTS, ATTITUDES (S)

GROUPS F RATIO =   .490   P = .6941

MEANS.   5.5000   6.3696   5.6739   5.7609

TREATMENTS F RATIO = 31.777   P = .0000

MEANS.   5.0879   6.5714

INTERACTICN F RATIO =   1.185   P = .3200

GROUP   1   4.7727   6.2273

GROUP   2   5.26C9   7.4783

GROUP   3   5.2609   6.0870

GROUP   4   5.0435   6.4783

SELF DISPARAGEMENT, IN RELATION TO PEERS (SD)

GROUPS F RATIO =   2.518   P = .0622

MEANS.   3.5909   3.8261   2.6957   3.9130

TREATMENTS F RATIC =   6.621   P = .0114

MEANS.   3.2198   3.7912

INTERACTICN F RATIC =   4.593   P = .0052

GROUP   1   3.4545   3.7273

GROUP   2   2.9565   4.6957

GROUP   3   2.9565   2.4348

GROUP   4   3.5217   4.3043

AVOIDANCE STYLE OF DEFENSIVENESS (DA_V)

GROUPS F RATIO =   5.164   P = .0C28

MEANS.   13.0682   14.3478   11.8478   13.3913

TREATMENTS F RATIC =   .402   P = .5350

MEANS.   13.2637   13.0659

INTERACTICN F RATIC =   13.521   P = .C000

GROUP   1   11.7727   14.3636

GROUP   2   14.3043   14.3913

GROUP   3   12.0000   11.6957

GROUP   4   14.9130   11.8696

APPROACH STYLE OF DEFENSIVENESS (DA_p)

GROUPS F RATIO =   .574   P = .6380

MEANS.   14.7045   14.2826   15.1957   14.3261

TREATMENTS F RATIO =   1.474   P = .2258

MEANS.   14.7912   (14.4615

INTERACTICN F RATIC =   3.700   P = .0146

GROUP 1   14.1818   15.2273

GROUP 2   14.4783   14.C87C

GROUP 3   15.3913   15.0000

GROUP 4   15.0870   13.5652

TABLE 26.

T X S ANALYSES OF VARIANCE FOR
ANGLO FEMALES CLASSIFIED BY SHIFT
IN SCHOOL ANXIETY BETWEEN T_2 AND T_3

GROUP 1	17 SUBJECTS.	ANGLO FEMALE	HI SHIFT	
GROUP 2	19 SUBJECTS.	ANGLO FEMALE	HI...NO SHIFT	
GROUP 3	16 SUBJECTS.	ANGLO FEMALE	LO...NO SHIFT	
GROUP 4	20 SUBJECTS.	ANGLO FEMALE	LO SHIFT	

MAT NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.5599	143.		
BETWEEN	1.0171	71.		
GROUPS	1.1750	3.	1.163	0.3301
ERROR (G)	1.0101	68.		
WITHIN	0.1091	72.		
TRIALS	0.0034	1.	0.030	0.8563
G BY T	0.0481	3.	0.425	0.7397
ERROR (T)	0.1133	68.		

G MEAN	1	2	3	4
	5.3324	5.1053	5.5125	5.1600

T MEAN	1	2
	5.2694	5.2597

G BY T	1	2
1	5.3765	5.2882
2	5.0684	5.1421
3	5.5000	5.5250
4	5.1850	5.1350

MAT VERBAL (V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	3.7478	143.		
BETWEEN	6.9364	71.		
GROUPS	2.5208	3.	0.353	0.7895
ERROR (G)	7.1312	68.		
WITHIN	0.6035	72.		
TRIALS	0.7366	1.	1.188	0.2792
G BY T	0.1836	3.	0.296	0.8298
ERROR (T)	0.6201	68.		

G MEAN	1	2	3	4
	6.3559	5.9316	6.4344	5.9425

T MEAN	1	2
	6.2181	6.0750

G BY T	1	2
1	6.4294	6.2824
2	6.0263	5.8368
3	6.5875	6.2812
4	5.9250	5.9600

GROUP 1   13 SUBJECTS.

GROUP 2   20 SUBJECTS.

GROUP 3   18 SUBJECTS.

GROUP 4   14 SUBJECTS.

CTMM NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	220.5562	129.		
BETWEEN	404.3633	64.		
GROUPS	656.5052	3.	1.675	0.1804
ERROR (G)	391.9629	61.		
WITHIN	39.5769	65.		
TRIALS	7.4063	1.	0.181	0.6753
G BY T	24.5000	3.	0.600	0.6215
ERROR (T)	40.8458	61.		

G MEAN	1	2	3	4
	114.0000	110.3750	119.4167	118.8214

T MEAN	1	2
	115.1846	115.6615

G BY T	1	2
1	113.6154	114.3846
2	110.9000	109.8500
3	119.4444	119.3889
4	117.2857	120.3571

CTMM VERBAL (V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	203.9334	129.		
BETWEEN	372.5610	64.		
GROUPS	631.6823	3.	1.756	0.1638
ERROR (G)	359.8174	61.		
WITHIN	37.9000	65.		
TRIALS	257.6094	1.	7.584	0.0077
G BY T	44.5990	3.	1.313	0.2776
ERROR (T)	33.9688	61.		

G MEAN	1	2	3	4
	113.2308	107.6000	117.5556	112.7500

T MEAN	1	2
	114.0000	111.1846

G BY T	1	2
1	115.3846	111.0769
2	109.8500	105.3500
3	118.8889	116.2222
4	112.3571	113.1429

GROUP 1	20 SUBJECTS.	ANGLO FEMALE	HI SHIFT
GROUP 2	22 SUBJECTS.	ANGLO FEMALE	HI...NO SHIFT
GROUP 3	22 SUBJECTS.	ANGLO FEMALE	LO...NO SHIFT
GROUP 4	23 SUBJECTS.	ANGLO FEMALE	LO SHIFT

GRADE POINT AVERAGE (GPA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	10.9176	173.		
BETWEEN	19.2005	86.		
GROUPS	31.9590	3.	1.705	0.1708
ERROR (G)	18.7393	83.		
WITHIN	2.7299	87.		
TRIALS	18.6724	1.	7.667	0.0070
G BY T	5.5615	3.	2.284	0.0837
ERROR (T)	2.4355	83.		

G MEAN	1	2	3	4
	14.5250	12.6818	14.4545	13.6522

T MEAN	1	2
	14.1379	13.4828

G BY T	1	2
1	14.5000	14.5500
2	13.4545	11.9091
3	14.5455	14.3636
4	14.0870	13.2174

GROUP 1   13 SUBJECTS.

GROUP 2   17 SUBJECTS.

GROUP 3   19 SUBJECTS.

GROUP 4   14 SUBJECTS.

PRONENESS TOWARD NEUROTICISM (PTN)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	11.4560	125.		
BETWEEN	18.7097	62.		
GROUPS	61.0552	3.	3.688	0.0166
ERROR (G)	16.5565	59.		
WITHIN	4.3175	63.		
TRIALS	0.2856	1.	0.063	0.7986
G BY T	1.0330	3.	0.227	0.8777
ERROR (T)	4.5528	59.		

G MEAN	1	2	3	4
	9.4615	9.9706	6.9737	8.6429

T MEAN	1	2
	8.7143	8.6190

G BY T	1	2
1	9.4615	9.4615
2	10.1765	9.7647
3	7.1053	6.8421
4	8.4286	8.8571

GROUP 1   20 SUBJECTS.

GROUP 2   23 SUBJECTS.

GROUP 3   22 SUBJECTS.

GROUP 4   23 SUBJECTS.

SCHOOL MOTIVATION (SM)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	50.2551	175.		
BETWEEN	83.7774	87.		
GROUPS	104.3643	3.	1.257	0.2939
ERROR (G)	83.0422	84.		
WITHIN	17.1136	88.		
TRIALS	46.0225	1.	2.757	0.0967
G BY T	19.1751	3.	1.148	0.3344
ERROR (T)	16.6959	84.		

G MEAN	1	2	3	4
	28.5750	25.1739	27.7045	26.0000

T MEAN	1	2
	27.3068	26.2841

G BY T	1	2
1	29.5500	27.6000
2	24.7391	25.6087
3	28.5909	26.8182
4	26.6957	25.3043

GROUP 1   22 SUBJECTS.

GROUP 2   24 SUBJECTS.

GROUP 3   23 SUBJECTS.

GROUP 4   22 SUBJECTS.

FEELINGS OF INFERIORITY (FI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.9175	181.		
BETWEEN	0.9118	90.		
GROUPS	1.2914	3.	1.437	0.2364
ERROR (G)	0.8988	87.		
WITHIN	0.9231	91.		
TRIALS	0.3517	1.	0.372	0.5507
G BY T	0.4526	3.	0.479	0.7022
ERROR (T)	0.9459	87.		

G MEAN	1	2	3	4
	1.2500	1.3958	1.2174	1.5909

T MEAN	1	2
	1.3187	1.4066

G BY T	1	2
1	1.2273	1.2727
2	1.2917	1.5000
3	1.3043	1.1304
4	1.4545	1.7273

NEUROTIC SYMPTOMS, ACADEMIC (NA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.3884	181.		
BETWEEN	1.5867	90.		
GROUPS	4.5325	3.	3.052	0.0321
ERROR (G)	1.4851	87.		
WITHIN	1.1923	91.		
TRIALS	0.9286	1.	0.774	0.6146
G BY T	1.0478	3.	0.873	0.5392
ERROR (T)	1.2003	87.		

G MEAN	1	2	3	4
	1.2727	1.4375	1.2391	1.9318

T MEAN	1	2
	1.5385	1.3956

G BY T	1	2
1	1.2727	1.2727
2	1.6250	1.2500
3	1.1304	1.3478
4	2.1364	1.7273

NEUROTIC SYMPTOMS, SOCIAL (NS)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.9712	181.		
BETWEEN	0.9365	90.		
GROUPS	2.4871	3.	2.817	0.0429
ERROR (G)	0.8830	87.		
WITHIN	1.0055	91.		
TRIALS	5.9835	1.	6.152	0.0144
G BY T	0.2977	3.	0.306	0.8229
ERROR (T)	0.9727	87.		

G MEAN	1	2	3	4
	1.1818	1.6875	1.3043	1.2273

T MEAN	1	2
	1.1758	1.5385

G BY T	1	2
1	1.0909	1.2727
2	1.4167	1.9583
3	1.0870	1.5217
4	1.0909	1.3636

REGRESSION WITH INDEPENDENCE STRIVINGS (AI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	2.5830	181.		
BETWEEN	2.9391	90.		
GROUPS	2.8854	3.	0.981	0.5931
ERROR (G)	2.9409	87.		
WITHIN	2.2308	91.		
TRIALS	0.0220	1.	0.010	0.9176
G BY T	3.4819	3.	1.573	0.2003
ERROR (T)	2.2130	87.		

G MEAN	1	2	3	4
	1.4773	1.2083	1.1957	1.7273

T MEAN	1	2
	1.4066	1.3846

G BY T	1	2
1	1.0909	1.8636
2	1.2500	1.1667
3	1.3043	1.0870
4	2.0000	1.4545

ACTIVE WITHDRAWAL (AW)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	2.2242	181.		
BETWEEN	3.3508	90.		

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
GROUPS	4.8993	3.	1.486	0.2228
ERROR (G)	3.2974	87.		
WITHIN	1.1099	91.		
TRIALS	0.0220.	1.	0.019	0.8844
G BY T	0.8908	3.	0.788	0.5064
ERROR (T)	1.1299	87.		

G MEAN	1	2	3	4
	1.3636	1.8542	1.2174	1.8409

T MEAN	1	2
	1.5604	1.5824

G BY T	1	2 .
1	1.3182	1.4091
2	2.0417	1.6667
3	1.1304	1.3043
4	1.7273	1.9545

EMOTIONAL DISTURBANCE WITH DEPRESSION (ED)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.0901	181.		
BETWEEN	1.5534	90.		
GROUPS	1.7188	3.	1.111	0.3495
ERROR (G)	1.5477	87.		
WITHIN	0.6319	91.		
TRIALS	0.1374	1.	0.213	0.6508
G BY T	0.3808	3.	0.589	0.6278
ERROR (T)	0.6462	87.		

G MEAN	1	2	3	4
	1.2273	1.6667	1.3913	1.5682

T MEAN	1	2
	1.4396	1.4945

G BY T	1	2
1	1.3182	1.1364

2	1.6667	1.6667		
3	1.3043	1.4783		
4	1.4545	1.6818		

SELF ENHANCEMENT, THROUGH DEROGATION OF OTHERS (SE)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.7598	181.		
BETWEEN	1.0613	90.		
GROUPS	1.9297	3.	1.871	0.1390
ERROR (G)	1.0314	87.		
WITHIN	0.4615	91.		
TRIALS	0.0000	1.	0.000	1.0000
G BY T	0.2588	3.	0.546	0.6563
ERROR (T)	0.4738	87.		

G MEAN	1	2	3	4
	1.3409	1.3125	1.2391	1.7045

T MEAN	1	2
	1.3956	1.3956

G BY T	1	2
1	1.3182	1.3636
2	1.2500	1.3750
3	1.3478	1.1304
4	1.6818	1.7273

DIFFUSE HYPERACTIVITY (DH)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.5739	181.		
BETWEEN	0.8597	90.		
GROUPS	0.3080	3.	0.351	0.7916
ERROR (G)	0.8787	87.		
WITHIN	0.2912	91.		
TRIALS	0.1374	1.	0.469	0.5021

| G BY T | 0.3027 | 3. | 1.035 | 0.3823 |
| ERROR (T) | 0.2926 | 87. | | |

G MEAN	1	2	3	4
	1.2045	1.2500	1.1739	1.3636

T MEAN	1	2
	1.2198	1.2747

G BY T	1	2
1	1.2727	1.1364
2	1.1250	1.3750
3	1.1739	1.1739
4	1.3182	1.4091

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GROUP 1	20 SUBJECTS.	ANGLO FEMALE	HI SHIFT
GROUP 2	24 SUBJECTS.	ANGLO FEMALE	HI...NO SHIFT
GROUP 3	23 SUBJECTS.	ANGLO FEMALE	LO...NO SHIFT
GROUP 4	21 SUBJECTS.	ANGLO FEMALE	LO SHIFT

PEER ACCEPTANCE

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0294	175.		
BETWEEN	0.0435	87.		
GROUPS	0.0133	3.	0.298	0.8288
ERROR (G)	0.0446	84.		
WITHIN	0.0156	88.		
TRIALS	0.0327	1.	2.106	0.1467
G BY T	0.0102	3.	0.654	0.5866
ERROR (T)	0.0155	84.		

G MEAN	1	2	3	4
	1.2335	1.2123	1.2200	1.1907

T MEAN	1	2
	1.2003	1.2276

G BY T	1	2
1	1.2330	1.2340
2	1.1904	1.2342
3	1.1904	1.2496
4	1.1914	1.1900

PEER REJECTION

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0386	175.		
BETWEEN	0.0613	87.		
GROUPS	0.1439	3.	2.469	0.0664
ERROR (G)	0.0583	84.		
WITHIN	0.0162	88.		
TRIALS	0.0600	1.	4.049	0.0447
G BY T	0.0389	3.	2.623	0.0548
ERROR (T)	0.0148	84.		

G MEAN	1	2	3	4
	1.1692	1.1904	1.1474	1.2795

T MEAN	1	2
	1.1772	1.2141

G BY T	1	2
1	1.1780	1.1605
2	1.1317	1.2492
3	1.1417	1.1530
4	1.2671	1.2919

GROUP 1	21 SUBJECTS.	ANGLO FEMALE	HI SHIFT
GROUP 2	24 SUBJECTS.	ANGLO FEMALE	HI...NO SHIFT
GROUP 3	23 SUBJECTS.	ANGLO FEMALE	LO...NO SHIFT
GROUP 4	22 SUBJECTS.	ANGLO FEMALE	LO SHIFT

SCHOOL ANXIETY (SA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	274.4972	179.		
BETWEEN	506.0168	89.		
GROUPS	4852.6979	3.	13.693	0.0000
ERROR (G)	354.3884	86.		
WITHIN	45.5500	90.		
TRIALS	390.1387	1.	42.441	0.0000
G BY T	972.9365	3.	105.841	0.0000
ERROR (T)	9.1925	86.		

G MEAN	1	2	3	4
	23.2381	31.2917	7.4783	25.8409

T MEAN	1	2
	23.4667	20.5222

G BY T	1	2
1	19.0000	27.4762
2	32.7917	29.7917
3	8.4783	6.4783
4	33.2273	18.4545

SEX-LINKED INTERESTS. ATTITUDES (S)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	9.7330	179.		
BETWEEN	16.0472	89.		
GROUPS	3.9808	3.	0.242	0.8677
ERROR (G)	16.4681	86.		
WITHIN	3.4889	90.		
TRIALS	0.0000	1.	0.000	1.0000
G BY T	4.8033	3.	1.379	0.2536
ERROR (T)	3.4836	86.		

G MEAN	1	2	3	4
	6.1905	6.6667	6.4783	6.9091

T MEAN	1	2
	6.5667	6.5667

G BY T	1	2
1	6.2857	6.0952
2	7.0000	6.3333
3	6.0435	6.9130
4	6.9091	6.9091

SELF DISPARAGEMENT, IN RELATION TO PEERS (SD)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	5.2056	179.		
BETWEEN	6.6831	89.		
GROUPS	10.4209	3.	1.590	0.1963
ERROR (G)	6.5528	86.		
WITHIN	3.7444	90.		
TRIALS	1.8000	1.	0.468	0.5030
G BY T	1.3935	3.	0.362	0.7835
ERROR (T)	3.8491	86.		

T MEAN	1	2
	3.8000	3.6000

G BY T	1	2
1	4.1905	4.2857
2	4.0417	3.7917
3	3.0870	3.1304
4	3.9091	3.2273

AVOIDANCE STYLE OF DEFENSIVENESS (DA_V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	11.2134	179.		
BETWEEN	17.0360	89.		
GROUPS	109.6151	3.	7.939	0.0002
ERROR (G)	13.8065	86.		
WITHIN	5.4556	90.		
TRIALS	3.7556	1.	0.692	0.5872
G BY T	6.8021	3.	1.253	0.2950
ERROR (T)	5.4284	86.		

G MEAN	1	2	3	4
	12.6429	14.3125	10.8696	13.8636

T MEAN	1	2
	13.0778	12.7889

G BY T	1	2
1	12.3333	12.9524
2	14.6250	14.0000
3	10.8261	10.9130
4	14.4545	13.2727

APPROACH STYLE OF DEFENSIVENESS (DA_P)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	12.8684	179.		

GROUPS	20.2233	3.	1.122	0.3448
ERROR (G)	18.0206	86.		
WITHIN	7.7000	90.		
TRIALS	28.8003	1.	3.793	0.0517
G BY T	3.7412	3.	0.493	0.6925
ERROR (T)	7.5927	86.		

G MEAN	1	2	3	4
	13.5714	13.6667	13.9565	15.0455

T MEAN	1	2
	14.4556	13.6556

G BY T	1	2
1	13.6190	13.5238
2	14.4167	12.9167
3	14.3043	13.6087
4	15.4545	14.6364

TABLE 27.

T X S ANALYSES OF VARIANCE FOR
ANGLO FEMALES CLASSIFIED BY SHIFT
IN SCHOOL ANXIETY BETWEEN T_3 AND T_4

GROUP 1	16 SUBJECTS.	ANGLO FEMALE	HI SHIFT
GROUP 2	18 SUBJECTS.	ANGLO FEMALE	HI...NO SHIFT
GROUP 3	18 SUBJECTS.	ANGLO FEMALE	LO...NO SHIFT
GROUP 4	20 SUBJECTS.	ANGLO FEMALE	LO SHIFT

MAT NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.7266	143.		
BETWEEN	1.2038	71.		
GROUPS	0.9569	3.	0.788	0.5077
ERROR (G)	1.2147	68.		
WITHIN	0.2560	72.		
TRIALS	9.5069	1.	72.966	0.0000
G BY T	0.0209	3.	0.160	0.9222
ERROR (T)	0.1303	68.		

G MEAN	1	2	3	4
	5.4000	5.5722	5.7222	5.3750

T MEAN	1	2
	5.2597	5.7736

G BY T	1	2
1	5.1625	5.6375
2	5.2944	5.8500
3	5.4444	6.0000

MAT VERBAL (V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	3.9588	143.		
BETWEEN	7.2849	71.		
GROUPS	0.9177	3.	0.121	0.9465
ERROR (G)	7.5658	68.		
WITHIN	0.6789	72.		
TRIALS	11.3906	1.	23.440	0.0001
G BY T	1.4829	3.	3.051	0.0336
ERROR (T)	0.4860	68.		

G MEAN	1	2	3	4
	6.4531	6.4583	6.4139	6.1350

T MEAN	1	2
	6.0750	6.6375

G BY T	1	2
1	5.8812	7.0250
2	6.3667	6.5500
3	6.2389	6.5889
4	5.8200	6.4500

GROUP 1   14 SUBJECTS.

GROUP 2   18 SUBJECTS.

GROUP 3   21 SUBJECTS.

GROUP 4   12 SUBJECTS.

CTMM NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	239.7140	129.		
BETWEEN	436.2830	64.		
GROUPS	98.1563	3.	0.217	0.8847
ERROR (G)	452.9121	61.		
WITHIN	46.1692	65.		
TRIALS	365.5625	1.	8.666	0.0048
G BY T	20.7083	3.	0.491	0.6940
ERROR (T)	42.1855	61.		

G MEAN	1	2	3	4
	119.3929	115.1667	117.6667	117.6250

T MEAN	1	2
	115.6615	119.0154

G BY T	1	2
1	116.8571	121.9286
2	113.4444	116.8889
3	115.8571	119.4762
4	117.2500	118.0000

CTMM VERBAL (V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	225.5888	129.		
BETWEEN	412.0383	64.		
GROUPS	182.8958	3.	0.432	0.7345
ERROR (G)	423.3076	61.		
WITHIN	42.0077	65.		
TRIALS	128.0156	1.	3.623	0.0585
G BY T	149.1094	3.	4.220	0.0090
ERROR (T)	35.3304	61.		

G MEAN	1	2	3	4
	115.2500	111.7500	112.4286	108.7917

T MEAN	1	2
	111.1846	113.1692

G BY T	1	2
1	113.4286	117.0714
2	110.3889	113.1111
3	113.8571	111.0000
4	105.0833	112.5000

GROUP 1   23 SUBJECTS.   ANGLO FEMALE   HI SHIFT

GROUP 2   21 SUBJECTS.   ANGLO FEMALE   HI...NO SHIFT

GROUP 3   23 SUBJECTS.   ANGLO FEMALE   LO...NO SHIFT

GROUP 4   20 SUBJECTS.   ANGLO FEMALE   LO SHIFT

GRADE POINT AVERAGE (GPA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	11.2651	173.		
BETWEEN	21.0507	86.		
GROUPS	7.4200	3.	0.344	0.7959
ERROR (G)	21.5433	83.		
WITHIN	1.5920	87.		
TRIALS	7.8679	1.	5.000	0.0263
G BY T	0.0095	3.	0.006	0.9991
ERROR (T)	1.5735	83.		

G MEAN	1	2	3	4
	13.2609	13.8571	14.1739	13.4750

T MEAN	1	2
	13.4828	13.9080

G BY T	1	2
1	13.0435	13.4783
2	13.6667	14.0476
3	13.9565	14.3913
4	13.2500	13.7000

GROUP 1   14 SUBJECTS.

GROUP 2   14 SUBJECTS.

GROUP 3   21 SUBJECTS.

GROUP 4   14 SUBJECTS.

PRONENESS TOWARD NEUROTICISM (PTN)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	12.7000	125.		
BETWEEN	21.5968	62.		
GROUPS	59.8412	3.	3.045	0.0350
ERROR (G)	19.6521	59.		
WITHIN	3.9444	63.		
TRIALS	25.7856	1.	7.425	0.0083
G BY T	5.9365	3.	1.709	0.1736
ERROR (T)	3.4730	59.		

G MEAN	1	2	3	4
	9.4286	8.4286	6.5476	9.0714

T MEAN	1	2
	8.6190	7.7143

G BY T	1	2
1	9.7857	9.0714
2	8.5714	8.2857
3	6.8095	6.2857
4	10.2143	7.9286

GROUP 1   16 SUBJECTS.

GROUP 2   14 SUBJECTS.

GROUP 3   20 SUBJECTS.

GROUP 4   16 SUBJECTS.

SCHOOL MOTIVATION (SM)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	58.8417	131.		
BETWEEN	92.7964	65.		
GROUPS	13.8288	3.	0.143	0.9330
ERROR (G)	96.6174	62.		
WITHIN	25.4015	66.		
TRIALS	18.1895	1.	0.707	0.5917
G BY T	21.3262	3.	0.829	0.5145
ERROR (T)	25.7150	62.		

G MEAN	1	2	3	4
	23.3750	23.1429	24.5250	23.4375

T MEAN	1	2
	24.0606	23.3182

G BY T	1	2
1	24.2500	22.5000
2	22.2143	24.0714
3	25.0000	24.0500
4	24.3125	22.5625

GROUP 1   20 SUBJECTS.

GROUP 2   25 SUBJECTS.

GROUP 3   26 SUBJECTS.

GROUP 4   20 SUBJECTS.

FEELINGS OF INFERIORITY (FI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.6426	181.		
BETWEEN	2.3756	90.		
GROUPS	1.9777	3.	0.828	0.5151
ERROR (G)	2.3893	87.		
WITHIN	0.9176	91.		
TRIALS	2.9066	1.	3.181	0.0743
G BY T	0.3686	3.	0.403	0.7544
ERROR (T)	0.9137	87.		

G MEAN	1	2	3	4
	1.5000	1.5000	1.3462	1.8500

T MEAN	1	2
	1.4066	1.6593

G BY T	1	2
1	1.5000	1.5000
2	1.2800	1.7200
3	1.2308	1.4615
4	1.7000	2.0000

NEUROTIC SYMPTOMS, ACADEMIC (NA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.5001	181.		
BETWEEN	2.0280	90.		
GROUPS	4.7149	3.	2.436	0.0689
ERROR (G)	1.9353	87.		
WITHIN	0.9780	91.		
TRIALS	7.9341	1.	9.245	0.0034
G BY T	2.1344	3.	2.487	0.0647
ERROR (T)	0.8582	87.		

G MEAN	1	2	3	4
	1.7250	1.4600	1.3077	2.0500

T MEAN	1	2
	1.3956	1.8132

G BY T	1	2
1	1.3000	2.1500
2	1.4800	1.4400
3	1.1923	1.4231
4	1.6500	2.4500

NEUROTIC SYMPTOMS, SOCIAL (NS)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.3070	181.		
BETWEEN	1.5286	90.		
GROUPS	1.0529	3.	0.682	0.5691
ERROR (G)	1.5450	87.		
WITHIN	1.0879	91.		
TRIALS	0.1978	1.	0.180	0.6757
G BY T	1.1360	3.	1.036	0.3816
ERROR (T)	1.0965	87.		

G MEAN	1	2	3	4

TREATMENTS F RATIO =   .021   P = .8799

MEANS.   15.2785   15.2152

INTERACTION F RATIO =   3.503   P = .0191

GROUP 1   14.2000   16.1000

GROUP 2   16.4000   15.7000

GROUP 3   14.8421   15.3158

GROUP 4   13.8500   13.7500

GROUP 1   10 SUBJECTS.

GROUP 2   13 SUBJECTS.

GROUP 3   9 SUBJECTS.

GROUP 4   12 SUBJECTS.

CTMM NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	265.4227	87.		
BETWEEN	429.4133	43.		
GROUPS	200.8802	3.	0.450	0.7225
ERROR (G)	446.5533	40.		
WITHIN	105.1591	44.		
TRIALS	1854.7266	1.	28.607	0.0000
G BY T	59.6406	3.	0.920	0.5580
ERROR (T)	64.8338	40.		

G MEAN	1	2	3	4
	92.1500	88.2692	90.1667	85.0417

T MEAN	1	2
	84.0682	93.2500

G BY T	1	2
1	90.0000	94.3000
2	83.6923	92.8462
3	84.6667	95.6667
4	79.0833	91.0000

CTMM VERBAL (V)   261

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	159.6134	87.		
BETWEEN	293.7062	43.		
GROUPS	101.4688	3.	0.329	0.8064
ERROR (G)	308.1240	40.		
WITHIN	28.5682	44.		
TRIALS	100.4063	1.	3.675	0.0593
G BY T	21.2983	3.	0.776	0.5169
ERROR (T)	27.3242	40.		

G MEAN	1	2	3	4
	91.7500	89.9615	91.3889	87.0417

T MEAN	1	2
	88.7955	90.9318

G BY T	1	2
1	91.3000	92.2000
2	87.6923	92.2308
3	91.3333	91.4444
4	86.0000	88.0833

GROUP 1   17 SUBJECTS.

GROUP 2   19 SUBJECTS.

GROUP 3   15 SUBJECTS.

GROUP 4   18 SUBJECTS.

GRADE POINT AVERAGE (GPA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	10.5741	137.		
BETWEEN	19.3551	68.		
GROUPS	46.3417	3.	2.559	0.0615
ERROR (G)	18.1095	65.		
WITHIN	1.9203	69.		
TRIALS	36.5291	1.	27.117	0.0000
G BY T	2.8030	3.	2.081	0.1100
ERROR (T)	1.3471	65.		

G MEAN	1	2	3	4
	10.8824	10.4737	12.7333	12.5833

T MEAN	1	2
	11.1014	12.1304

G BY T	1	2
1	10.7647	11.0000
2	9.6842	11.2632
3	12.2000	13.2667
4	12.0000	13.1667

GROUP 1   13 SUBJECTS.

GROUP 2   15 SUBJECTS.

GROUP 3   14 SUBJECTS.

GROUP 4   15 SUBJECTS.

SCHOOL MOTIVATION (SM)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	45.3374	113.		
BETWEEN	70.9843	56.		
GROUPS	1.4010	3.	0.019	0.9961
ERROR (G)	74.9230	53.		
WITHIN	20.1404	57.		
TRIALS	20.2100	1.	0.982	0.6728
G BY T	12.4134	3.	0.603	0.6197
ERROR (T)	20.5764	53.		

G MEAN	1	2	3	4
	26.4615	26.3000	25.9286	26.3000

T MEAN	1	2
	25.8246	26.6667

G BY T	1	2
1	26.2308	26.6923
2	26.2667	26.3333
3	25.9286	25.9286
4	24.9333	27.6667

GROUP 1   20 SUBJECTS.

GROUP 2   20 SUBJECTS.

GROUP 3   19 SUBJECTS.

GROUP 4   20 SUBJECTS.

FEELINGS OF INFERIORITY (FI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.7061	157.		
BETWEEN	0.7803	78.		
GROUPS	0.0308	3.	0.038	0.9895
ERROR (G)	0.8102	75.		
WITHIN	0.6329	79.		
TRIALS	0.9114	1.	1.419	0.2355
G BY T	0.3032	3.	0.472	0.7068
ERROR (T)	0.6424	75.		

G MEAN	1	2	3	4
	1.2500	1.2000	1.2632	1.2500

T MEAN	1	2
	1.1646	1.3165

G BY T	1	2
1	1.1000	1.4000
2	1.1000	1.3000
3	1.1579	1.3684
4	1.3000	1.2000

NEUROTIC SYMPTOMS, ACADEMIC (NA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.8124	157.		
BETWEEN	0.8788	78.		
GROUPS	1.6306	3.	1.921	0.1320
ERROR (G)	0.8487	75.		
WITHIN	0.7468	79.		
TRIALS	0.1013	1.	0.135	0.7152
G BY T	0.9066	3.	1.210	0.3115
ERROR (T)	0.7491	75.		

G MEAN	1	2	3	4
	1.2000	1.6000	1.1579	1.4000

T MEAN	1	2
	1.3165	1.3671

G BY T	1	2
1	1.1000	1.3000
2	1.5000	1.7000
3	1.0526	1.2632
4	1.6000	1.2000

NEUROTIC SYMPTOMS, SOCIAL (NS)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.6032	157.		
BETWEEN	0.2014	78.		
GROUPS	0.0389	3.	0.187	0.9046
ERROR (G)	0.2079	75.		
WITHIN	1.0000	79.		
TRIALS	63.2911	1.	304.438	0.0000
G BY T	0.0389	3.	0.187	0.9046
ERROR (T)	0.2079	75.		

G MEAN	1	2	3	4
	0.6250	0.6000	0.6316	0.6750

T MEAN	1	2
	1.2658	0.0000

G BY T	1	2
1	1.2500	-0.0000
2	1.2000	-0.0000
3	1.2632	-0.0000
4	1.3500	-0.0000

REGRESSION WITH INDEPENDENCE STRIVINGS (AI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.5120	157.		
BETWEEN	0.6908	78.		
GROUPS	0.4388	3.	0.626	0.6043
ERROR (G)	0.7009	75.		
WITHIN	0.3354	79.		
TRIALS	0.3101	1.	0.895	0.6508
G BY T	0.0716	3.	0.207	0.8915
ERROR (T)	0.3463	75.		

G MEAN	1	2	3	4
	1.1250	1.2000	1.0526	1.3000

T MEAN	1	2
	1.1266	1.2152

G BY T	1	2
1	1.1000	1.1500
2	1.1000	1.3000
3	1.0526	1.0526
4	1.2500	1.3500

ACTIVE WITHDRAWAL (AW)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.6381	157.		
BETWEEN	0.8100	78.		

GROUPS	0.2832	3.	0.341	0.7984
ERROR (G)	0.8310	75.		
WITHIN	0.4684	79.		
TRIALS	0.4051	1.	0.906	0.6536
G BY T	1.0154	3.	2.270	0.0860
ERROR (T)	0.4473	75.		

G MEAN	1	2	3	4
	1.2500	1.2500	1.3421	1.4250

T MEAN	1	2
	1.3671	1.2658

G BY T	1	2
1	1.2500	1.2500
2	1.1500	1.3500
3	1.3684	1.3158
4	1.7000	1.1500

EMOTIONAL DISTURBANCE WITH DEPRESSION (ED)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.8018	157.		
BETWEEN	0.8767	78.		
GROUPS	0.6257	3.	0.706	0.5548
ERROR (G)	0.8867	75.		
WITHIN	0.7278	79.		
TRIALS	0.5127	1.	0.712	0.5939
G BY T	0.9984	3.	1.387	0.2523
ERROR (T)	0.7199	75.		

G MEAN	1	2	3	4
	1.2500	1.4750	1.3421	1.5250

T MEAN	1	2
	1.3418	1.4557

G BY T	1	2
1	1.1500	1.3500

	2	1.5000	1.6500
	3	1.2105	1.4737
	4	1.7000	1.3500

SELF ENHANCEMENT, THROUGH DEROGATION OF OTHERS (SE)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.4470	157.		
BETWEEN	0.5985	78.		
GROUPS	0.7471	3.	1.261	0.2933
ERROR (G)	0.5926	75.		
WITHIN	0.2975	79.		
TRIALS	0.0063	1.	0.022	0.8774
G BY T	0.6067	3.	2.099	0.1061
ERROR (T)	0.2890	75.		

G MEAN	1	2	3	4
	1.2000	1.4000	1.1316	1.4000

T MEAN	1	2
	1.2785	1.2911

G BY T	1	2
	1.0500	1.3500
2	1.4000	1.4000
3	1.1053	1.1579
4	1.5500	1.2500

DIFFUSE HYPERACTIVITY (DH)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.3643	157.		
BETWEEN	0.0665	78.		
GROUPS	0.0400	3.	0.592	0.6259
ERROR (G)	0.0676	75.		
WITHIN	0.6582	79.		
TRIALS	46.8101	1.	692.493	0.0000

G BY T	0.0400	3.	0.592	0.6259	
ERROR (T)	0.0676	75.			269

G MEAN	1	2	3	4
	0.5000	0.5500	0.5526	0.5750

T MEAN	1	2
	1.0886	0.0000

G BY T	1	2
1	1.000C	-0.0000
2	1.1000	-0.0000
3	1.1053	-0.0000
4	1.1500	-0.0000

GROUP 1	20 SUBJECTS.	NONANGLO FEMALE	HI SHIFT
GROUP 2	20 SUBJECTS.	NONANGLO FEMALE	HI...NO SHIFT
GROUP 3	18 SUBJECTS.	NONANGLO FEMALE	LO...NO SHIFT
GROUP 4	18 SUBJECTS.	NONANGLO FEMALE	LO SHIFT

PEER ACCEPTANCE

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0331	151.		
BETWEEN	0.0459	75.		
GROUPS	0.0634	3.	1.404	0.2477
ERROR (G)	0.0452	72.		
WITHIN	0.0204	76.		
TRIALS	0.0010	1.	0.048	0.8220
G BY T	0.0142	3.	0.677	0.5726
ERROR (T)	0.0209	72.		

G MEAN	1	2	3	4
	1.2190	1.2752	1.2275	1.3064

T MEAN	1	2
	1.2591	1.2539

G BY T	1	2
1	1.2330	1.2050
2	1.2595	1.2910
3	1.2161	1.2389
4	1.3306	1.2822

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0449	151.		
BETWEEN	0.0652	75.		
GROUPS	0.0462	3.	0.700	0.5582
ERROR (G)	0.0660	72.		
WITHIN	0.0248	76.		
TRIALS	0.0136	1.	0.527	0.5228
G BY T	0.0031	3.	0.121	0.9465
ERROR (T)	0.0259	72.		

G MEAN	1	2	3	4
	1.2200	1.2952	1.2619	1.2289

T MEAN	1	2
	1.2424	1.2613

G BY T	1	2
1	1.1995	1.2405
2	1.2925	1.2980
3	1.2606	1.2633
4	1.2161	1.2417

GROUP 1   13 SUBJECTS.

GROUP 2   18 SUBJECTS.

GROUP 3   12 SUBJECTS.

GROUP 4   16 SUBJECTS.

PRONENESS TOWARD NEUROTICISM (PTN)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	8.4153	117.		
BETWEEN	11.3290	58.		
GROUPS	47.6636	3.	5.099	0.0038
ERROR (G)	9.3472	55.		
WITHIN	5.5508	59.		
TRIALS	25.6356	1.	5.362	0.0229
G BY T	12.9779	3.	2.715	0.0526
ERROR (T)	4.7806	55.		

G MEAN	1	2	3	4
	9.8077	12.1111	9.7500	11.8750

T MEAN	1	2
	11.5254	10.5932

G BY T	1	2
1	9.3077	10.3077
2	13.0000	11.2222
3	10.0000	9.5000
4	12.8125	10.9375

TABLE 32.

T X S ANALYSES OF VARIANCE FOR
NONANGLO FEMALES CLASSIFIED BY SHIFT
IN SCHOOL ANXIETY BETWEEN T_2 AND T_3

GROUP 1	18 SUBJECTS.	NONANGLO FEMALE	HI SHIFT
GROUP 2	14 SUBJECTS.	NONANGLO FEMALE	HI...NO SHIFT
GROUP 3	16 SUBJECTS.	NONANGLO FEMALE	LO...NO SHIFT
GROUP 4	14 SUBJECTS.	NONANGLO FEMALE	LO SHIFT

MAT NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.4631	123.		
BETWEEN	0.6218	61.		
GROUPS	1.0903	3.	1.825	0.1514
ERROR (G)	0.5975	58.		
WITHIN	0.3069	62.		
TRIALS	3.1617	1.	12.877	0.0010
G BY T	0.5425	3.	2.209	0.0954
ERROR (T)	0.2455	58.		

G MEAN	1	2	3	4
	4.4917	4.1571	4.6094	4.4643

T MEAN	1	2
	4.2806	4.6000

G BY T	1	2
1	4.3056	4.6778
2	3.8143	4.5000
3	4.5250	4.6937
4	4.4357	4.4929

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.0132	123.		
BETWEEN	1.7003	61.		
GROUPS	3.4190	3.	2.122	0.1060
ERROR (G)	1.6114	58.		
WITHIN	0.3373	62.		
TRIALS	0.9061	1.	2.878	0.0914
G BY T	0.5804	3.	1.843	0.1481
ERROR (T)	0.3149	58.		

G MEAN	1	2	3	4
	3.8333	3.8607	4.5125	4.2536

T MEAN	1	2
	4.0242	4.1952

G BY T	1	2
1	3.8444	3.8222
2	3.5929	4.1286
3	4.3750	4.6500
4	4.2857	4.2214

GROUP 1	20 SUBJECTS.	NONANGLO FEMALE	HI SHIFT
GROUP 2	19 SUBJECTS.	NONANGLO FEMALE	HI...NO SHIFT
GROUP 3	19 SUBJECTS.	NONANGLO FEMALE	LO...NO SHIFT
GROUP 4	21 SUBJECTS.	NONANGLO FEMALE	LO SHIFT

SOCIAL ANXIETY (SA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	327.7826	157.		
BETWEEN	557.0625	78.		
GROUPS	7383.4609	3.	25.998	0.0000
ERROR (G)	284.0066	75.		
WITHIN	101.4051	79.		
TRIALS	503.3164	1.	16.581	0.0003
G BY T	1743.6647	3.	57.441	0.0000
ERROR (T)	30.3559	75.		

G MEAN	1	2	3	4
	41.5750	54.0526	20.3684	36.9762

T MEAN	1	2
	40.0380	36.4684

G BY T	1	2
1	35.3000	47.8500
2	55.4211	52.6842
3	22.3158	18.4211
4	46.6667	27.2857

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	6.4557	157.		
BETWEEN	8.0198	78.		
GROUPS	21.0223	3.	2.803	0.0446
ERROR (G)	7.4997	75.		
WITHIN	4.9114	79.		
TRIALS	8.2025	1.	1.646	0.2007
G BY T	1.9954	3.	0.400	0.7566
ERROR (T)	4.9842	75.		

G MEAN	1	2	3	4
	5.0250	4.4737	6.1579	5.6905

T MEAN	1	2
	5.1139	5.5696

G BY T	1	2
1	4.9500	5.1000
2	4.3684	4.5789
3	6.0000	6.3158
4	5.1429	6.2381

SELF DISPARAGEMENT, IN RELATION TO PEERS (SD)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	5.4006	157.		
BETWEEN	7.4090	78.		
GROUPS	4.1584	3.	0.552	0.6528
ERROR (G)	7.5390	75.		
WITHIN	3.4177	79.		
TRIALS	22.7848	1.	7.154	0.0090
G BY T	2.7873	3.	0.875	0.5397
ERROR (T)	3.1847	75.		

G MEAN	1	2	3	4
	4.0000	4.0263	3.5263	4.3095

T MEAN	1	2
	4.3544	3.5949

G BY T	1	2
1	4.7500	3.2500
2	4.1579	3.8947
3	3.7895	3.2632
4	4.6667	3.9524

...ENCE STYLE OF DEFENSIVENESS (DA_v)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	10.0027	157.		
BETWEEN	13.5055	78.		
GROUPS	57.1570	3.	4.861	0.0042
ERROR (G)	11.7595	75.		
WITHIN	6.5443	79.		
TRIALS	4.9619	1.	0.985	0.6750
G BY T	44.7764	3.	8.891	0.0001
ERROR (T)	5.0361	75.		

G MEAN	1	2	3	4
	13.5750	15.1316	12.1316	13.5000

T MEAN	1	2
	13.4051	13.7595

G BY T	1	2
1	12.1000	15.0500
2	14.5789	15.6842
3	12.4737	11.7895
4	14.4286	12.5714

...ROACH STYLE OF DEFENSIVENESS (DA_p)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	11.4440	157.		
BETWEEN	15.8105	78.		

GROUPS	30.7725	3.	2.023	0.1165
ERROR (G)	15.2120	75.		
WITHIN	7.1329	79.		
TRIALS	17.7783	1.	2.569	0.1092
G BY T	8.8955	3.	1.285	0.2849
ERROR (T)	6.9205	75.		

G MEAN	1	2	3	4
	14.5000	15.3158	13.8158	15.8095

T MEAN	1	2
	15.2152	14.5443

G BY T	1	2
1	14.3500	14.6500
2	15.3158	15.3158
3	14.5263	13.1053
4	16.5714	15.0476

GROUP 1   9 SUBJECTS.

GROUP 2   14 SUBJECTS.

GROUP 3   12 SUBJECTS.

GROUP 4   9 SUBJECTS.

CTMM NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	244.9069	87.		
BETWEEN	457.4046	43.		
GROUPS	187.0625	3.	0.392	0.7628
ERROR (G)	477.6803	40.		
WITHIN	37.2386	44.		
TRIALS	19.1016	1.	0.533	0.5235
G BY T	61.5495	3.	1.716	0.1779
ERROR (T)	35.8687	40.		

G MEAN	1	2	3	4
	91.6667	89.8571	96.1667	93.9444

T MEAN	1	2
	93.2500	92.3182

G BY T	1	2
1	90.5556	92.7778
2	91.7857	87.9286
3	97.5000	94.8333
4	92.5556	95.3333

CTMM VERBAL (V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	189.4942	87.		
BETWEEN	355.3370	43.		
GROUPS	235.9115	3.	0.648	0.5926
ERROR (G)	364.2939	40.		
WITHIN	27.4205	44.		
TRIALS	120.5547	1.	4.698	0.0341
G BY T	19.8203	3.	0.772	0.5190
ERROR (T)	25.6621	40.		

G MEAN	1	2	3	4
	92.2778	85.8929	92.4583	89.6667

T MEAN	1	2
	90.9318	88.5909

G BY T	1	2
1	92.3333	92.2222
2	87.9286	83.8571
3	93.0000	91.9167
4	91.4444	87.8889

GROUP 1	16 SUBJECTS.	NONANGLO FEMALE	HI SHIFT
GROUP 2	18 SUBJECTS.	NONANGLO FEMALE	HI...NO SHIFT
GROUP 3	19 SUBJECTS.	NONANGLO FEMALE	LO...NO SHIFT
GROUP 4	16 SUBJECTS.	NONANGLO FEMALE	LO SHIFT

GRADE POINT AVERAGE (GPA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	10.5812	137.		
BETWEEN	16.7445	68.		
GROUPS	22.8782	3.	1.390	0.2528
ERROR (G)	16.4614	65.		
WITHIN	4.5072	69.		
TRIALS	19.5942	1.	4.730	0.0313
G BY T	7.3758	3.	1.780	0.1583
ERROR (T)	4.1427	65.		

G MEAN	1	2	3	4
	12.4063	11.2778	12.8947	11.2813

T MEAN	1	2
	12.1304	11.3768

G BY T	1	2
1	11.5625	11.2500
2	12.0000	10.5556
3	13.6316	12.1579
4	11.0625	11.5000

GROUP 1   12 SUBJECTS.

GROUP 2   14 SUBJECTS.

GROUP 3   15 SUBJECTS.

GROUP 4   17 SUBJECTS.

SCHOOL MOTIVATION (SM)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	43.3957	115.		
BETWEEN	63.2633	57.		
GROUPS	51.5768	3.	0.807	0.5018
ERROR (G)	63.9126	54.		
WITHIN	23.8707	58.		
TRIALS	0.0771	1.	0.003	0.9548
G BY T	10.5544	3.	0.421	0.7420
ERROR (T)	25.0511	54.		

G MEAN	1	2	3	4
	24.5000	27.8214	26.9000	26.9706

T MEAN	1	2
	26.6724	26.6207

G BY T	1	2
1	24.0833	24.9167
2	27.6429	28.0000
3	27.8000	26.0000
4	26.7059	27.2353

GROUP 1   21 SUBJECTS.

GROUP 2   19 SUBJECTS.

GROUP 3   19 SUBJECTS.

GROUP 4   21 SUBJECTS.

FEELINGS OF INFERIORITY (FI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.7973	159.		
BETWEEN	0.7946	79.		
GROUPS	2.3828	3.	3.256	0.0257
ERROR (G)	0.7319	76.		
WITHIN	0.8000	80.		
TRIALS	0.2250	1.	0.275	0.6080
G BY T	0.5207	3.	0.636	0.5979
ERROR (T)	0.8186	76.		

G MEAN	1	2	3	4
	1.6190	1.0789	1.2895	1.1429

T MEAN	1	2
	1.3250	1.2500

G BY T	1	2
1	1.8095	1.4286
2	1.0000	1.1579
3	1.3158	1.2632
4	1.1429	1.1429

NEUROTIC SYMPTOMS, ACADEMIC (NA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.0187	159.		
BETWEEN	1.1769	79.		
GROUPS	0.4695	3.	0.390	0.7640
ERROR (G)	1.2048	76.		
WITHIN	0.8625	80.		
TRIALS	0.1000	1.	0.111	0.7389
G BY T	0.2039	3.	0.227	0.8778
ERROR (T)	0.8985	76.		

G MEAN	1	2	3	4
	1.5000	1.3421	1.4474	1.2619

T MEAN	1	2
	1.3625	1.4125

G BY T	1	2
1	1.4286	1.5714
2	1.4211	1.2632
3	1.3684	1.5263
4	1.2381	1.2857

NEUROTIC SYMPTOMS, SOCIAL (NS)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.6786	159.		
BETWEEN	0.6443	79.		
GROUPS	1.2031	3.	1.933	0.1299
ERROR (G)	0.6222	76.		
WITHIN	0.7125	80.		
TRIALS	0.2250	1.	0.305	0.5893
G BY T	0.2191	3.	0.297	0.8294
ERROR (T)	0.7384	76.		

G MEAN	1	2	3	4
	1.4048	1.0263	1.3947	1.2619

T MEAN	1	2
	1.2375	1.3125

G BY T	1	2
1	1.2857	1.5238
2	1.0526	1.0000
3	1.3158	1.4737
4	1.2857	1.2381

AGGRESSION WITH INDEPENDENCE STRIVINGS (AI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.4931	159.		
BETWEEN	0.4734	79.		
GROUPS	0.1250	3.	0.257	0.8574
ERROR (G)	0.4872	76.		
WITHIN	0.5125	80.		
TRIALS	0.6250	1.	1.198	0.2767
G BY T	0.2445	3.	0.469	0.7091
ERROR (T)	0.5216	76.		

G MEAN	1	2	3	4
	1.1905	1.1842	1.1579	1.0714

T MEAN	1	2
	1.2125	1.0875

G BY T	1	2
1	1.2857	1.0952
2	1.3158	1.0526
3	1.1053	1.2105
4	1.1429	1.0000

ACTIVE WITHDRAWAL (AW)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.7572	159.		
BETWEEN	0.9544	79.		

GROUPS	1.9546	3.	2.136	0.1013
ERROR (G)	0.9150	76.		
WITHIN	0.5625	80.		
TRIALS	1.2250	1.	2.347	0.1258
G BY T	1.3678	3.	2.620	0.0558
ERROR (T)	0.5220	76.		

G MEAN	1	2	3	4
	1.6667	1.2105	1.2895	1.2143

T MEAN	1	2
	1.2625	1.4375

G BY T	1	2
1	1.3333	2.0000
2	1.1053	1.3158
3	1.3158	1.2632
4	1.2857	1.1429

EMOTIONAL DISTURBANCE WITH DEPRESSION (ED)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.6635	159.		
BETWEEN	0.8418	79.		
GROUPS	0.2736	3.	0.317	0.8154
ERROR (G)	0.8642	76.		
WITHIN	0.4875	80.		
TRIALS	1.2250	1.	2.561	0.1097
G BY T	0.4730	3.	0.989	0.5960
ERROR (T)	0.4784	76.		

G MEAN	1	2	3	4
	1.4762	1.3421	1.3947	1.2857

T MEAN	1	2
	1.4625	1.2875

G BY T	1	2
1	1.7143	1.2381

2	1.4211	1.2632
3	1.4211	1.3684
4	1.2857	1.2857

SELF ENHANCEMENT, THROUGH DEROGATION OF OTHERS (SE)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.2868	159.		
BETWEEN	0.2608	79.		
GROUPS	0.0279	3.	0.103	0.9570
ERROR (G)	0.2700	76.		
WITHIN	0.3125	80.		
TRIALS	1.2250	1.	4.124	0.0431
G BY T	0.3995	3.	1.345	0.2652
ERROR (T)	0.2971	76.		

G MEAN	1	2	3	4
	1.2381	1.1842	1.1842	1.1905

T MEAN	1	2
	1.2875	1.1125

G BY T	1	2
1	1.1905	1.2857
2	1.3684	1.0000
3	1.3158	1.0526
4	1.2857	1.0952

DIFFUSE HYPERACTIVITY (DH)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.3465	159.		
BETWEEN	0.3619	79.		
GROUPS	0.9222	3.	2.714	0.0497
ERROR (G)	0.3398	76.		
WITHIN	0.3312	80.		
TRIALS	0.0062	1.	0.018	0.8878

G BY T	0.1888	3.	0.553	0.6516	
ERROR (T)	0.3411	76.			288

G MEAN	1	2	3	↓
	1.3571	1.1316	1.1316	1.0000

T MEAN	1	2
	1.1500	1.1625

G BY T	1	2
1	1.2857	1.4286
2	1.2105	1.0526
3	1.1579	1.1053
4	0.9524	1.0476

GROUP 1	18 SUBJECTS.	NONANGLO FEMALE	HI SHIFT
GROUP 2	19 SUBJECTS.	NONANGLO FEMALE	HI...NO SHIFT
GROUP 3	18 SUBJECTS.	NONANGLO FEMALE	LO...NO SHIFT
GROUP 4	21 SUBJECTS.	NONANGLO FEMALE	LO SHIFT

PEER ACCEPTANCE

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0367	151.		
BETWEEN	0.0544	75.		
GROUPS	0.1465	3.	2.898	0.0400
ERROR (G)	0.0506	72.		
WITHIN	0.0193	76.		
TRIALS	0.0043	1.	0.217	0.6476
G BY T	0.0107	3.	0.538	0.6617
ERROR (T)	0.0199	72.		

G MEAN	1	2	3	4
	1.2500	1.3171	1.2983	1.1814

T MEAN	1	2
	1.2539	1.2646

G BY T	1	2
1	1.2683	1.2317
2	1.2947	1.3395
3	1.2928	1.3039
4	1.1714	1.1914

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0432	151.		
BETWEEN	0.0714	75.		
GROUPS	0.1334	3.	1.940	0.1294
ERROR (G)	0.0688	72.		
WITHIN	0.0154	76.		
TRIALS	0.0140	1.	0.879	0.6460
G BY T	0.0021	3.	0.129	0.9419
ERROR (T)	0.0160	72.		

G MEAN	1	2	3	4
	1.3100	1.2311	1.1750	1.2862

T MEAN	1	2
	1.2613	1.2421

G BY T	1	2
1	1.3117	1.3083
2	1.2363	1.2258
3	1.1933	1.1567
4	1.2990	1.2733

GROUP 1   14 SUBJECTS.

GROUP 2   18 SUBJECTS.

GROUP 3   16 SUBJECTS.

GROUP 4   11 SUBJECTS.

PRONENESS TOWARD NEUROTICISM (PTN)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	9.1920	117.		
BETWEEN	14.6201	58.		
GROUPS	11.9362	3.	0.808	0.5026
ERROR (G)	14.7665	55.		
WITHIN	3.8559	59.		
TRIALS	0.6865	1.	0.197	0.6629
G BY T	11.7874	3.	3.386	0.0239
ERROR (T)	3.4809	55.		

G MEAN	1	2	3	4
	10.0357	11.3333	10.3125	10.0909

T MEAN	1	2
	10.5932	10.4407

G BY T	1	2
1	9.6429	10.4286
2	11.1667	11.5000
3	10.3125	10.3125
4	11.2727	8.9091

TABLE 33.

T X S ANALYSES OF VARIANCE FOR
NONANGLO FEMALES CLASSIFIED BY SHIFT
IN SCHOOL ANXIETY BETWEEN T_3 AND T_4

GROUP 1	17 SUBJECTS.	NONANGLO FEMALE	HI SHIF
GROUP 2	15 SUBJECTS.	NONANGLO FEMALE	HI...NO
GROUP 3	16 SUBJECTS.	NONANGLO FEMALE	LO...NO
GROUP 4	14 SUBJECTS.	NONANGLO FEMALE	LO SHIF

MAT NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.3991	123.		
BETWEEN	0.5172	61.		
GROUPS	0.8970	3.	1.803	0.1554
ERROR (G)	0.4976	58.		
WITHIN	0.2830	62.		
TRIALS	8.8356	1.	62.711	0.0000
G BY T	0.1791	3.	1.271	0.2921
ERROR (T)	0.1409	58.		

G MEAN	1	2	3	4
	4.7588	4.7433	5.1062	4.8571

T MEAN	1	2
	4.6000,	5.1339

G BY T	1	2
1	4.4471	5.0706
2	4.4733	5.0133
3	4.7875	5.4250
4	4.7071	5.0071

MAT VERBAL (V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.4547	123.		
BETWEEN	2.4366	61.		
GROUPS	7.1978	3.	3.286	0.0265
ERROR (G)	2.1904	58.		
WITHIN	0.4885	62.		
TRIALS	14.3616	1.	59.469	0.0000
G BY T	0.6404	3.	2.652	0.0561
ERROR (T)	0.2415	58.		

G MEAN	1	2	3	4
	4.5412	4.2467	5.1875	4.0929

T MEAN	1	2
	4.1952	4.8758

G BY T	1	2
1	4.3118	4.7706
2	3.8267	4.6667
3	4.6875	5.6875
4	3.8857	4.3000

GROUP 1	19 SUBJECTS.	NONANGLO FEMALE	HI SHIFT
GROUP 2	20 SUBJECTS.	NONANGLO FEMALE	HI...NO SHIFT
GROUP 3	20 SUBJECTS.	NONANGLO FEMALE	LO...NO SHIFT
GROUP 4	20 SUBJECTS.	NONANGLO FEMALE	LO SHIFT

SCHOOL ANXIETY (SA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	312.1285	157.		
BETWEEN	526.2843	78.		
GROUPS	5609.0696	3.	17.256	0.0000
ERROR (G)	325.0529	75.		
WITHIN	98.7089	79.		
TRIALS	209.6445	1.	10.233	0.0024
G BY T	2017.2747	3.	98.466	0.0000
ERROR (T)	20.4871	75.		

G MEAN	1	2	3	4
	32.7895	49.8250	21.1750	37.3500

T MEAN	1	2
	36.4684	34.1646

G BY T	1	2
1	25.6842	39.8947
2	50.2000	49.4500
3	21.7000	20.6500
4	47.7500	26.9500

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	8.5043	157.		
BETWEEN	12.2394	78.		
GROUPS	35.6407	3.	3.153	0.0291
ERROR (G)	11.3033	75.		
WITHIN	4.8165	79.		
TRIALS	45.7278	1.	10.506	0.0021
G BY T	2.7762	3.	0.638	0.5967
ERROR (T)	4.3526	75.		

G MEAN	1	2	3	4
	6.4737	4.7000	6.6750	6.6000

T MEAN	1	2
	5.5696	6.6456

G BY T	1	2
1	6.2105	6.7368
2	4.3500	5.0500
3	5.9000	7.4500
4	5.8500	7.3500

SELF DISPARAGEMENT, IN RELATION TO PEERS (SD)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	7.5229	157.		
BETWEEN	8.5011	78.		
GROUPS	21.6076	3.	2.709	0.0501
ERROR (G)	7.9769	75.		
WITHIN	6.5570	79.		
TRIALS	36.5570	1.	5.924	0.0164
G BY T	6.2047	3.	1.005	0.3964
ERROR (T)	6.1711	75.		

G MEAN	1	2	3	4
	5.2105	3.6750	3.6750	3.8000

T MEAN	1	2
	3.5949	4.5570

G BY T	1	2
1	4.3158	6.1053
2	3.6000	3.7500
3	3.4500	3.9000
4	3.0500	4.5500

AVOIDANCE STYLE OF DEFENSIVENESS (DA_v)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	10.3486	157.		
BETWEEN	14.4581	78.		
GROUPS	88.4229	3.	7.689	0.0003
ERROR (G)	11.4995	75.		
WITHIN	6.2911	79.		
TRIALS	5.6963	1.	0.920	0.6576
G BY T	8.9704	3.	1.449	0.2343
ERROR (T)	6.1919	75.		

G MEAN	1	2	3	4
	12.7895	15.5000	12.0750	13.8750

T MEAN	1	2
	13.7595	13.3797

G BY T	1	2
1	12.4211	13.1579
2	15.9000	15.1000
3	12.0500	12.1000
4	14.6000	13.1500

APPROACH STYLE OF DEFENSIVENESS (DA_p)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	13.2117	157.		
BETWEEN	16.0222	78.		

GROUPS	49.3057	3.	3.356	0.0228
ERROR (G)	14.6909	75.		
WITHIN	10.4367	79.		
TRIALS	35.6013	1.	3.408	0.0654
G BY T	1.7832	3.	0.171	0.9155
ERROR (T)	10.4473	75.		

G MEAN	1	2	3	4
	13.3684	15.3500	12.9250	14.6000

T MEAN	1	2
	14.5443	13.5949

G BY T	1	2
1	13.8947	12.8421
2	16.1000	14.6000
3	13.2000	12.6500
4	14.9500	14.2500

GROUP 1   12 SUBJECTS.

GROUP 2   13 SUBJECTS.

GROUP 3   12 SUBJECTS.

GROUP 4   7 SUBJECTS.

CTMM NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	284.4221	87.		
BETWEEN	506.1214	43.		
GROUPS	1624.3281	3.	3.847	0.0163
ERROR (G)	422.2559	40.		
WITHIN	67.7614	44.		
TRIALS	348.0078	1.	5.574	0.0219
G BY T	45.4427	3.	0.728	0.5443
ERROR (T)	62.4291	40.		

G MEAN	1	2	3	4
	86.7500	89.6923	105.1667	97.2143

T MEAN	1	2
	92.3182	96.2955

G BY T	1	2
1	83.3333	90.1667
2	89.2308	90.1538
3	103.6667	106.6667
4	94.0000	100.4286

CTMM VERBAL (V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	190.1609	87.		
BETWEEN	355.8605	43.		
GROUPS	563.5755	3.	1.656	0.1906
ERROR (G)	340.2818	40.		
WITHIN	28.2273	44.		
TRIALS	14.7266	1.	0.502	0.5104
G BY T	17.8568	3.	0.609	0.6171
ERROR (T)	29.3426	40.		

G MEAN	1	2	3	4
	87.7083	85.8462	96.0000	85.0714

T MEAN	1	2
	88.5909	89.4091

G BY T	1	2
1	86.9167	88.5000
2	84.5385	87.1538
3	96.5833	95.4167
4	85.2857	84.8571

GROUP 1	15 SUBJECTS.	NONANGLO FEMALE	HI SHIFT
GROUP 2	18 SUBJECTS.	NONANGLO FEMALE	HI...NO SHIFT
GROUP 3	19 SUBJECTS.	NONANGLO FEMALE	LO...NO SHIFT
GROUP 4	16 SUBJECTS.	NONANGLO FEMALE	LO SHIFT

GRADE POINT AVERAGE (GPA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	10.7320	135.		
BETWEEN	18.4226	67.		
GROUPS	44.8629	3.	2.611	0.0579
ERROR (G)	17.1832	64.		
WITHIN	3.1544	68.		
TRIALS	53.1250	1.	21.120	0.0001
G BY T	0.1292	3.	0.051	0.9838
ERROR (T)	2.5154	64.		

G MEAN	1	2	3	4
	11.3333	11.5000	13.6316	11.4063

T MEAN	1	2
	11.4118	12.6618

G BY T	1	2
1	10.7333	11.9333
2	10.8889	12.1111
3	13.0526	14.2105
4	10.6875	12.1250

GROUP 1   23 SUBJECTS.

GROUP 2   21 SUBJECTS.

GROUP 3   23 SUBJECTS.

GROUP 4   21 SUBJECTS.

SCHOOL MOTIVATION (SM)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	42.8270	175.		
BETWEEN	74.7152	87.		
GROUPS	18.1810	3.	0.237	0.8710
ERROR (G)	76.7343	84.		
WITHIN	11.3011	88.		
TRIALS	3.0049	1.	0.276	0.6074
G BY T	25.1882	3.	2.310	0.0809
ERROR (T)	10.9039	84.		

G MEAN	1	2	3	4
	26.0870	25.8571	27.3043	26.3571

T MEAN	1	2
	26.2841	26.5455

G BY T	1	2
1	26.3478	25.8261
2	26.6190	25.0952
3	26.5652	28.0435
4	25.5714	27.1429

GROUP 1   19 SUBJECTS.

GROUP 2   20 SUBJECTS.

GROUP 3   20 SUBJECTS.

GROUP 4   21 SUBJECTS.

FEELINGS OF INFERIORITY (FI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.8074	159.		
BETWEEN	1.0680	79.		
GROUPS	0.1428	3.	0.129	0.9417
ERROR (G)	1.1046	76.		
WITHIN	0.5500	80.		
TRIALS	0.6250	1.	1.126	0.2921
G BY T	0.3949	3.	0.711	0.5514
ERROR (T)	0.5551	76.		

G MEAN	1	2	3	4
	1.3421	1.3750	1.3000	1.2381

T MEAN	1	2
	1.2500	1.3750

G BY T	1	2
1	1.1579	1.5263
2	1.3500	1.4000
3	1.2000	1.4000
4	1.2857	1.1905

NEUROTIC SYMPTOMS, ACADEMIC (NA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	2.0000	159.		
BETWEEN	2.1392	79.		
GROUPS	0.5289	3.	0.240	0.8688
ERROR (G)	2.2028	76.		
WITHIN	1.8625	80.		
TRIALS	1.2250	1.	0.674	0.5806
G BY T	3.2287	3.	1.777	0.1573
ERROR (T)	1.8170	76.		

G MEAN	1	2	3	4
	1.6579	1.4000	1.5250	1.4286

T MEAN	1	2
	1.4125	1.5875

G BY T	1	2
1	1.2105	2.1053
2	1.2500	1.5500
3	1.5000	1.5500
4	1.6667	1.1905

NEUROTIC SYMPTOMS, SOCIAL (NS)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.9528	159.		
BETWEEN	0.9430	79.		
GROUPS	0.6850	3.	0.719	0.5471
ERROR (G)	0.9532	76.		
WITHIN	0.9625	80.		
TRIALS	0.6250	1.	0.695	0.5880
G BY T	2.6784	3.	2.979	0.0359
ERROR (T)	0.8992	76.		

G MEAN	1	2	3	4
	1.5263	1.2500	1.4500	1.2857

T MEAN	1	2
	1.3125	1.4375

G BY T	1	2
1	1.2632	1.7895
2	1.0000	1.5000
3	1.4000	1.5000
4	1.5714	1.0000

REGRESSION WITH INDEPENDENCE STRIVINGS (AI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.2185	159.		
BETWEEN	1.2183	79.		
GROUPS	1.1767	3.	0.965	0.5844
ERROR (G)	1.2199	76.		
WITHIN	1.2188	80.		
TRIALS	1.4063	1.	1.136	0.2900
G BY T	0.6577	3.	0.531	0.6665
ERROR (T)	1.2384	76.		

G MEAN	1	2	3	4
	1.4474	1.1000	1.1000	1.0952

T MEAN	1	2
	1.0875	1.2750

G BY T	1	2
1	1.1579	1.7368
2	1.0500	1.1500
3	1.1000	1.1000
4	1.0476	1.1429

ACTIVE WITHDRAWAL (AW)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.9294	159.		
BETWEEN	2.1364	79.		

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
GROUPS	1.1375	3.	0.523	0.6721
ERROR (G)	2.1758	76.		
WITHIN	1.7250	80.		
TRIALS	3.6000	1.	2.187	0.1395
G BY T	3.0968	3.	1.881	0.1385
ERROR (T)	1.6462	76.		

G MEAN	1	2	3	4
	1.7368	1.6750	1.3500	1.5952

T MEAN	1	2
	1.437,5	1.7375

G BY T	1	2
1	1.3158	2.1579
2	1.5500	1.8000
3	1.0500	1.6500
4	1.8095	1.3810

EMOTIONAL DISTURBANCE WITH DEPRESSION (ED)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.6099	159.		
BETWEEN	0.7845	79.		
GROUPS	0.8250	3.	1.054	0.3746
ERROR (G)	0.7829	76.		
WITHIN	0.4375	80.		
TRIALS	0.9000	1.	2.020	0.1557
G BY T	0.0787	3.	0.177	0.9115
ERROR (T)	0.4456	76.		

G MEAN	1	2	3	4
	1.5263	1.3250	1.4250	1.1905

T MEAN	1	2
	1.2875	1.4375

G BY T	1	2
1	1.4737	1.5789

2	1.3000	1.3500		
3	1.3000	1.5500		
4	1.0952	1.2857		

SELF ENHANCEMENT, THROUGH DEROGATION OF OTHERS (SE)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.2711	159.		
BETWEEN	0.2671	79.		
GROUPS	0.1015	3.	0.371	0.7773
ERROR (G)	0.2736	76.		
WITHIN	0.2750	80.		
TRIALS	0.6250	1.	2.280	0.1313
G BY T	0.1816	3.	0.663	0.5811
ERROR (T)	0.2741	76.		

G MEAN	1	2	3	4
	1.2105	1.2250	1.1500	1.1190

T MEAN	1	2
	1.1125	1.2375

G BY T	1	2
1	1.1053	1.3158
2	1.1000	1.3500
3	1.1000	1.2000
4	1.1429	1.0952

DIFFUSE HYPERACTIVITY (DH)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.6792	159.		
BETWEEN	0.9747	79.		
GROUPS	1.0404	3.	1.070	0.3674
ERROR (G)	0.9721	76.		
WITHIN	0.3875	80.		
TRIALS	1.2250	1.	3.196	0.0742

```
G BY T          0.2154       3.        0.562      0.6460

ERROR (T)       0.3833      76.

G MEAN            1           2          3          4
                1.1579      1.1250     1.2250     1.4762

T MEAN            1           2
                1.1625      1.3375

G BY T            1           2

    1           1.0526      1.2632

    2           1.0500      1.2000

    3           1.0500      1.4000

    4           1.4762      1.4762
```

GROUP 1   14 SUBJECTS.

GROUP 2   18 SUBJECTS.

GROUP 3   15 SUBJECTS.

GROUP 4   11 SUBJECTS.

PEER ACCEPTANCE

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0504	115.		
BETWEEN	0.0853	57.		
GROUPS	0.0863	3.	1.013	0.3954
ERROR (G)	0.0852	54.		
WITHIN	0.0161	58.		
TRIALS	0.0279	1.	1.737	0.1902
G BY T	0.0134	3.	0.835	0.5166
ERROR (T)	0.0161	54.		

G MEAN	1	2	3	4
	1.2632	1.2903	1.3853	1.2845

T MEAN	1	2
	1.2917	1.3228

G BY T	1	2
1	1.2621	1.2643
2	1.2861	1.2944
3	1.3387	1.4320
4	1.2745	1.2945

PEER REJECTION

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0950	115.		
BETWEEN	0.1213	57.		
GROUPS	0.1882	3.	1.601	0.1986
ERROR (G)	0.1176	54.		
WITHIN	0.0692	58.		
TRIALS	0.2860	1.	4.530	0.0357
G BY T	0.1055	3.	1.671	0.1828
ERROR (T)	0.0631	54.		

G MEAN	1	2	3	4
	1.2307	1.3942	1.2423	1.2709

T MEAN	1	2
	1.2424	1.3417

G BY T	1	2
1	1.2071	1.2543
2	1.2900	1.4983
3	1.1687	1.3160
4	1.3100	1.2318

GROUP 1   13 SUBJECTS.

GROUP 2   18 SUBJECTS.

GROUP 3   14 SUBJECTS.

GROUP 4   14 SUBJECTS.

PRONENESS TOWARD NEUROTICISM (PTN)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	9.2143	117.		
BETWEEN	13.1736	58.		
GROUPS	15.0441	3.	1.151	0.3369
ERROR (G)	13.0716	55.		
WITHIN	5.3220	59.		
TRIALS	0.3051	1.	0.054	0.8126
G BY T	0.2933	3.	0.052	0.9837
ERROR (T)	5.6875	55.		

G MEAN	1	2	3	4
	11.1154	10.5556	10.5357	9.3571

T MEAN	1	2
	10.4407	10.3390

G BY T	1	2
1	11.1538	11.0769
2	10.6111	10.5000
3	10.7143	10.3571
4	9.2857	9.4286

Table 34.

Means at T_1, T_2, T_3, and T_4 on all variables for children classified
by sex and socio-cultural status, with probabilities obtained from
TXS analyses of variance

Variables and groups	T_1	T_2	T_3	T_4	P*
School anxiety (SA)					
Anglo males	23.8	24.5	19.1	20.0	.281, .000, .227
Anglo females	28.8	23.5	20.5	22.4	.000, .000, .007
Non-Anglo males	35.4	32.4	29.5	26.6	.000, .000, .002
Non-Anglo females	45.5	40.0	36.5	34.2	.000, .000, .002
School Motivation (SM)					
Anglo males	24.0	23.9	23.8	24.0	.712, .865, .772
Anglo females	26.4	27.3	23.4	23.3	.105, .097, .592
Non-Anglo males	23.2	21.7	26.6	24.8	.059, .009, .092
Non-Anglo females	25.8	26.7	26.6	26.5	.673, .955, .607
Self disparagement, in relation to peers (SD)					
Anglo males	3.6	4.6	4.3	4.9	.001, .000, .072
Anglo females	3.2	3.8	3.6	4.4	.011, .503, .017
Non-Anglo males	4.1	4.8	4.2	5.2	.034, .101, .015
Non-Anglo females	3.7	4.4	3.6	4.6	.044, .009, .016
Avoidance style of defensiveness (D_{AV})					
Anglo males	13.0	13.1	11.8	12.0	.675, .000, .512
Anglo females	13.3	13.1	12.8	12.7	.535, .587, .870
Non-Anglo males	14.1	12.4	13.0	12.6	.000, .147, .287
Non-Anglo females	14.2	13.4	13.8	13.4	.046, .675, .658
Approach style of defensiveness (D_{AP})					
Anglo males	14.1	13.1	12.2	11.6	.007, .016, .082
Anglo females	14.8	14.5	13.7	13.3	.226, .052, .508
Non-Anglo males	15.1	13.9	13.6	13.1	.002, .508, .632
Non-Anglo females	15.3	15.2	14.5	13.6	.880, .109, .065
Feelings of inferiority (FI)					
Anglo males	1.3	1.4	1.9	2.0	.508, .006, .642
Anglo females	1.1	1.3	1.4	1.7	.091, .551, .074
Non-Anglo males	1.6	1.9	1.6	1.8	.092, .269, .275
Non-Anglo females	1.2	1.3	1.3	1.4	.236, .608, .292

Table 34.
(Continued)

Variables and groups	T_1	T_2	T_3	T_4	P*
Neurotic symptoms, academic (NA)					
Anglo males	1.5	1.5	1.8	1.9	.677, .167, .532
Anglo females	1.2	1.5	1.4	1.8	.004, .615, .003
Non-Anglo males	1.7	2.1	2.1	1.9	.042, .910, .621
Non-Anglo females	1.3	1.4	1.4	1.6	.715, .739, .581
Neurotic symptoms, social (NS)					
Anglo males	1.5	1.6	2.1	2.0	.000, .013, .664
Anglo females	1.1	1.2	1.5	1.6	NA , .014, .676
Non-Anglo males	1.7	2.0	2.0	1.9	.000, .954, .670
Non-Anglo females	1.3	1.2	1.3	1.4	NA , .589, .588
Aggression, with independence strivings (AI)					
Anglo males	1.5	1.5	1.9	1.7	.888, .055, .156
Anglo females	1.2	1.4	1.4	1.4	.114, .918, .767
Non-Anglo males	2.0	1.9	1.8	1.9	.703, .732, .575
Non-Anglo females	1.1	1.2	1.1	1.3	.651, .277, .290
Active withdrawal (AW)					
Anglo males	1.8	1.7	1.9	1.8	.638, .265, .955
Anglo females	1.2	1.6	1.6	1.4	.005, .884, .059
Non-Anglo males	2.1	2.0	1.6	2.2	.616, .054, .006
Non-Anglo females	1.4	1.3	1.4	1.7	.654, .126, .140
Emotional disturbance, with depression (ED)					
Anglo males	1.4	1.4	1.5	1.5	.725, .588, .917
Anglo females	1.4	1.4	1.5	1.5	.742, .651, .840
Non-Anglo males	1.3	1.4	1.3	1.3	.767, .653, .828
Non-Anglo females	1.3	1.5	1.3	1.4	.594, .110, .156
Self enhancement, through derogation of others (SE)					
Anglo males	1.2	1.2	1.3	1.2	.858, .203, .303
Anglo females	1.1	1.4	1.4	1.4	.002, 1.00, 1.00
Non-Anglo males	1.2	1.4	1.2	1.3	.022, .032, .178
Non-Anglo females	1.3	1.3	1.1	1.2	.877, .043, .131
Diffuse hyperactivity (DH)					
Anglo males	1.4	1.4	1.4	1.4	NA, .653, .808
Anglo females	1.2	1.2	1.3	1.3	NA, .502, .891
Non-Anglo males	1.4	1.4	1.5	1.6	NA, .609, .599
Non-Anglo females	1.1	1.2	1.2	1.3	NA, .888, .074

Table 34.
(Continued)

Variables and groups	T_1	T_2	T_3	T_4	P*
Peer acceptance (PA)					
Anglo males	1.2	1.2	1.2	1.4	.728, .167, .000
Anglo females	1.2	1.2	1.2	1.4	.319, .147, .000
Non-Anglo males	1.2	1.2	1.2	1.3	.621, .563, .007
Non-Anglo females	1.3	1.3	1.3	1.3	.822, .648, .190
Peer rejection (PR)					
Anglo males	1.2	1.2	1.2	1.3	.233, .568, .011
Anglo females	1.2	1.2	1.2	1.3	.680, .045, .031
Non-Anglo males	1.2	1.2	1.3	1.3	.309, .050, .519
Non-Anglo females	1.2	1.3	1.2	1.3	.523, .646, .036
MAT Non-Verbal (NV)					
Anglo males	4.1	5.2	5.3	6.0	.000, .004, .000
Anglo females	4.0	5.3	5.3	5.8	.000, .856, .000
Non-Anglo males	3.3	4.2	4.6	5.2	.000, .000, .000
Non-Anglo females	3.2	4.3	4.6	5.1	.000, .001, .000
MAT Verbal (V)					
Anglo males	4.7	6.1	6.2	6.7	.000, .582, .000
Anglo females	4.6	6.2	6.1	6.6	.000, .279, .000
Non-Anglo males	3.1	3.9	4.1	4.9	.000, .014, .000
Non-Anglo females	3.2	4.0	4.2	4.9	.000, .091, .000
CTMM Non-Verbal IQ					
Anglo males	102.6	112.3	110.2	115.9	.000, .114, .000
Anglo females	107.2	115.2	115.7	119.0	.000, .675, .005
Non-Anglo males	84.0	90.0	90.4	98.5	.000, .815, .000
Non-Anglo females	84.1	93.3	92.3	96.3	.000, .524, .022
CTMM Verbal IQ					
Anglo males	104.2	110.7	109.0	111.9	.000, .113, .013
Anglo females	108.9	114.0	111.2	113.2	.000, .008, .059
Non-Anglo males	87.5	89.8	87.0	91.8	.049, .021, .007
Non-Anglo females	88.8	90.9	88.6	89.4	.059, .034, .510
Proneness toward neuroticism (PTN)					
Anglo males	9.4	9.4	8.5	8.6	.969, .033, .800
Anglo females	10.1	8.7	8.6	7.7	.002, .799, .008
Non-Anglo males	10.6	9.5	9.0	9.5	.018, .287, .300
Non-Anglo females	11.5	10.6	10.4	10.3	.023, .663, .813
Grade point average (GPA)					
Anglo males	12.4	13.4	12.4	12.7	.000, .000, .113
Anglo females	13.1	14.1	13.5	13.9	.000, .007, .026
Non-Anglo males	10.3	11.0	10.9	11.7	.001, .632, .001
Non-Anglo females	11.1	12.1	11.4	12.7	.000, .031, .000

Table 34.
(Continued)

Variables and groups	T_1	T_2	T_3	T_4	P*
Sex-linked interests, attitudes (S)					
Anglo males	9.3	10.7	10.3	10.4	.000, .091, .597
Anglo females	5.1	6.6	6.6	7.3	.000, 1.00, .032
Non-Anglo males	8.9	9.6	9.7	10.2	.031, .811, .139
Non-Anglo females	4.7	5.1	5.6	6.6	.183, .201, .002

Note: All means were rounded to the first decimal place. For a more accurate value refer to the main tables.

* Significance of the difference between T_1 and T_2, T_2 and T_3, and T_3 and T_4, listed in that order.

children is consistent with both theory (as developed in Chapter 1) and empirical

results elsewhere. Furthermore, it is interesting that there is a general decrease

in SA between T_1 and T_4. A number of investigators have studied the effects of

repeated measurement on personality questionnaires, and they generally have found

declines over time; but few of these studies used the time spread involved here.

Also, they have found that the effects of repeated measurement are pretty well dis-

sipated by the end of the second administration; and one of the purposes of splitting

the CSQ into three forms administered a week apart was to "wash out" this repeated

measurement effect during each testing period. (For one of the most recent and adequate

series of studies of the repeated measurement effect see Howard, 1964, and Howard

and Diesenhaus, 1965.) Therefore, if one can rule out repeated measurement effects,

it appears that there was an _actual_ decline in school anxiety during the two years of

this project; and if that is so, the decline was greater in Non-Anglo than Anglo

children.

2. School Motivation (SM)

Sex and socio-cultural status differences in SM were precluded by the method of

obtaining this information, as described in Chapter 2. There are, however, significant

differences over "treatments" for Anglo females and Non-Anglo males. Non-Anglo males

increased in SM over the summer months and decreased during both school years, while

Anglo females decreased in SM across the summer months. It is only for Non-Anglo males,

therefore, that we get results which suggest a significant in-school influence - and

in this instance it appears to be a negative influence.

3. Self Disparagement in Relation to Peers (SD)

It is interesting, and probably significant, that males tend to show more evidence

of self disparagement in relation to peers than females among both Anglo and Non-Anglo

children. The items of the SD scale reflect inadequacies in terms of competence; and

it is not surprising that boys, who have more trouble in school, should feel this way.

It also appears that SD is closely related to in-school experiences, since it increases

during both school years and falls during the summer months.

4. Avoidance Style of Defensiveness (D_{AV})

In interpreting the D_{AV} means it must be remembered that a high D_{AV} score acti represents a low avoidance tendency. With this in mind, it is obvious that boys consistently have somewhat higher D_{AV} scores than girls; and this agrees well with literature on defensiveness (See Chapter 1). As for significant differences betwee "treatments," Anglo males show a drop in D_{AV} between T_2 and T_3 and both Non-Anglo males and females show a drop between T_1 and T_2.

5. Approach Style of Defensiveness (D_{AP})

Generally, girls show higher D_{AP} scores than boys, and this is not unexpected in view of the conformity and other characteristics of girls. With respect to chai in D_{AP} across "treatments," it is evident that there is a steady decline in D_{AP} fr T_1 to T_4, and, in addition, a number of these differences between periods are high significant in a statistical sense.

6. Feelings of Inferiority (FI)

Feelings of inferiority are generally more pronounced in boys than girls, and Non-Anglos than Anglos; and this is in keeping with general psychological knowledg (remembering, of course, that this information comes from the teacher's observatio of children's behavior). Also, the trend of the means suggests that FI is under t influence of the in-school environment.

7. Neurotic Symptoms, Academic (NA)

Basically the same sex and socio-cultural status differences occur with regar NA that were found for FI, i.e., males and Non-Anglos had higher NA means than females and Anglos. There also is some tendency for NA to go up during both schoo years and down in the summer months in between, indicating that there may be an in influence on NA.

8. Neurotic Symptoms, Social (NS)

Males clearly show higher NS means than females, and Non-Anglos show higher N means than Anglos. Also, there are significant increases between T_2 and T_3 for An

but not for Non-Anglos, and generally insignificant differences across both school years. On the basis of our rationale, there is the suggestion here of an out-of-school influence on NS among Anglo children.

9. Ag_ ession with Independence Strivings (AI)

As one would expect, boys have higher AI scores than girls; but contrary to expectations, the overall AI level of Non-Anglos is no higher than that for Anglos, although there is an interaction between fourth and fifth grades (with Anglos being higher in fourth and Non-Anglos being higher in fifth).

10. Active Withdrawal (AW)

In regard to AW, boys again have higher scores than girls; and, in an overall sense, Non-Anglos have higher scores than Anglos. Trends across time periods are not consistent with the rationale, and only two reach a satisfactory level of statistical significance.

11. Emotional Disturbance with Depression (ED)

Generally, differences between the sexes, between Anglos and Non-Anglos, and between T_1 and T_4 are slight, although Anglo children consistently have higher ED means than Non-Anglo children.

12. Self Enhancement through Derogation of Others (SE)

Trends across the "treatments" are generally undiscernable with regard to SE; but among Non-Anglos there is a tendency for males to have higher SE means than females, while among Anglos there is a tendency for females to have higher SE means than males.

13. Diffuse Hyperactivity (DH)

With regard to DH, boys consistently have higher means than girls, and this fits w 1 with obscrvations of teachers and reports in the educational and psychological literature. At the same time, there clearly are no significant trends across the "treatment" periods.

14. Peer Acceptance (PA)

In interpreting these scores it must be remembered that a constant of 1.0 was added for computational convenience. Also, there is a very small variability in these scores and rounding errors have tended to obliterate the significance of the differences (see Chapter 2 for a discussion of scoring method and the complete tables for the actual means). In this connection, it also should be pointed out that PA scores tended to increase between T_1 and T_4 (especially between T_3 and T_4); and this suggests that fifth graders are more discriminating in their nominations than fourth graders. In addition, it appears that Non-Anglo females had higher PA than Non-Anglo males, although there are no sex differences in PA among Anglos.

15. Peer Rejection (PR)

The qualifying remarks made in connection with PA also apply to PR; and in this case there are significant increases in PR between T_3 and T_4, i.e., during fifth grade, but none between T_1 and T_2. Also, Anglo females and Non-Anglo males show significantly higher PR means between T_2 and T_3. The frequency of significant differences between T_2, T_3, and T_4 may reflect the increasing discrimination of children in nominating other children in fifth grade compared to fourth grade; and these differences, therefore, may be developmentally influenced.

16. MAT Nonverbal (NV)

With the exception of the Non-Anglo children, these results clearly follow the rationale; and it is reasonable to conclude that MAT Nonverbal achievement is influenced by the in-school environment. (Although no one would expect any other result, it does serve to illustrate and support the rationale on which in-school and out-of-school influences are differentiated.) Generally, sex differences are slight, and Anglo and Non-Anglo differences follow expectations. The unexpected differences among Non-Anglos between T_2 and T_3 may be attributed to a change from the elementary level of the MAT (without an answer sheet) in the fourth grade, to the intermediate level of the MAT (with a machine scorable answer sheet) in the fifth grade. After diligent investigation it was discovered that guessing and responding to items which probably

had not been read was more prevalent when an answer sheet was used than when test booklets, on which answers were marked, were used. In addition, this tendency was accentuated among Non-Anglos because of the relative difficulty of the intermediate level of the MAT as compared with the elementary level. The effects of guessing, of course, decreased as the children knew a larger proportion of the items. This probably accounts for the smaller gains in the fifth grade than in the fourth grade. The same problem also occurred with Anglo children; but since the switch was made in the Spring, 1965 (instead of the Fall, 1965), and the intermediate level was not as difficult for them, there appeared to be less guessing, and the major effect of guessing and filling in occurred at T_2. This appears to adequately explain the discrepancies noted.

17. MAT Verbal (V)

The results for MAT Verbal achievement provide support for the basic rationale, and the qualifying remarks made in conjunction with the discussion of the MAT Nonverbal test also apply here (but apparently to a lesser degree). Obvious Anglo and Non-Anglo differences occur, as expected, and sex differences are slight.

18. CTMM Nonverbal IQ

As previously noted, the same form of the CTMM was given on all four occasions, so that improvement in intellectual functioning could be measured with the content held constant. There have been few studies of learning of this kind, and in view of the current controversy over racial and ethnic differences in intelligence, these results have an importance over and above their import for the rationale. However, it is obvious that increases in CTMM Nonverbal IQ are larger across the school year than across the summer months, as the rationale requires. Also, it is apparent that all four groups improved about the same number of IQ points, which supports the idea that improvement without specific instruction (incidental learning?) occurs in about the same degree among Non-Anglo children as among Anglo children. Perhaps the advantage of the Anglo children in learning from instruction by the teacher lies in skills required in such learning, e.g., the abilities to listen and to comprehend what is listened to.

19. CTMM Verbal IQ

The results for CTMM Verbal IQ do not fit the rationale quite as well as the results for CTMM Nonverbal IQ, and this is perhaps because verbal intellectual functioning is more dependent on the out-of-school environment than nonverbal intellectual functioning. And, of course, this is generally in agreement with studies of culturally deprived children (see Chapter 1). Also, sex differences, in favor of girls, occur among Anglo children; but they are much less pronounced among Non-Anglo children. This, too, is not surprising in relation to what the psychological and educational literature shows.

20. Proneness toward Neuroticism (PTN)

Sex differences in PTN are observable only among Non-Anglo children, where girls have higher scores than boys; and this difference is perhaps a reflection of the greater "liberation" of females in Anglo than in Non-Anglo families, as indicated in a wide variety of psychological studies (see Chapter 1). There is also a significant decrease during the fourth and fifth grades for Anglo females, as well as a significant decrease in PTN in fourth grade for both Non-Anglo males and females. There is some evidence, therefore, that PTN tends to be lowered by in-school influences.

21. Sex-linked Interests and Attitudes (S)

Sex-linked interests and attitudes generally follow the pattern required by the rationale, i.e., they increase across both school years and decrease across the summer months. The difference between the sexes occurs because all scores are in the masculine direction. Thus, all groups show an increase in masculine interests and attitudes during both school years. Just how this should be interpreted, however, is not clear from these data alone.

22. Grade Point Average (GPA)

Teacher grades generally conform with expectations of the rationale, increasing across the school year and decreasing across the summer months. This trend, however, may be partially (if not entirely) the result of the proclivity of some teachers to "grade low" at the beginning of the school year so as to "challenge" children to work

harder and to have a feeling of progress. Generally, also, girls get better grades

than boys and Anglo children get better grades than Non-Anglo children which is relevant

to the earlier discussion of success and failure in school.

Analyses for Children
Classified by Low and High
School Anxiety and School Motivation

In this section we want to find out what happens, under the "treatment" conditions

represented by T_1, T_2, T_3, and T_4, to Anglo and Non-Anglo children who differ in school

anxiety and school motivation. To obtain these subsamples we first determined the

median school anxiety and school motivation scores on each of the four occasions.

Then we selected all children whose school anxiety scores were above the median on

three of the four occasions. After this we did the same thing for the school motivation

scores and then repeated the process in selecting children whose school anxiety or school

motivation scores were below the median on three of the four occasions. In a few

instances children who did not have all four scores were selected if two of their

three scores were well above, or well below, the median. From these children we then

formed a series of subsamples made up of Anglo children and a series made up of Non-

Anglo children. These subsamples consisted of children high in school anxiety and

low in school motivation (Hi Anx - Lo Mot), high in school anxiety and high in school

motivation (Hi Anx - Hi Mot), low in school anxiety and low in school motivation (Lo

Anx - Lo Mot), and low in school anxiety and high in school motivation (Lo Anx - Hi

Mot). We then performed a level (of school anxiety and school motivation) by treat-

ments (with and without the in-school influence) analysis of variance for each of the

major variables referred to in previous analyses, using the discussion by Edwards

(1964, Chapter 14) as our guide. These results are presented in Tables 35 and 36.

The general logic for doing these analyses rests upon the McClelland-Atkinson

conception of approach and avoidance motivation as discussed in Chapter 1. However,

where they use test anxiety as a measure of the need to avoid failure, we use school

anxiety (which is substantially correlated with the TASC); and where they use a pro-

jective test to measure the need to achieve success, we substitute a measure of school

TABLE 35.

T X S ANALYSES OF VARIANCE FOR
ANGLO CHILDREN CLASSIFIED BY
SCHOOL ANXIETY AND SCHOOL MOTIVATION

GROUP 1   23 SUBJECTS.   ANGLC HI ANX LO MO   1

GROUP 2   65 SUBJECTS.   ANGLO LC ANX HI MO ·   2

GROUP 3   21 SUBJECTS.   ANGLO HI ANX HI MO   3

GROUP 4   31 SUBJECTS.   ANGLC LC ANX   LO MO   4

TOTAL =   140 SUBJECTS.

DEGREES OF FREECCM

    3 AND   136 FCR GROUPS.

    3 AND   408 FCR TREATMENTS.

    9 AND   408 FCR INTERACTION.

SCHOOL ANXIETY (SA)
GROUPS F RATIO = 132.682   P =   0

MEANS.   38.6630   14.3846   41.9524   12.9516

TREATMENTS F RATIO =   11.626   P = .0000

MEANS.   25.3429   23.1571   19.2071   21.0571

INTERACTICN F RATIO =   .894   P = .5316

GROUP 1   4C.0435   42.2609   34.0870   38.2609

GROUP 2   18.4000   14.6615   11.1538   13.3231

GROUP 3   43.9048   41.8571   42.1429   39.9C48

GROUP 4   16.4194   14.1290   9.5161   11.7419

SEX-LINKED INTERESTS, ATTITUDES (S)

GROUPS F RATIO =   .908   P = .5588

MEANS.   8.0978   8.0577   7.8571   9.0C81

TREATMENTS F RATIC =   24.356   P = .CCC0

MEANS.   7.0786   8.7000   8.4429   8.7571

INTERACTICN F RATIC =   2.559   P = .0074

GROUP   1   7.7391   8.6522   8.5652   7.4348

GROUP   2   6.6308   8.4769   8.3077   8.8154

GROUP   3   6.8571   7.8095   7.6667   9.0952

GROUP   4   7.6774   9.8065   9.1613   9.3871

SELF DISPARAGEMENT, IN RELATION TO PEERS (SD)

GROUPS F RATIO =   5.123   P = .0026

MEANS.   4.7283   3.4462   4.2619   3.8871

TREATMENTS F RATIC =   9.000   P = .0001

MEANS.   3.3214   4.1143   3.7071   4.3643

INTERACTICN F RATIC =   1.696   P = .0874

GROUP   1   3.7826   5.0870   4.6522   5.3913

GROUP   2   3.0769   3.7692   3.3846   3.5538

GROUP   3   3.4762   3.9048   3.9048   5.7619

GROUP   4   3.3871   4.2581   3.5484   4.3548

AVOIDANCE STYLE OF DEFENSIVENESS (DA_y)

GROUPS F RATIO =   21.504   P = .0000

MEANS.   13.7283   12.3462   15.4881   10.9839

TREATMENTS F RATIO =   4.368   P = .0052

MEANS.   13.1071   13.1071   12.5071   12.2500

INTERACTICN F RATIO =   1.086   P = .3718

GROUP   1   14.2174   14.6522   13.2609   12.7826

GROUP   2   12.8000   12.5231   12.1385   11.9231

GROUP   3   15.0952   15.3810   15.9524   15.5238

GROUP   4   11.5806   11.6452   10.3871   10.3226

APPROACH STYLE OF DEFENSIVENESS (DA_p)

GROUPS F RATIO =   4.528   P = .0050

MEANS.   12.8696   14.1962   13.8214   12.0081

TREATMENTS F RATIO = 19.040   P = .0000

MEANS.	14.5429	13.8786	12.9143	12.4143

INTERACTICN F RATIO = 1.069   P = .3849

GROUP 1	14.5217	13.4348	12.3043	11.2174
GROUP 2	15.0462	14.6769	13.6769	13.3846
GROUP 3	14.2381	13.9524	13.6667	13.4286
GROUP 4	13.7097	12.4839	11.2581	10.5806

GROUP 1   29 SUBJECTS.

GROUP 2   67 SUBJECTS.

GROUP 3   27 SUBJECTS.

GROUP 4   33 SUBJECTS.

CTMM NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	239.3794	623.		
BETWEEN	709.3782	155.		
GROUPS	9584.8957	3.	17.942	0.0000
ERROR (G)	534.2035	152.		
WITHIN	83.7174	468.		
TRIALS	3875.4167	3.	66.503	0.0000
G BY T	108.9514	9.	1.870	0.0540
ERROR (T)	58.2740	456.		

G MEAN	1	2	3	4
	104.0086	118.3134	114.0093	103.1742

T MEAN	1	2	3	4
	104.8269	113.1474	112.1538	116.6987

G BY T	1	2	3	4
1	99.8276	104.2069	102.8621	109.1379
2	109.5224	120.6866	119.3134	123.7313
3	109.3333	113.7407	115.4074	117.5556
4	96.0000	105.2121	103.1212	108.3636

CTMM VERBAL (V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	235.4738	623.		
BETWEEN	787.7625	155.		
GROUPS	11006.5207	3.	18.780	0.0000
ERROR (G)	586.0765	152.		
WITHIN	52.5577	468.		
TRIALS	1055.7917	3.	23.498	0.0000
G BY T	104.5625	9.	2.327	0.0144
ERROR (T)	44.9311	456.		

G MEAN	1	2	3	4
	99.6121	116.3694	113.1481	101.9091

T MEAN	1	2	3	4
	106.1923	111.7628	109.0641	111.5321

G BY T	1	2	3	4
1	97.7931	102.1724	97.5172	100.9655
2	112.0448	118.3731	117.6269	117.4328
3	111.8889	114.5926	110.2593	115.8519
4	97.0303	104.4545	100.8485	105.3030

GROUP 1   30 SUBJECTS.   ANGLC HI ANX LO MO   1

GROUP 2   71 SUBJECTS.   ANGLC LC ANX HI MO   2

GROUP 3   28 SUBJECTS.   ANGLC HI ANX HI MO   3

GROUP 4   32 SUBJECTS.   ANGLC LC ANX LO MO   4

TOTAL =   161 SUBJECTS.

DEGREES OF FREEDOM

    3 AND   157 FOR GROUPS.

    3 AND   471 FOR TREATMENTS.

    9 AND   471 FOR INTERACTION.

GRADE POINT AVERAGE (GPA)

GROUPS F RATIO =   42.046   P = .0000

MEANS.   10.4583   15.0035   14.8125   11.6719

TREATMENTS F RATIO =   10.344   P = .0000

MEANS.   13.1553   13.9876   13.1180   13.5839

INTERACTION F RATIO =   .354   P = .9555

GROUP 1   10.4000   10.9667   10.0333   10.4333

GROUP 2   14.5352   15.6056   14.7042   15.1690

GROUP 3   14.5714   15.1071   14.4843   15.1071

GROUP 4   11.4375   12.2500   11.3125   11.6875

GROUP 1   46 SUBJECTS.

GROUP 2   54 SUBJECTS.

GROUP 3   26 SUBJECTS.

GROUP 4   23 SUBJECTS.

SCHOOL MOTIVATION (SM)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	55.7814	595.		
BETWEEN	170.1128	148.		
GROUPS	809.4635	3.	5.160	0.0024
ERROR (G)	156.8848	145.		
WITHIN	17.9267	447.		
TRIALS	16.0651	3.	0.889	0.5509
G BY T	11.4601	9.	0.634	0.7694
ERROR (T)	18.0734	435.		

G MEAN	1	2	3	4
	23.9185	27.3333	23.2212	28.3152

T MEAN	1	2	3	4
	26.1678	25.7114	25.5705	25.4027

G BY T	1	2	3	4
1	24.1739	23.8043	23.8261	23.8696
2	27.8704	27.3333	27.2593	26.8704
3	24.5769	23.7308	22.6154	21.9615
4	27.9565	27.9565	28.4348	28.9130

GROUP 1	33 SUBJECTS.	HI ANX	LO MO
GROUP 2	75 SUBJECTS.	LO ANX	HI MO
GROUP 3	31 SUBJECTS.	HI ANX	HI MO
GROUP 4	39 SUBJECTS.	LO ANX	LO MO

FEELINGS OF INFERIORITY (FI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.6371	711.		
BETWEEN	2.4647	177.		
GROUPS	10.7300	3.	4.621	0.0042
ERROR (G)	2.3222	174.		
WITHIN	1.3628	534.		
TRIALS	10.6793	3.	8.160	0.0001
G BY T	1.3985	9.	1.069	0.3843
ERROR (T)	1.3087	522.		

G MEAN	1	2	3	4
	1.8561	1.4300	1.1774	1.5833

T MEAN	1	2	3	4
	1.2022	1.4270	1.5843	1.7809

G BY T	1	2	3	4
1	1.4242	1.6061	2.1212	2.2727
2	1.1600	1.3200	1.4133	1.8267
3	1.0968	1.0645	1.2258	1.3226
4	1.1795	1.7692	1.7436	1.6410

NEUROTIC SYMPTOMS, ACADEMIC (NA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.4007	711.		
BETWEEN	2.9628	177.		
GROUPS	28.2881	3.	11.198	0.0000
ERROR (G)	2.5261	174.		
WITHIN	0.8830	534.		
TRIALS	6.4494	3.	7.564	0.0002
G BY T	0.7878	9.	0.924	0.5043
ERROR (T)	0.8526	522.		

G MEAN	1	2	3	4
	1.7955	1.1833	1.2742	1.9872

T MEAN	1	2	3	4
	1.2921	1.3933	1.5393	1.7303

G BY T	1	2	3	4
1	1.6061	1.5758	1.9394	2.0606
2	1.0800	1.1200	1.2400	1.2933
3	1.0645	1.2581	1.2903	1.4839
4	1.6154	1.8718	1.9744	2.4872

NEUROTIC SYMPTOMS, SOCIAL (NS)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.4952	711.		
BETWEEN	2.3015	177.		
GROUPS	10.2339	3.	4.727	0.0038
ERROR (G)	2.1648	174.		
WITHIN	1.2280	534.		
TRIALS	9.4209	3.	7.944	0.0001
G BY T	0.9371	9.	0.790	0.6269
ERROR (T)	1.1859	522.		

G MEAN	1	2	3	4
	1.6742	1.3967	1.3145	1.8590

T MEAN	1	2	3	4
	1.2697	1.4157	1.7247	1.7303

G BY T	1	2	3	4
1	1.5152	1.7879	1.7576	1.6364
2	1.0933	1.2267	1.5600	1.7067
3	1.1290	1.1613	1.4194	1.5484
4	1.5128	1.6667	2.2564	2.0000

AGGRESSION WITH INDEPENDENCE STRIVINGS (AI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.8092	711.		
BETWEEN	4.1349	177.		
GROUPS	9.4003	3.	2.324	0.0753
ERROR (G)	4.0441	174.		
WITHIN	1.0384	534.		
TRIALS	1.8483	3.	1.808	0.1431
G BY T	1.6979	9.	1.661	0.0951
ERROR (T)	1.0224	522.		

G MEAN	1	2	3	4
	1.6364	1.3567	1.1613	1.7115

T MEAN	1	2	3	4
	1.3258	1.4382	1.5730	1.4719

G BY T	1	2	3	4
1	1.3636	1.4242	2.1212	1.6364
2	1.2400	1.2200	1.3333	1.5333
3	1.1935	1.2581	1.0968	1.0968
4	1.5641	1.8205	1.9487	1.5128

ACTIVE WITHDRAWAL (AW)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.6283	711.		
BETWEEN	.3.2161	177.		

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P	
GROUPS	38.2243	3.	14.631	0.0000	332
ERROR (G)	2.6125	174.			
WITHIN	1.1021	534.			
TRIALS	0.9401	3.	0.861	0.5363	
G BY T	1.7524	9.	1.605	0.1101	
ERROR (T)	1.0918	522.			

G MEAN	1	2	3	4
	2.1591	1.2433	1.2016	1.9295

T MEAN	1	2	3	4
	1.4494	1.6124	1.5843	1.5787

G BY T	1	2	3	4
1	1.8485	2.3333	2.1515	2.3030
2	1.1200	1.2533	1.2000	1.4000
3	1.1613	1.4839	1.0645	1.0968
4	1.9744	1.7949	2.2564	1.6923

EMOTIONAL DISTURBANCE WITH DEPRESSION (ED)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.2276	711.		
BETWEEN	3.0851	177.		
GROUPS	25.3232	3.	9.373	0.0001
ERROR (G)	2.7017	174.		
WITHIN	0.6119	534.		
TRIALS	0.1475	3.	0.238	0.8704
G BY T	0.3577	9.	0.578	0.8166
ERROR (T)	0.6189	522.		

G MEAN	1	2	3	4
	1.9015	1.1933	1.1855	1.8141

T MEAN	1	2	3	4
	1.4326	1.4551	1.4494	1.5000

G BY T	1	2	3	4
1	1.8788	1.8485	1.8182	2.0606

2	1.1867	1.1733	1.2133	1.2000
3	1.1613	1.0645	1.2903	1.2258
4	1.7436	1.9744	1.7179	1.8205

SELF ENHANCEMENT, THROUGH DEROGATION OF OTHERS (SE)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.4086	711.		
BETWEEN	0.8446	177.		
GROUPS	1.0849	3.	1.291	0.2783
ERROR (G)	0.8405	174.		
WITHIN	0.2640	534.		
TRIALS	1.3446	3.	5.277	0.0017
G BY T	0.4416	9.	1.733	0.0783
ERROR (T)	0.2548	522.		

G MEAN	1	2	3	4
	1.2045	1.2500	1.3790	1.1731

T MEAN	1	2	3	4
	1.1180	1.2921	1.3034	1.2753

G BY T	1	2	3	4
1	1.0909	1.3030	1.3333	1.0909
2	1.0800	1.2667	1.3333	1.3200
3	1.1935	1.3226	1.4516	1.5484
4	1.1538	1.3077	1.1026	1.1282

DIFFUSE HYPERACTIVITY (DH)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.6105	711.		
BETWEEN	1.3139	177.		
GROUPS	1.4374	3.	1.096	0.3527
ERROR (G)	1.3118	174.		
WITHIN	0.3773	534.		
TRIALS	0.5037	3.	1.324	0.2645

G BY T	0.1594	9.	0.419	0.9250
ERROR (T)	0.3804	522.		

G MEAN	1	2	3	4
	1.4015	1.2333	1.2258	1.3782

T MEAN	1	2	3	4
	1.2303	1.2865	1.3596	1.3034

G BY T	1	2	3	4
1	1.2424	1.3939	1.5152	1.4545
2	1.1467	1.2667	1.2667	1.2533
3	1.2581	1.1290	1.2903	1.2258
4	1.3590	1.3590	1.4615	1.3333

GROUP 1   32 SUBJECTS.

GROUP 2   71 SUBJECTS.

GROUP 3   28 SUBJECTS.

GROUP 4   37 SUBJECTS.

PEER ACCEPTANCE

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0635	671.		
BETWEEN	0.1399	167.		
GROUPS	1.5069	3.	13.119	0.0000
ERROR (G)	0.1149	164.		
WITHIN	0.0382	504.		
TRIALS	1.2125	3.	39.043	0.0000
G BY T	0.0390	9.	1.256	0.2580
ERROR (T)	0.0311	492.		

G MEAN	1	2	3	4
	1.1461	1.3250	1.2999	1.1577

T MEAN	1	2	3	4
	1.2071	1.1960	1.2201	1.3765

G BY T	1	2	3	4
1	1.1050	1.1156	1.1409	1.2228
2	1.2758	1.2638	1.2742	1.4863
3	1.2614	1.2164	1.2757	1.4461
4	1.1224	1.1200	1.1424	1.2459

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0905	671.		
BETWEEN	0.1802	167.		
GROUPS	1.4458	3.	9.208	0.0001
ERROR (G)	0.1570	164.		
WITHIN	0.0608	504.		
TRIALS	0.7059	3.	12.754	0.0000
G BY T	0.1440	9.	2.602	0.0063
ERROR (T)	0.0554	492.		

G MEAN	1	2	3	4
	1.3690	1.1618	1.1681	1.2605

T MEAN	1	2	3	4
	1.1960	1.1808	1.1988	1.3205

G BY T	1	2	3	4
1	1.2875	1.2731	1.3141	1.6012
2	1.1339	1.1208	1.1532	1.2390
3	1.1936	1.1700	1.1489	1.1600
4	1.2378	1.2241	1.2243	1.3557

GROUP 1   17 SUBJECTS.

GROUP 2   52 SUBJECTS.

GROUP 3   19 SUBJECTS.

GROUP 4   25 SUBJECTS.

PRONENESS TOWARD NEUROTICISM (PTN)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	11.5708	451.		
BETWEEN	27.9058	112.		
GROUPS	247.8892	3.	11.344	0.0000
ERROR (G)	21.8512	109.		
WITHIN	6.1740	339.		
TRIALS	73.7139	3.	13.673	0.0000
G BY T	12.0977	9.	2.244	0.0190
ERROR (T)	5.3914	327.		

G MEAN	1	2	3	4
	10.9265	7.5962	10.1316	8.8100

T MEAN	1	2	3	4
	9.8230	9.0177	8.3274	8.0000

G BY T	1	2	3	4
1	11.1176	11.7647	9.6471	11.1765
2	9.3462	7.5192	7.0769	6.4423
3	10.7368	10.5263	9.7895	9.4737
4	9.2400	9.1200	8.9200	7.9600

TABLE 36.

T X S ANALYSES OF VARIANCE FOR NONANGLO CHILDREN CLASSIFIED BY SCHOOL ANXIETY AND SCHOOL MOTIVATION

GROUP 1	4C SLBJECTS.	NCN ANGLC	HI ANX	LC MO		5	
GROUP 2	16 SLBJECTS.	NCN ANGLC	LO ANX	HI MO	6		
GROUP 3	40 SLBJECTS.	NCN ANGLC	HI ANX		HI MC	7	
GROUP 4	18 SUBJECTS.	NCN ANGLC	LO ANX	LO MO		8	
TOTAL =	114 SLBJECTS.						

DEGREES OF FREECCM

    3 AND   110 FCR GROUPS.

    3 AND   33C FCR TREATMENTS.

    9 ANC   33C FCR INTERACTION.

SCHOOL ANXIETY (SA)
GROUPS F RATIO = 66.768   P = .0CCC

MEANS.	44.7813	18.2031	44.1937	16.7917

TREATMENTS F RATIO = 15.635   P = .0000

MEANS.	41.6053	37.2018	34.2018	32.6930

INTERACTICN F RATIO = .694   P = .7156

GROUP 1	+8.9250	46.025C	43.6750	40.5C00
GROUP 2	22.8125	20.375C	16.2500	13.3750
GROUP 3	5C.4C00	44.925C	41.7750	39.6750
GROUP 4	22.5C00	15.3889	12.2778	17.0C00

SEX-LINKED INTERESTS, ATTITUDES (S)

GROUPS F RATIO = 4.184   P = .0C78

MEANS.	7.7375	8.3281	6.3312	8.3333

TREATMENTS F RATIC = 12.162   P = .0C00

MEANS.   6.6667   7.1053   7.5702   8.3421

INTERACTICN F RATIC = .860   P = .5618

GROUP 1   6.9500   7.3750   7.6500   8.9750

GROUP 2   7.9375   7.8750   8.3750   9.1250

GROUP 3   5.6750   5.8000   6.5500   7.3000

GROUP 4   7.1111   8.7222   8.9444   8.5556

SELF DISPARAGEMENT, IN RELATION TO PEERS (SD)

GROUPS F RATIO = 7.187   P = .0004

MEANS.   5.0437   3.4531   4.0437   4.1250

TREATMENTS F RATIC = 5.356   P = .0017

MEANS.   3.8158   4.6316   4.0351   4.8158

INTERACTICN F RATIC = .571   P = .8216

GROUP 1   4.2500   5.2250   4.9000   5.8000

GROUP 2   3.5000   3.3125   3.1875   3.8125

GROUP 3   3.7000   4.5250   3.5250   4.4250

GROUP 4   3.3889   4.7222   4.0000   4.3889

AVOIDANCE STYLE OF DEFENSIVENESS (DA_V)

GROUPS F RATIO = 22.081   P = .0000

MEANS.   13.8000   11.5781   14.6125   10.9444

TREATMENTS F RATIC = 6.150   P = .0007

MEANS.   14.2105   12.8596   13.2456   12.9737

INTERACTICN F RATIC = 1.288   P = .2417

GROUP 1   14.4750   12.8500   14.0750   13.8000

GROUP 2   12.5625   12.2500   11.2500   10.2500

GROUP 3   15.4250   14.2500   14.6500   14.1250

GROUP 4   12.3889   10.3333   10.0556   11.0000

APPROACH STYLE OF DEFENSIVENESS (DA_p)

GROUPS F RATIC = 4.758   P = .0041

MEANS.   14.3187   13.7500   15.0750   12.9028

TREATMENTS F RATIO =   9.814   P = .CC00

MEANS.   15.3246   14.4211   14.0351   13.3421

INTERACTICN F RATIO =   1.177   P = .3084

GROUP   1   15.1250   14.2500   14.1500   13.7500

GROUP   2   14.1250   15.125C   13.8750   11.8750

GROUP   3   16.3250   14.9500   14.9750   14.0500

GROUP   4   14.6111   13.0000   11.8333   12.1667

GROUP 1   34 SUBJECTS.

GROUP 2   17 SUBJECTS.

GROUP 3   34 SUBJECTS.

GROUP 4   19 SUBJECTS.

CTAM NONVERBAL (NV)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	278.6446	415.		
BETWEEN	825.1092	103.		
GROUPS	8421.0207	3.	14.100	0.0000
ERROR (G)	597.2319	100.		
WITHIN	98.2412	312.		
TRIALS	2818.5000	3.	38.740	0.0000
G BY T	41.0729	9.	0.565	0.8266
ERROR (T)	72.7536	300.		

G MEAN	1	2	3	4
	81.3015	103.4706	94.6912	91.9474

T MEAN	1	2	3	4
	84.5481	91.7308	91.4519	97.2596

G BY T	1	2	3	4
1	75.8529	81.1176	81.7941	86.4412
2	95.0588	103.9412	104.8824	110.0000
3	87.2059	95.2059	94.1765	102.1765
4	85.9474	93.5789	91.8421	96.4211

CTMM VERBAL (V)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	200.3276	415.		
BETWEEN	688.9511	103.		
GROUPS	5494.6458	3.	10.086	0.0000
ERROR (G)	544.7803	100.		
WITHIN	39.0192	312.		
TRIALS	182.3958	3.	4.953	0.0027
G BY T	64.3507	9.	1.747	0.0775
ERROR (T)	36.8255	300.		

G MEAN	1	2	3	4
	80.8971	96.9118	93.6544	86.7763

T MEAN	1	2	3	4
	87.8173	89.6827	87.4423	90.0962

G BY T	1	2	3	4
1	81.5000	82.5294	79.5000	80.0588
2	94.2353	97.6471	96.8235	98.9412
3	91.3824	94.0000	92.4118	96.8235
4	87.0000	87.6316	84.3684	88.1053

GROUP 1   42 SUBJECTS.   NCN ANGLC HI ANX LO MO   5

GROUP 2   21 SUBJECTS.   NCN ANGLC LO ANX HI MO   6

GROUP 3   40 SUBJECTS.   NCN ANGLC   HI ANX   HI MO   7

GROUP 4   19 SUBJECTS.   NCN ANGLC LO ANX LO MC   8

TOTAL =   122 SUBJECTS.

DEGREES OF FREEDCM

      3 AND   118 FOR GROUPS.

      3 AND   354 FCR TREATMENTS.

      9 AND   354 FCR INTERACTION.

GRADE POINT AVERAGE (GPA)

GROUPS F RATIO =   27.194   P = .0CC0

MEANS.   9.2500   13.6667   12.5625   10.3816

TREATMENTS F RATIC =   15.392   P = .0C00

MEANS.   10.5574   11.418C   11.0656   12.0492

INTERACTICN F RATIO =   1.948   P = .0440

GROUP   1   8.5952   9.2143   5.1667   10.0238

GROUP   2   13.1429   14.1429   13.5238   13.8571

GROUP   3   11.4500   12.5750   12.2250   14.0000

GROUP   4   10.1579   10.8421   1C.1053   10.4211

GROUP 1   31 SUBJECTS.

GROUP 2   29 SUBJECTS.

GROUP 3   34 SUBJECTS.

GROUP 4   38 SUBJECTS.

SCHOOL MOTIVATION (SM)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	57.8855	527.		
BETWEEN	156.8621	131.		
GROUPS	324.6406	3.	2.123	0.0991
ERROR (G)	152.9298	128.		
WITHIN	25.1433	396.		
TRIALS	0.3555	3.	0.015	0.9971
G BY T	78.5317	9.	3.261	0.0010
ERROR (T)	24.0857	384.		

G MEAN	1	2	3	4
	23.1129	25.2069	23.9779	26.6316

T MEAN	1	2	3	4
	24.8561	24.7348	24.8258	24.8182

G BY T	1	2	3	4
1	23.3226	20.5161	23.1935	25.4194
2	25.6207	26.0690	26.4138	22.7241
3	24.0000	23.9706	23.7941	24.1471
4	26.2895	27.8421	25.8684	26.5263

GROUP 1	51 SUBJECTS.	HI ANX	LO MO
GROUP 2	23 SUBJECTS.	LO ANX	HI MO
GROUP 3	47 SUBJECTS.	HI ANX	HI MO
GROUP 4	25 SUBJECTS.	LO ANX	LO MO

FEELINGS OF INFERIORITY (FI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.3974	583.		
BETWEEN	1.9013	145.		
GROUPS	1.1424	3.	0.596	0.6229
ERROR (G)	1.9173	142.		
WITHIN	1.2306	438.		
TRIALS	1.3288	3.	1.106	0.3464
G BY T	2.6004	9.	2.165	0.0233
ERROR (T)	1.2010	426.		

G MEAN	1	2	3	4
	1.4559	1.5652	1.3723	1.3300

T MEAN	1	2	3	4
	1.2945	1.5205	1.4247	1.4589

G BY T	1	2	3	4
1	1.4510	1.4902	1.3529	1.5294
2	1.1304	2.2174	1.5652	1.3478
3	1.3191	1.3404	1.2340	1.5957
4	1.0800	1.2800	1.8000	1.1600

NEUROTIC SYMPTOMS, ACADEMIC (NA)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.9894	583.		
BETWEEN	2.9800	145.		
GROUPS	1.2690	3.	0.421	0.7422
ERROR (G)	3.0161	142.		
WITHIN	1.6615	438.		
TRIALS	4.0108	3.	2.443	0.0624
G BY T	1.8078	9.	1.101	0.3603
ERROR (T)	1.6419	426.		

G MEAN	1	2	3	4
	1.7059	1.4674	1.6170	1.5800

T MEAN	1	2	3	4
	1.3836	1.7740	1.6575	1.6575

G BY T	1	2	3	4
1	1.5294	2.0392	1.7059	1.5490
2	1.2609	1.5652	1.4348	1.6087
3	1.4681	1.6596	1.4894	1.8511
4	1.0400	1.6400	2.0800	1.5600

NEUROTIC SYMPTOMS, SOCIAL (NS)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	2.2826	583.		
BETWEEN	3.2691	145.		
GROUPS	8.6905	3.	2.755	0.0438
ERROR (G)	3.1545	142.		
WITHIN	1.9561	438.		
TRIALS	1.7003	3.	0.870	0.5407
G BY T	2.0796	9.	1.064	0.3886
ERROR (T)	1.9552	426.		

G MEAN	1	2	3	4
	1.6814	1.5109	1.3830	1.9900

T MEAN	1	2	3	4
	1.5068	1.5685	1.7603	1.6096

G BY T	1	2	3	4
1	1.6667	1.5882	1.7059	1.7647
2	1.2609	1.8261	1.4783	1.4783
3	1.3617	1.3830	1.4468	1.3404
4	1.6800	1.6400	2.7200	1.9200

AGGRESSION WITH INDEPENDENCE STRIVINGS (AI)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	2.5728	583.		
BETWEEN	5.5272	145.		
GROUPS	3.5087	3.	0.630	0.6007
ERROR (G)	5.5698	142.		
WITHIN	1.5947	438.		
TRIALS	0.7237	3.	0.449	0.7221
G BY T	1.1165	9.	0.693	0.7169
ERROR (T)	1.6110	426.		

G MEAN	1	2	3	4
	1.5343	1.6087	1.5372	1.2000

T MEAN	1	2	3	4
	1.4863	1.5822	1.4110	1.4795

G BY T	1	2	3	4
1	1.6863	1.6078	1.4314	1.4118
2	1.7826	1.9130	1.2174	1.5217
3	1.3617	1.5745	1.5745	1.6383
4	1.0400	1.2400	1.2400	1.2800

ACTIVE WITHDRAWAL (AW)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	1.9396	583.		
BETWEEN	3.4846	145.8		

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
GROUPS	18.2572	3.	5.755	0.0013
ERROR (G)	3.1725	142.		
WITHIN	1.4281	438.		
TRIALS	1.8744	3.	1.307	0.2706
G BY T	0.9885	9.	0.689	0.7204
ERROR (T)	1.4342	426.		

G MEAN	1	2	3	4
	1.8971	1.3804	1.3670	2.1100

T MEAN	1	2	3	4
	1.6849	1.6370	1.5685	1.8356

G BY T	1	2	3	4
1	2.0980	1.7059	1.7451	2.0392
2	1.2609	1.4783	1.3478	1.4348
3	1.3191	1.2553	1.3404	1.5532
4	1.9200	2.3600	1.8400	2.3200

EMOTIONAL DISTURBANCE WITH DEPRESSION (ED)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.5558	583.		
BETWEEN	0.8692	145.		
GROUPS	1.9441	3.	2.297	0.0789
ERROR (G)	0.8464	142.		
WITHIN	0.4521	438.		
TRIALS	0.3059	3.	0.690	0.5620
G BY T	0.9100	9.	2.052	0.0323
ERROR (T)	0.4434	426.		

G MEAN	1	2	3	4
	1.4118	1.1196	1.2819	1.3600

T MEAN	1	2	3	4
	1.2877	1.3767	1.2740	1.3219

G BY T	1	2	3	4
1	1.3922	1.6078	1.3529	1.2941

2	1.13.4	1.2609	1.0435	1.0435	349
3	1.3191	1.2128	1.1277	1.4681	
4	1.1600	1.3200	1.6000	1.3600	

SELF ENHANCEMENT, THROUGH DEROGATION OF OTHERS (SE)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.3179	583.		
BETWEEN	0.5299	145.		
GROUPS	1.3454	3.	2.624	0.0519
ERROR (G)	0.5127	142.		
WITHIN	0.2477	438.		
TRIALS	0.6849	3.	2.816	0.0380
G BY T	0.3142	9.	1.292	0.2384
ERROR (T)	0.2432	426.		

	1	2	3	4
G MEAN	1.1618	1.2935	1.2819	1.0700
T MEAN	1.1849	1.2945	1.1301	1.2123

G BY T	1	2	3	4
1	1.1176	1.2745	1.0784	1.1765
2	1.0870	1.4348	1.3478	1.3043
3	1.3830	1.3617	1.1064	1.2766
4	1.0400	1.0800	1.0800	1.0800

DIFFUSE HYPERACTIVITY (DH)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.6829	583.		
BETWEEN	1.1268	145.		
GROUPS	0.9307	3.	0.823	0.5140
ERROR (G)	1.1309	142.		
WITHIN	0.5360	438.		
TRIALS	0.9469	3.	1.785	0.1478

G BY T	0.6551	9.	1.235	0.2709
ERROR (T)	0.5305	426.		

G MEAN	1	2	3	4
	1.3431	1.4130	1.2181	1.3000

T MEAN	1	2	3	4
	1.2466	1.2397	1.3288	1.4110

G BY T	1	2	3	4
1	1.2941	1.1373	1.3529	1.5882
2	1.4348	1.3043	1.5217	1.3913
3	1.0851	1.3404	1.1489	1.2979
4	1.2800	1.2000	1.4400	1.2800

GROUP 1   49 SUBJECTS.

GROUP 2   22 SUBJECTS.

GROUP 3   44 SUBJECTS.

GROUP 4   21 SUBJECTS.

PEER ACCEPTANCE

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0485	543.		
BETWEEN	0.0945	135.		
GROUPS	0.6168	3.	7.464	0.0003
ERROR (G)	0.0826	132.		
WITHIN	0.0333	408.		
TRIALS	0.2269	3.	7.204	0.0003
G BY T	0.0485	9.	1.540	0.1312
ERROR (T)	0.0315	396.		

G MEAN	1	2	3	4
	1.1951	1.3157	1.3126	1.2017

T MEAN	1	2	3	4
	1.2391	1.2189	1.2437	1.3127

G BY T	1	2	3	4
1	1.1963	1.1716	1.1902	1.2220
2	1.2236	1.3059	1.2836	1.4495
3	1.2959	1.2691	1.3136	1.3718
4	1.2362	1.1329	1.1805	1.2571

PEER REJECTION

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	0.0747	543.		
BETWEEN	0.1373	135.		
GROUPS	0.2653	3.	1.975	0.1194
ERROR (G)	0.1344	132.		
WITHIN	0.0540	408.		
TRIALS	0.4300	3.	8.235	0.0001
G BY T	0.0095	9.	0.182	0.9951
ERROR (T)	0.0522	396.		

G MEAN	1	2	3	4
	1.3011	1.1875	1.2561	1.2567

T MEAN	1	2	3	4
	1.2301	1.2198	1.2521	1.3432

G BY T	1	2	3	4
1	1.2590	1.2463	1.3043	1.3947
2	1.1623	1.1714	1.1695	1.2468
3	1.2286	1.2159	1.2327	1.3470
4	1.2367	1.2167	1.2576	1.3157

GROUP 1   27 SUBJECTS.

GROUP 2   16 SUBJECTS.

GROUP 3   30 SUBJECTS.

GROUP 4   13 SUBJECTS.

PRONENESS TOWARD NEUROTICISM (PTN)

SOURCE	MEAN SQUARE	D.F.	F-RATIO	P
TOTAL	9.8221	343.		
BETWEEN	22.8673	85.		
GROUPS	112.6050	3.	5.750	0.0016
ERROR (G)	19.5843	82.		
WITHIN	5.5242	258.		
TRIALS	24.4061	3.	4.641	0.0039
G BY T	6.4718	9.	1.231	0.2760
ERROR (T)	5.2593	246.		

G MEAN	1	2	3	4
	10.9630	8.9219	10.9333	8.7692

T MEAN	1	2	3	4
	11.0349	10.0581	9.9070	9.9651

G BY T	1	2	3	4
1	11.2222	10.6296	10.7778	11.2222
2	9.4375	9.3750	8.3750	8.5000
3	12.3667	10.3667	10.8333	10.1667
4	9.5385	9.0000	7.8462	8.6923

motivation based on teacher ratings. However, in defense of this latter decision,
two things should be pointed out: first, Winterbottom (1958) has reported that
children who are strong in achievement motivation are rated by teachers as deriving
more pleasure from success, and this is to some degree what was rated by teachers in
school motivation; second, there is a negligible correlation between school anxiety
and school motivation, and this is consistent with the assumption usually made about
the need to achieve success and the need to avoid failure.

Group Differences on the Variables. To summarize the results of the group
differences shown in Tables 35 and 36, it should be noted, first, that children
classified by school motivation and school anxiety generally differ on the variables
studied; and second, that there are several instances of different results for Anglo
compared to Non-Anglo groups. Taking these latter differences as the basis of dis-
cussion, Anglo children (classified according to SA and SM) do not differ significantly
on S, SE, AI, and DH; whereas Non-Anglo children (classified on the basis of SA and
SM) do not differ significantly on FI, NA, ED, SE, DH, and PR. And, since only two
of the variables on which Anglo groups do not differ involve classroom behavior and
every one of the variables on which Non-Anglo groups do not differ involve classroom
behavior, it would, therefore, appear that SA and SM are more significant in the class-
room behavior of Anglo than Non-Anglo children. Of course, since these variables
depend on teacher information, it is possible that teachers of Anglo classes were more
sensitive and discriminating with respect to these behavioral characteristics.

Interactions of School Anxiety and School Motivation with In-School and Out-of-
School Influences. Some of the most important data in this project concern the trends
in the Anglo and Non-Anglo Hi Anx - Lo Mot, Lo Anx - Hi Mot, Hi Anx - Hi Mot, and Lo
Anx - Lo Mot subsample means for each of the major variables across the in-school and
out-of-school periods. In the next few pages we will present our findings in regard
to these analyses. We have taken all interactions which are statistically significant
at of beyond the .10 level, and have plotted the means in order to clearly show the

nature of these interactions.

a. Anglo Children

Sex-Linked Interests, Attitudes (S). The means for S are shown graphically in Figure 8. The overall trend of the means for S is sharply upward between T_1 and T_2, slightly downward between T_2 and T_3, and somewhat upward between T_3 and T_4 (with one exception). As for the interactions, between T_1 and T_2, HA-HM and LA-LM have parallel upward trends, and LA-LM and LA-HM have parallel upward (but more sharply rising) trends. Between T_3 and T_4, LA-LM and LA-HM have parallel and somewhat upward trends, HA-HM has a sharply upward trend, and HA-LM has a sharply downward trend. This indicates that HA was not influenced by the presence of HM (or LM) in fourth grade; but in fifth grade HA accompanied by LM produced a down turn in S, while in the company of HM it turned up.

Proneness toward Neuroticism (PTN). The overall trend with respect to PTN, as shown in Figure 9, is a generally downward pattern in all three periods. The major exception to this occurred for HA-LM which moved sharply upward between T_1 and T_2, sharply downward between T_2 and T_3, and sharply upward again between T_3 and T_4. For the other three groups the change across the summer months was somewhat less than the changes across fourth and fifth grade. Also at T_1 there were two distinct groupings - HA-LM and HA-HM had similar means, and LA-LM and LA-HM had similar (but lower) means. During fourth grade, however, each set has diverged sharply, with HA-LM higher than HA-HM and LA-LM higher than LA-HM. Furthermore, HA-LM and HA-HM come together at the end of the summer, but then HA-LM surged upward again during fifth grade. The LA-LM and LA-HM groups stayed about the same distance apart during the summer and then converged somewhat during fifth grade. It appears, therefore, that HA-LM Anglo children's PTN scores are associated with in-school influences. Also, the groups moved farther apart between T_1 and T_4.

Aggression with Independence Strivings (AI). There really is no overall trend discernable in the AI means, as Figure 10 shows. But, with regard to specific inter-actions between T_1 and T_2, LA-LM is the exception, since it moves upward more sharply. Between T_2 and T_3, pronounced differences occurred, as HA-LM moved strongly upward,
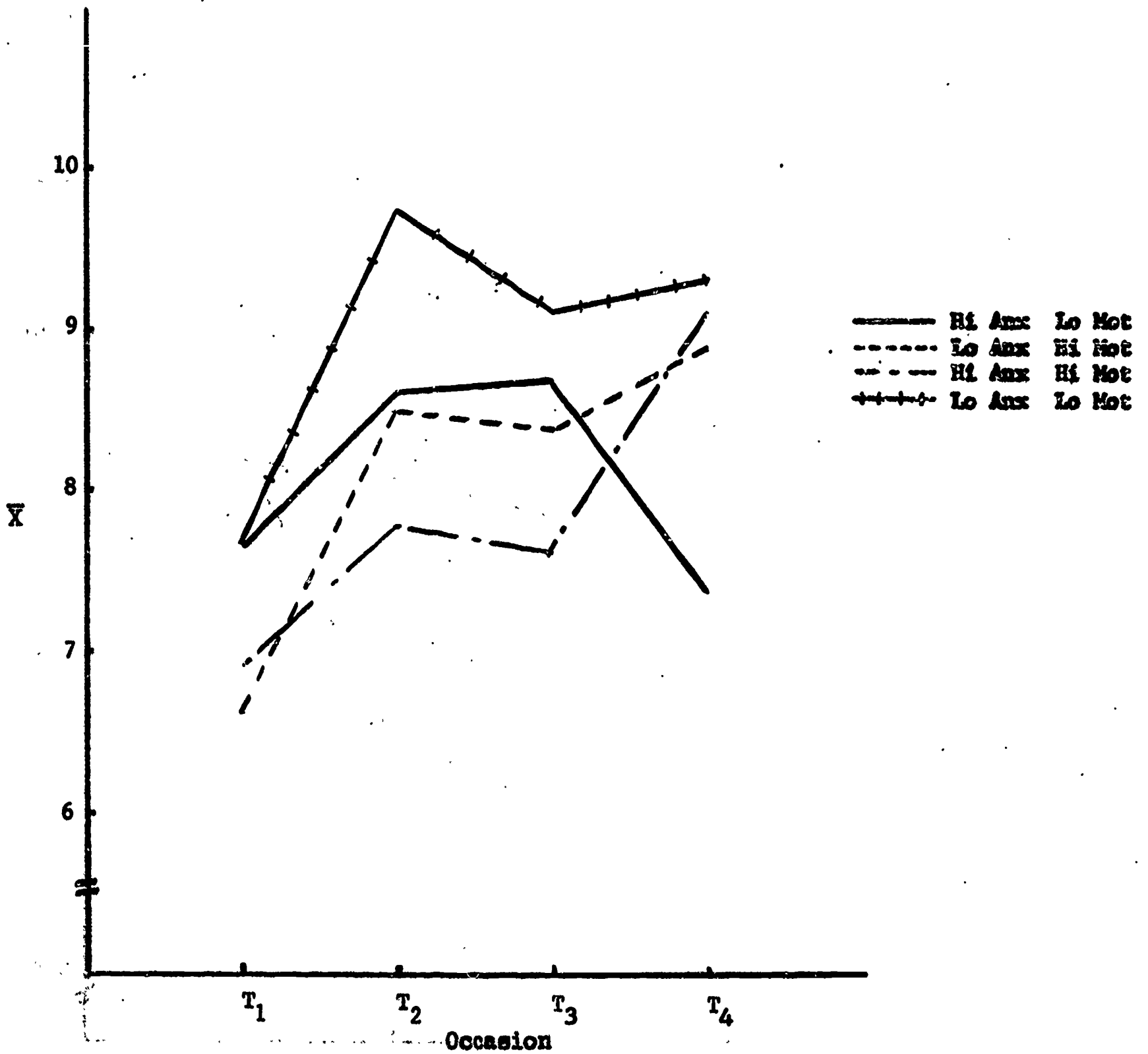
Figure 8. Anglo Interaction between High and Low School
Anxiety and School Motivation and Sex-linked Interests,
Attitudes (S), the interaction being significant beyond
the .10 level.
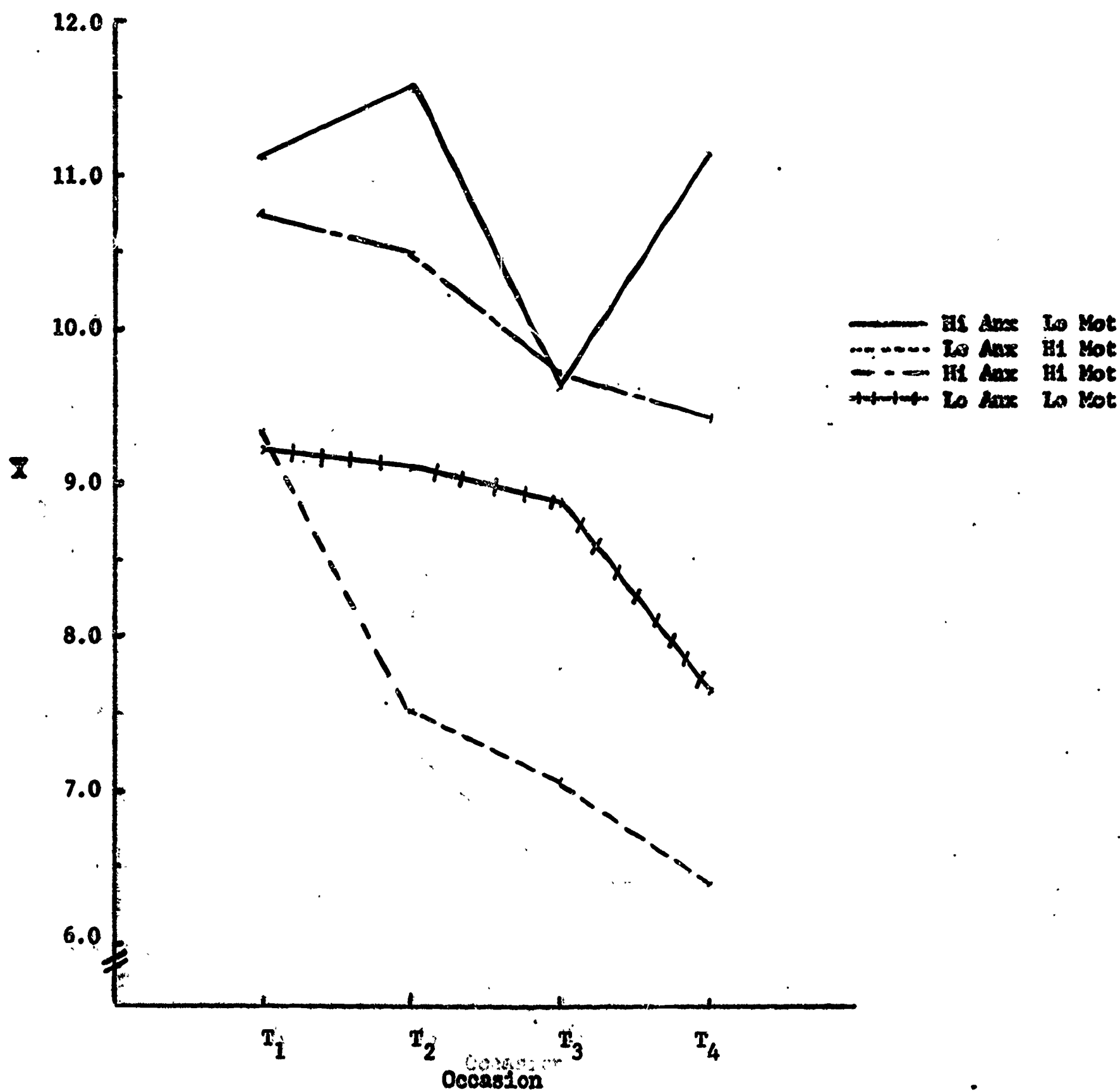
Figure 9. Anglo Interaction between High and Low School Anxiety and School Motivation and Proneness toward Neuroticism (PT... the interaction being significant beyond the .10 level.
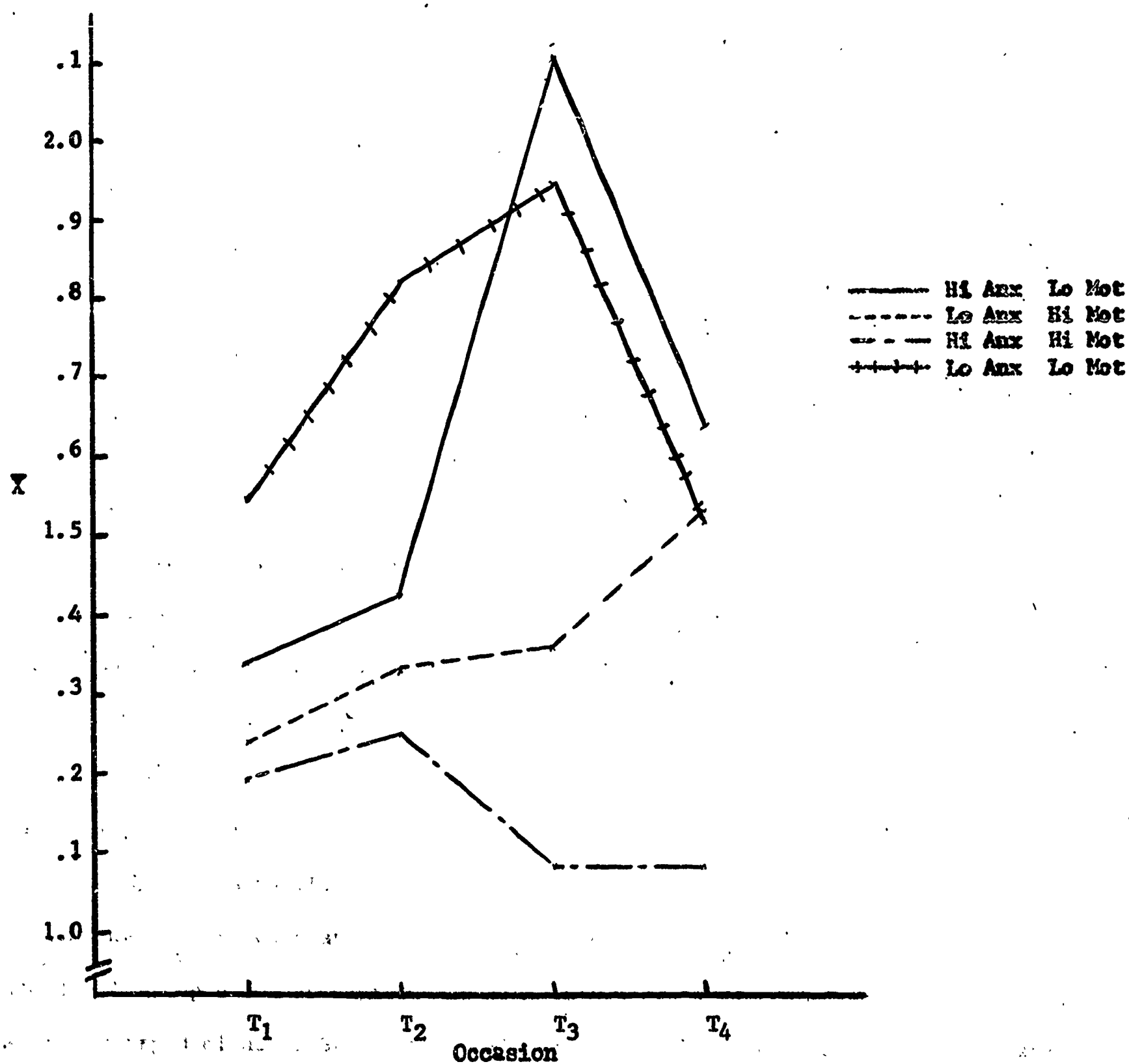
Figure 10. Anglo Interaction between High and Low School Anxiety and School Motivation and Aggression, with independence Strivings (AI), the interaction being significant beyond the .10 level.

HA-HM moved downward, and the remaining two groups moved upward. Between T_3 and T_4, HA-LM and LA-LM moved strongly downward, LA-HM moved upward, and there was no change in the LA-HM group.

Self Disparagement in Relation to Peers (SD). Two observable overall trends should be noted in Figure 11 where the SD means are plotted. One is the general tendency for SD to go up during fourth grade, down during the summer months, and up again during fifth grade. The second trend to be noted is the increased differentiation of the group between T_1 and T_4. As to specific interactions, the most noticeable is the accelerated change of the HA-HM group. They show the least change between T_1 and T_2, the smallest drop between T_2 and T_3, and by far the greatest increase between T_3 and T_4. On the other hand, the LA-HM group shows a decelerating rate of change, since it begins at T_1 with a somewhat lower mean, but ends at T_4 with a mean considerably below the other groups. In summary, two things need to be said: first, it appears that SD is influenced by in-school experiences; and, second, HA seems to interact with HM to produce greater self disparagement (in relation to peers), which is not surprising in view of the heavy emphasis on competence in the SD items.

Self Enhancement through Derogation of Others (SE). Figure 12 reveals no obvious overall trends in SE, except that there is a pronounced increase in differentiation of the groups at T_3 and T_4, compared to T_1 and T_2. (No reasonable explanation for this shift comes to mind.) During fourth grade there was an increase in SE, and the groups started and stayed close together. Then, over the summer months the HA-HM group continued to increase at a rate somewhat greater than that for HA-LM and HA-HM, but the LA-LM group had a precipitous decline in SE. This was followed during fifth grade by a sharp decline in SE for the HA-LM group. Both of these sharp declines are inexplicable in this context although other data may provide helpful clues.

Peer Rejection (PR). There was little change in PR between T_1 and T_2, and T_2 and T_3, but substantial increases occurred between T_3 and T_4, as Figure 13 shows. During this period the greatest increase occurred for HA-LM, and the least for HA-HM. And, over the total time it should be added that HA-LM showed the greatest increase, and HA-HM showed the least (actually a slight decrease). In view of these results
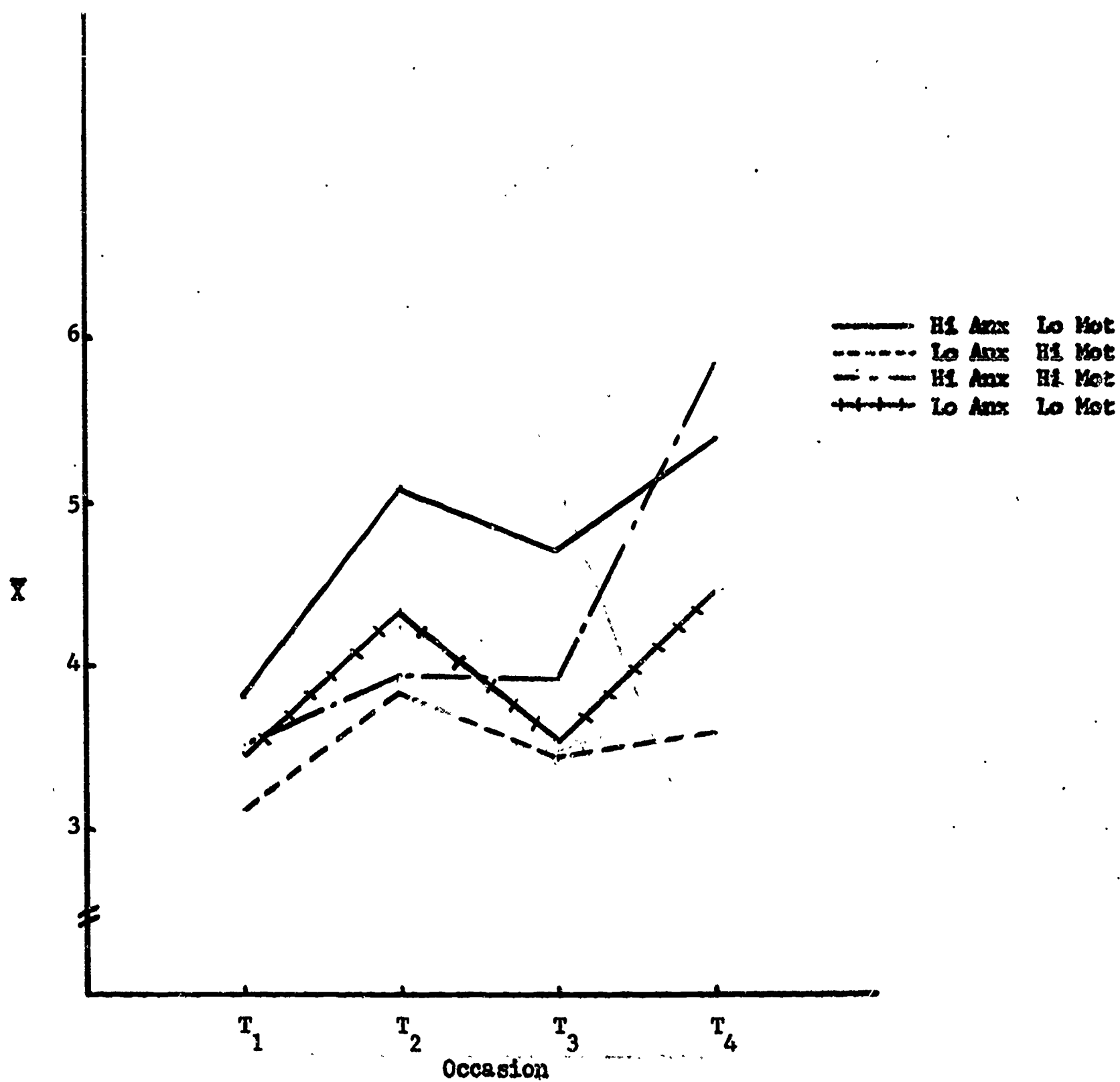
Figure 11. Anglo Interaction between High and Low School
Anxiety and School Motivation and Self Disparagement,
in relation to Peers (SD), the interaction being significant
beyond the .10 level.
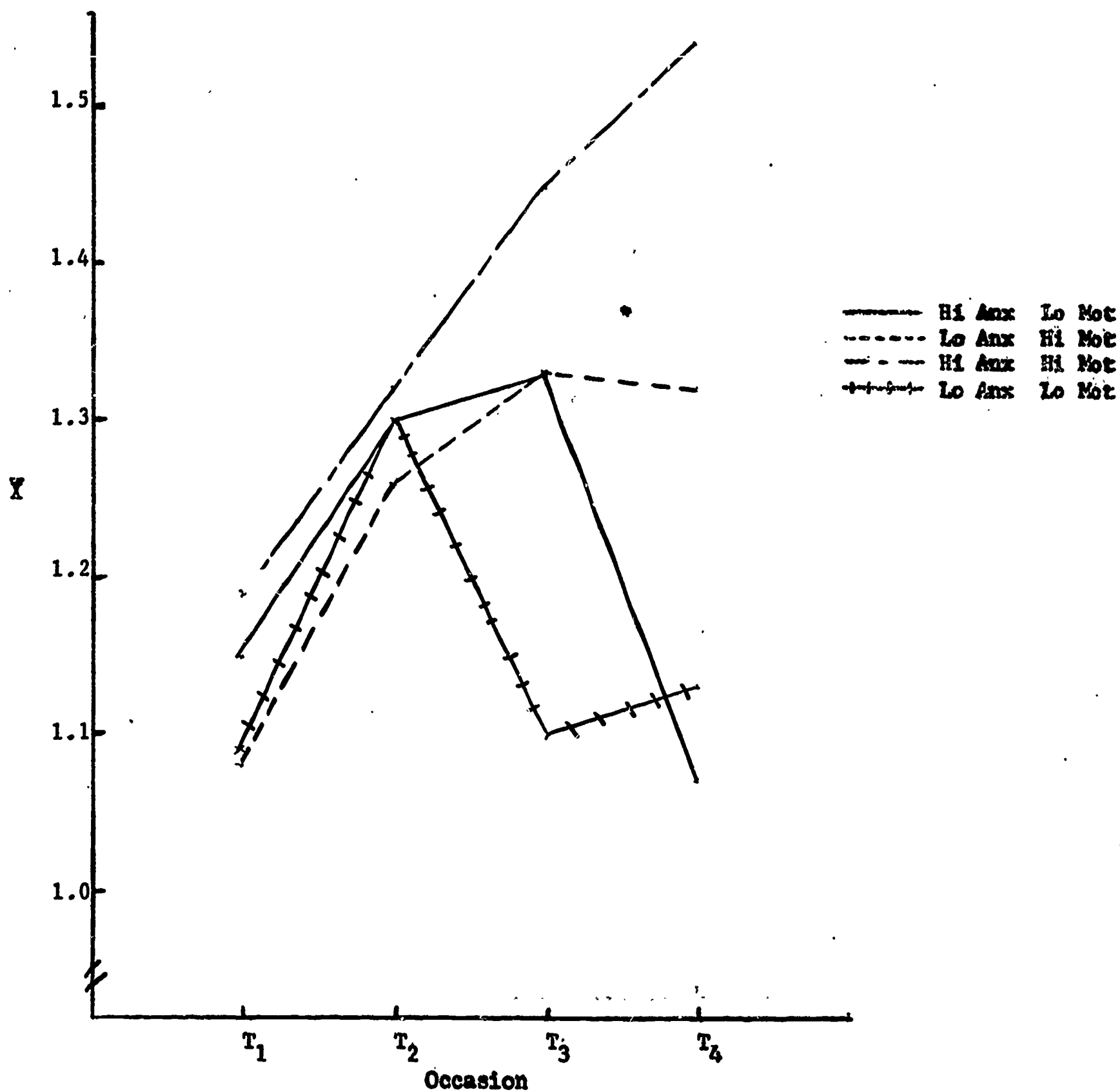
Figure 12. Anglo Interaction between High and Low School
Anxiety and School Motivation and Self Enhancement, through
Derogation of Others (SE), the interaction being significant
beyond the .10 level.
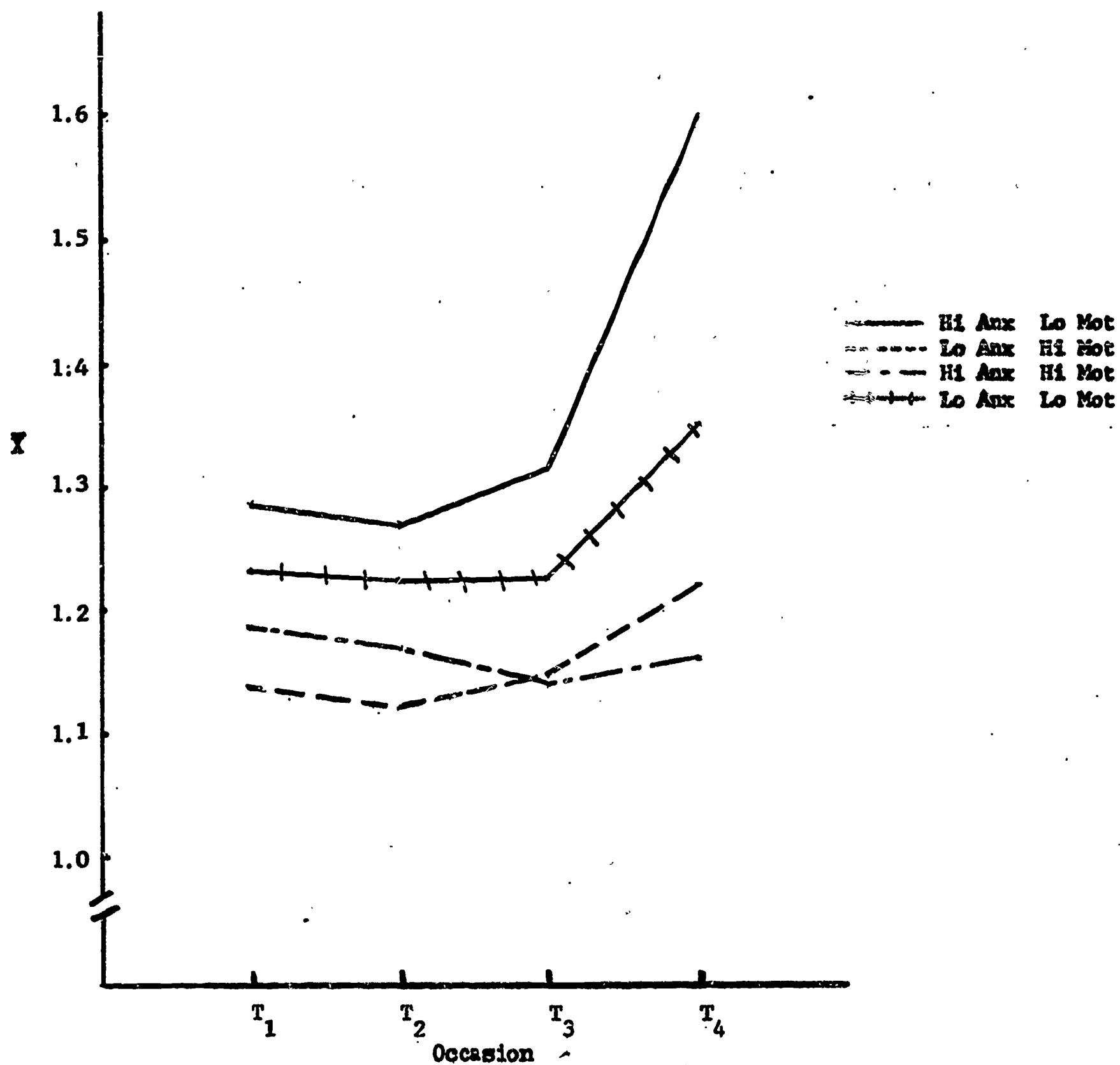
Figure 13. Anglo Interaction between High and Low School
Anxiety and School Motivation and Peer Rejection (PR),
the interaction being significant beyond the .10 level.

it is appropriate to suggest that SM interacts with HA, so that peer rejection is more likely to occur for HA children with LM than HA children with HM. In keeping with this, the LA-HM group is similar to the HA-HM group in means, although the group does have an upward trend.

CTMM Nonverbal (NV) IQ. In Figure 14 there are two overall trends which need comment. There is, first of all, a tendency for means to increase between T_1 and T_2, decrease slightly between T_2 and T_3 (with one exception), and increase again between T_3 and T_4. And, there is a pronounced separation of groups, with LA-HM and HA-HM being consistently higher than HA-LM and LA-LM. There is, therefore, in these results evidence that HM is more significant to CTMM (NV) performance than HA. However, in both fourth grade and fifth grade the LA-HM group showed more _improvement_ than the HA-HM group. In addition, the data suggest that CTMM NV IQ is sensitive to the influence of the in-school environment.

CTMM Verbal (V) IQ. The pattern with respect to CTMM V IQ, as shown in Figure 15, is similar to the pattern obtained with respect to CTMM NV IQ. In general, there is an upward trend between T_1 and T_2, a downward trend between T_2 and T_3, and an upward trend between T_3 and T_4. And, LA-LM and HA-LM are generally lower than LA-HM and HA-HM. However, two additional points are noteworthy: the LA-LM group shows greater _improvement_ between T_1 and T_4 than the HA-LM group, indicating that HA may interfere with learning (as represented by improvement in performance on an intelligence test); and the LA-HM group showed little improvement during the fifth grade, which may have been the result of the ceiling of the test.

b. Non-Angl Children

Feelings of Inferiority (FI). For FI, shown in Figure 16, there appear to be distinctive pairs of groups with a sharply differing trend. Two groups, LA-HM and LA-LM, have an inverted V pattern, although the first peaks at T_2 and the second at T_3. Also, LA-HM drops strongly between T_2 and T_3, while LA-LM rises during the same period, and they both go down from T_3 to T_4. The other two groups, HA-LM and HA-HM, rise between T_1 and T_2, fall between T_2 and T_3, and rise again between T_3 and T_4. On the basis of this evidence it would appear that there were quite different processes
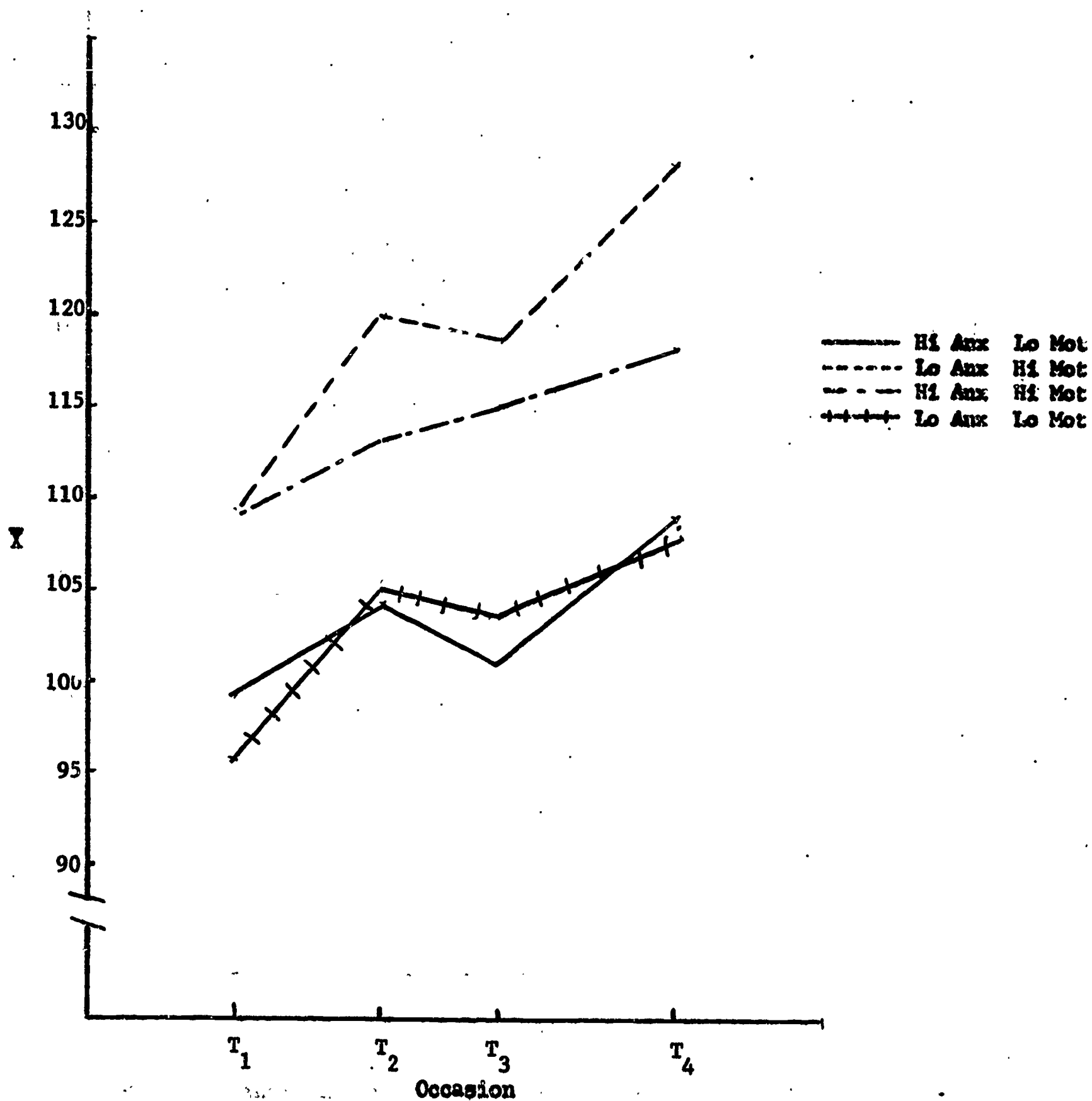
Figure 14 Anglo Interaction between High and Low School
Anxiety and School Motivation and CTMM NonVerbal (NV) IQ,
the interaction being significant beyond the .10 level.
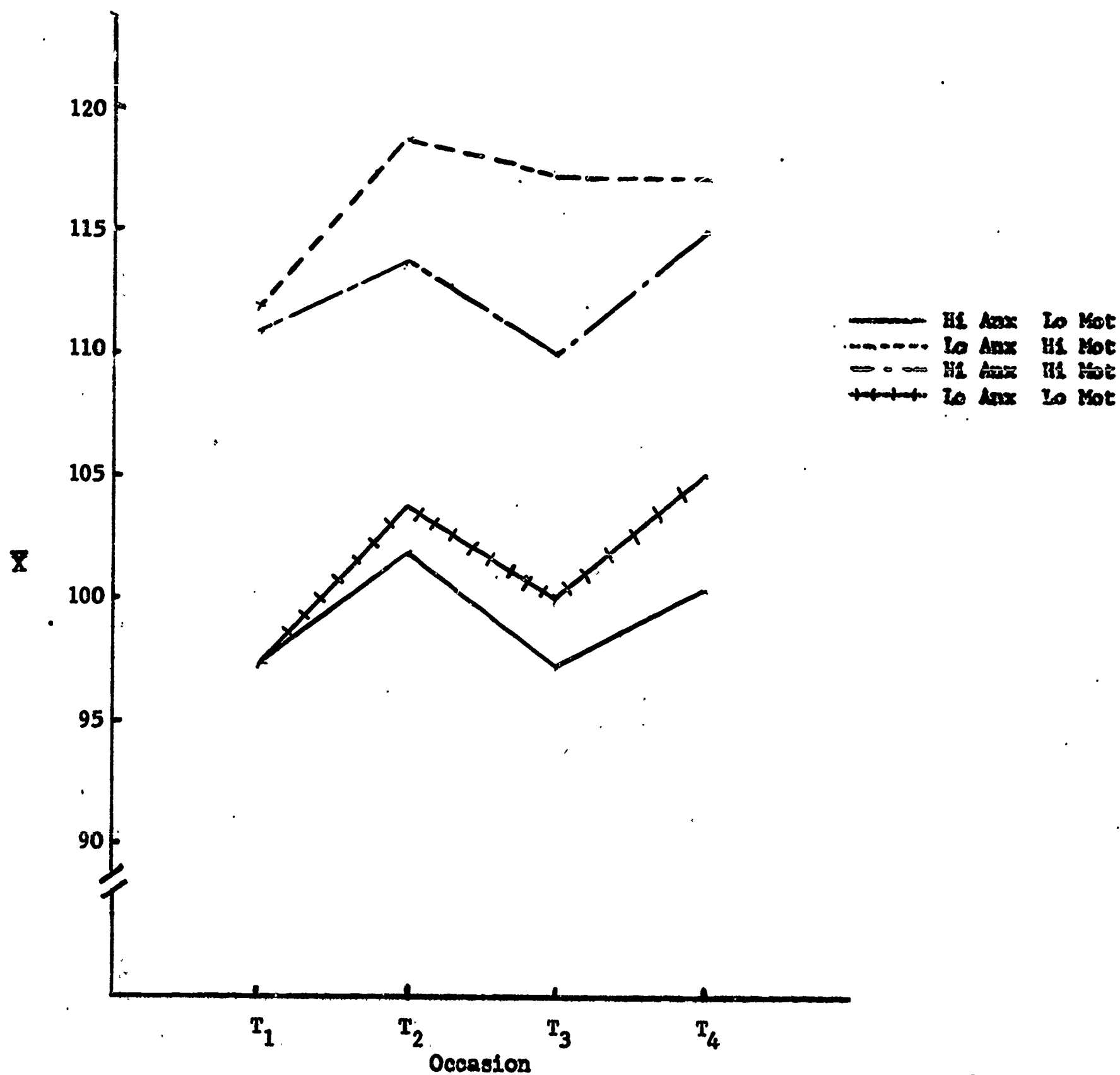
Figure 15. Anglo Interaction between High and Low School Anxiety and School Motivation and CTMM Verbal (V) IQ, the interaction being significant beyond the .10 level.
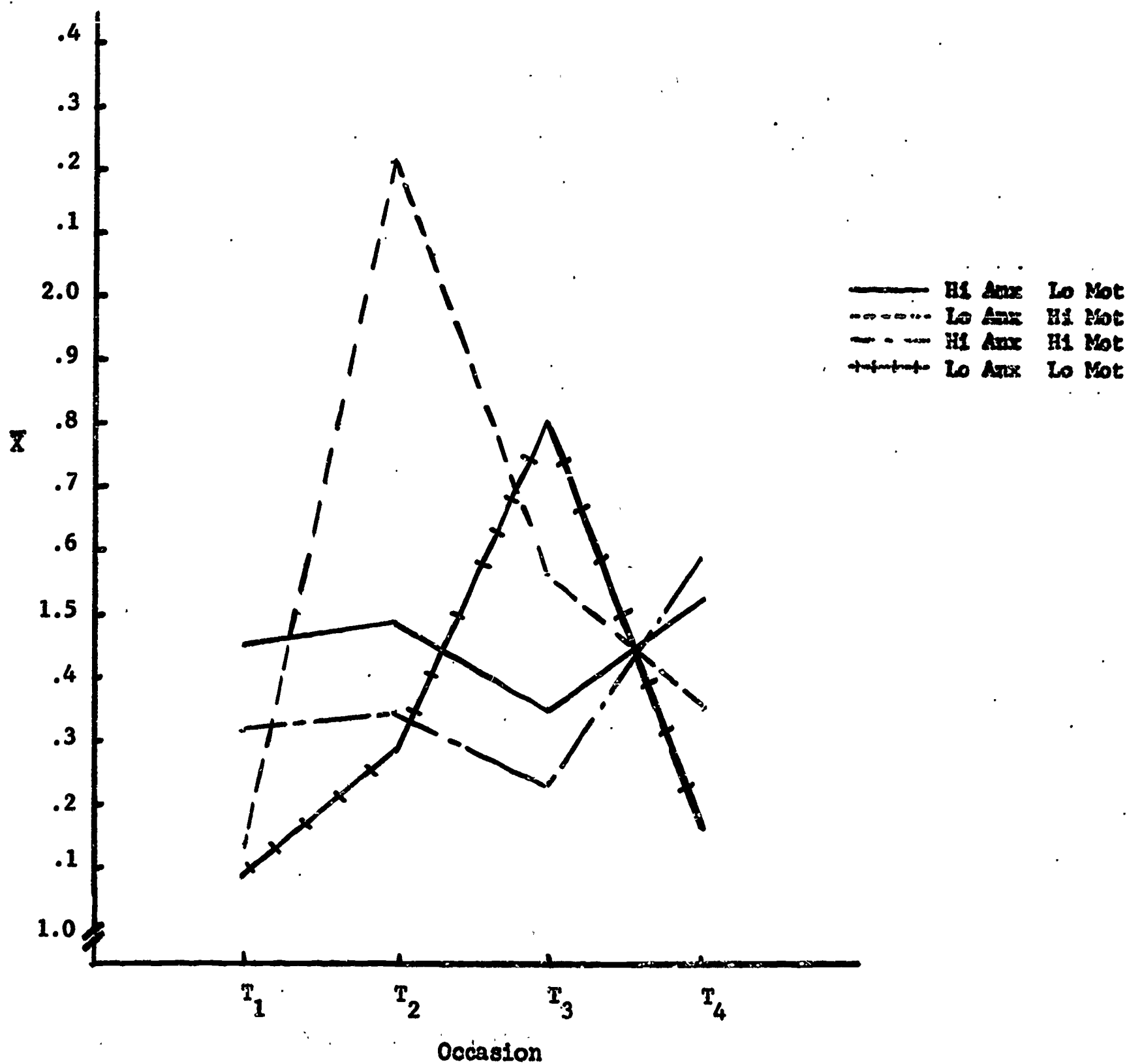
Figure 16. Non-Anglo Interaction between High and Low School
Anxiety and School Motivation and Feelings of
Inferiority (FI), the interaction being significant
beyond the .10 level.

governing the responses (or experiences) of HA as compared with LA Non-Anglo children between T_1 and T_4. In support of this it should be noted that these groups end up at T_4 much as they were at T_1 (this, in spite of the variations in between). Also, for HA children it appears that FI is associated with in-school influences.

Emotional Disturbance with Depression (ED). In Figure 17 the overall trend for ED appears to be mixed. Between T_1 and T_2, there are parallel upward trends, with the exception of HA-HM, which is downward. Between T_2 and T_3 there are almost parallel downward trends, with the exception of LA-LM, which continues upward. Putting all the results together, an intriguing pattern emerges: the trends for HA-LM and LA-HM are almost identical, expect that the latter group has lower means; and the trends for LA-LM and HA-HM are reversed, for, while LA-LM is going up, HA-HM is going down (from T_1 to T_3), and then they both reverse directions, ending up almost together. But at this point what this means is not clear.

Grade Point Average (GPA). The results for GPA are shown in Figure 18, and as to the overall trend, there is an increase between T_1 and T_2, a decrease between T_2 and T_3, and an increase between T_3 and T_4. In addition, the difference between the GPA of LA-HM and HA-HM, and between LA-LM and HA-LM, decreases between T_1 and T_4, indicating greater gains for HA-HM and HA-LM, respectively. In other words, HA Non-Anglo children seem to have improved their school achievement (as measured by grades) more than LA children.

CTMM Verbal (V) IQ. The overall trend of CTMM V IQ as revealed in Figure 19, is similar in one important respect to the preceding one (for GPA): there is an increase between T_1 and T_2, a decrease between T_2 and T_3, and an increase between T_3 and T_4. As to general pattern, LA-HM and HA-HM tend to show overall increases in CTMM V IQ, while LA-LM and HA-LM tend to show overall decreases. These combined results suggest the association of CTMM V IQ gains with in-school influences, as well as with HM. To go a step further, school anxiety appears to be strongly associated with status on the CTMM V IQ (note the large differences in means), and school motivation appears to be associated with gain or improvement in performance.
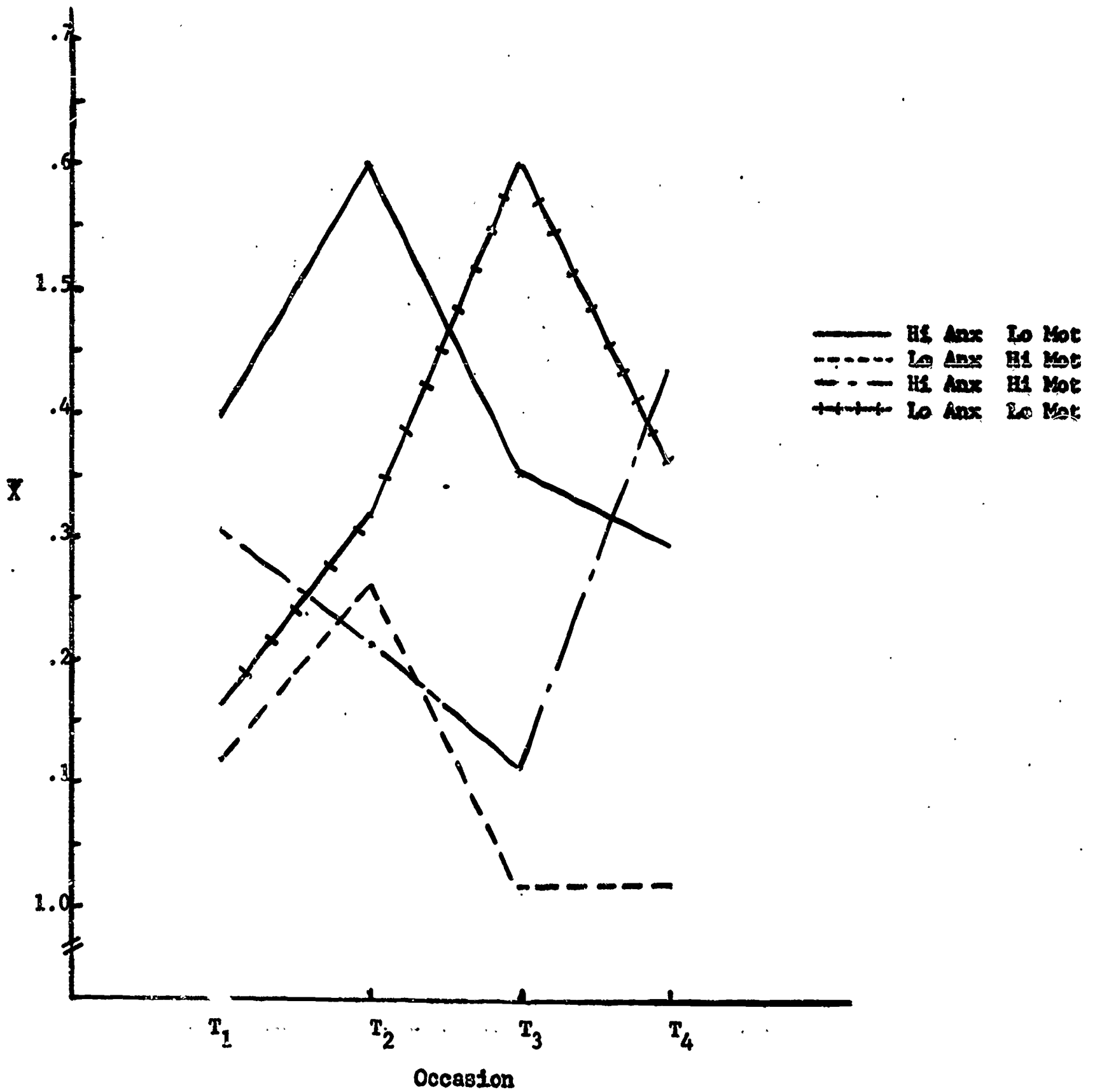
Figure 17. Non-Anglo Interaction between High and Low School Anxiety and School Motivation and Emotional Disturbance, with Depression (ED), the interaction being significant beyond the .10 level.
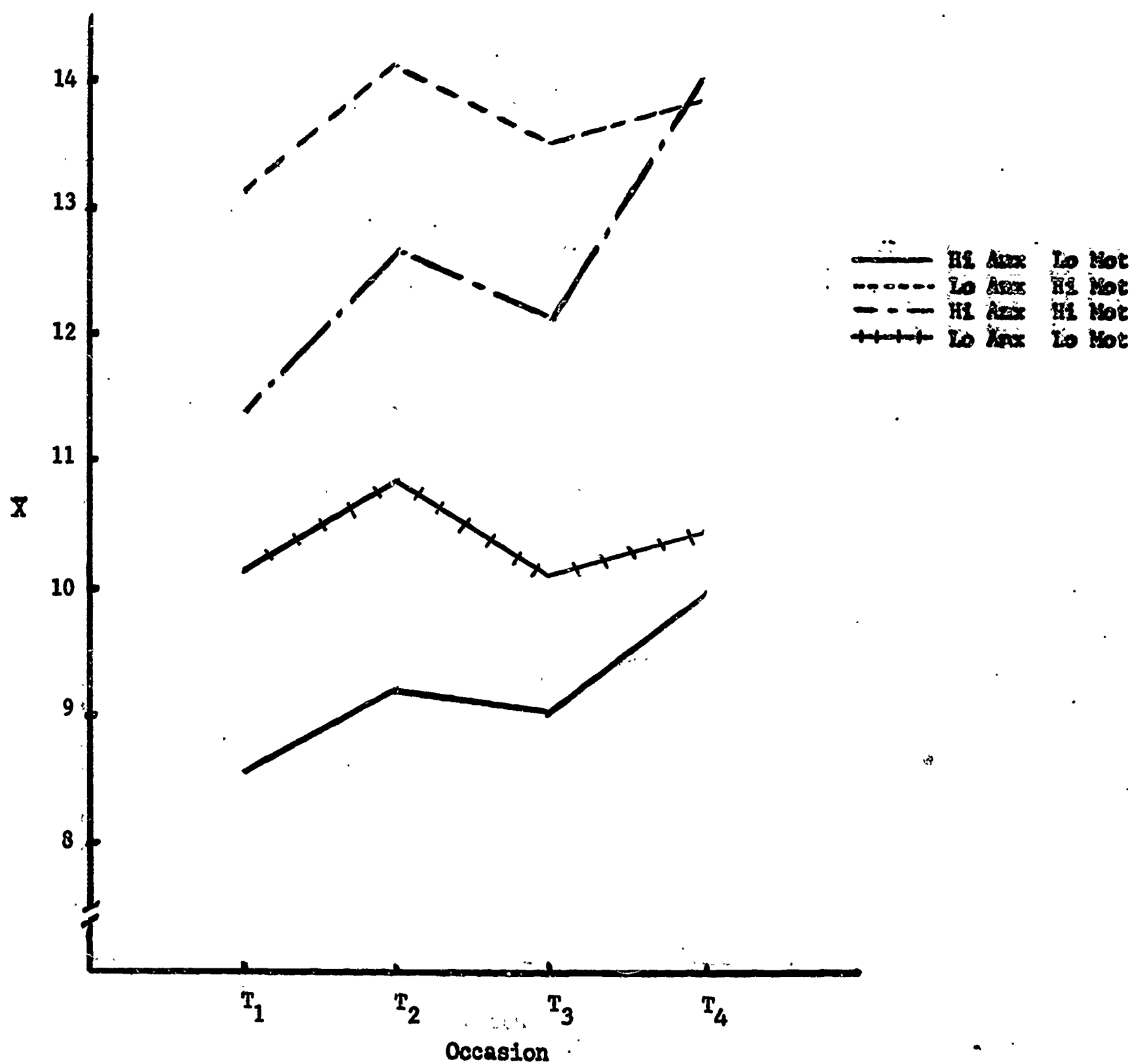
Figure 18. Non-Anglo Interaction between High and Low School
Anxiety and School Motivation and Grade Point Average (GPA),
the interaction being significant beyond the .10 level.
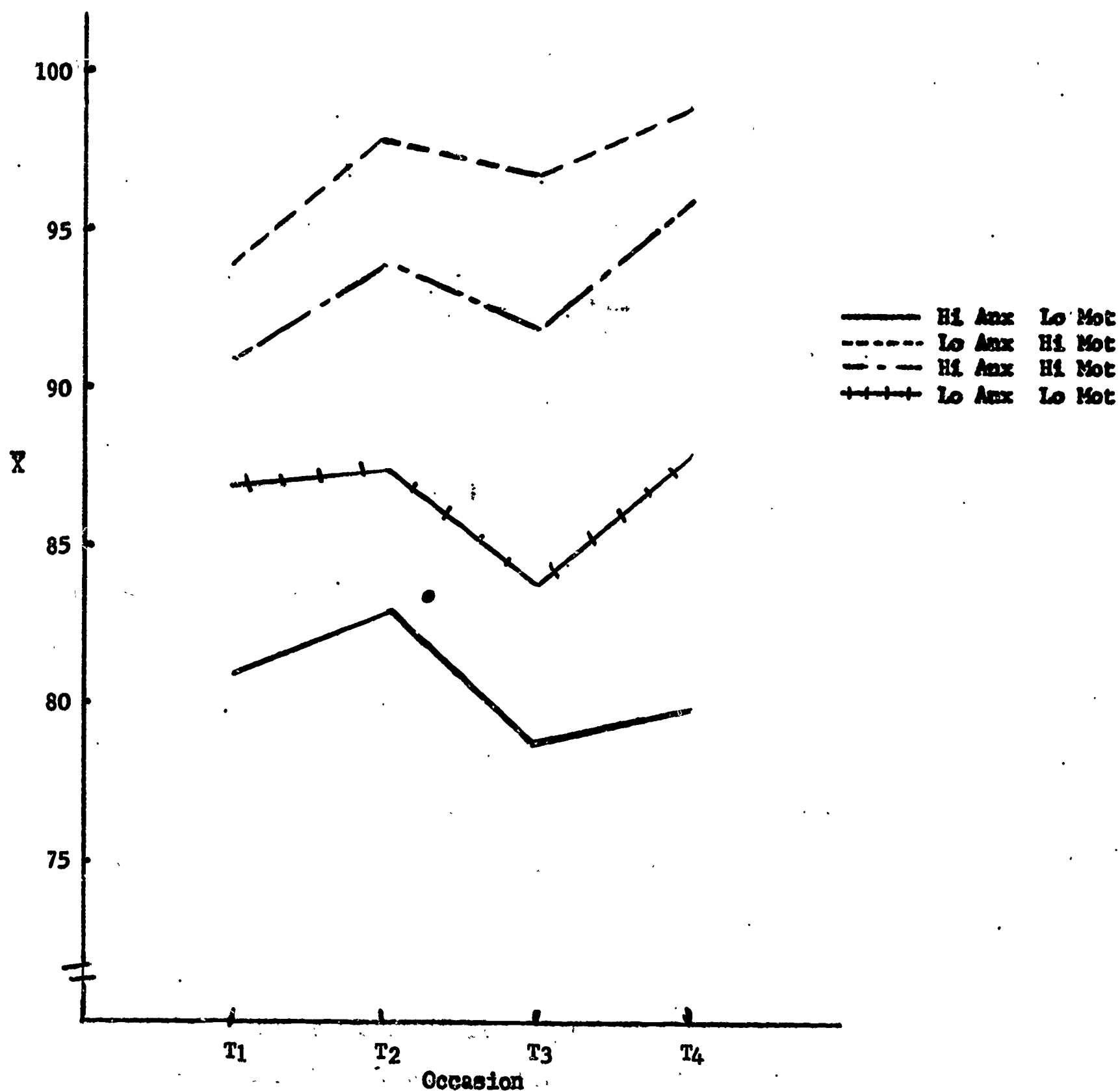
Figure 19. Non-Anglo Interaction between High and Low School
Anxiety and School Motivation and CTMM Verbal (V) IQ, the
interaction being significant beyond the .10 level.

Analysis of Interaction of Shift in
School Anxiety with In-School and
Out-of-School Influences

If an interaction was statistically significant beyond the .05 level, or approached significance (i.e., was less than .10), the means were plotted so as to better reveal the nature of the interactions. In addition, if an interaction for one period was significant at the forementioned levels, the means for the other two shift periods for the variable also were plotted. In this way it was possible to determine the general results associated with shifts in school anxiety. Also, it should be noted that these analyses were carried out for children classified into Anglo male, Anglo female, Non-Anglo male, and Non-Anglo female groups. Furthermore, it should be mentioned that, for interactions which had a probability of .10 or less (actually, many were beyond the .05 level), there was a notation made on the figure indicating this. And lastly, it will be remembered that the anxiety shift groups were as follows: Hi Shift, includes the 25 per cent making the greatest shift upward in anxiety; Hi-No Shift, includes the upper half of the No Shift category; Lo-No Shift, includes the lower half of the No Shift category; and Lo Shift, includes the 25 per cent making the greatest shift downward in anxiety. To further clarify these groups, it should be pointed out that shifts were determined between T_1 and T_2, T_2 and T_3, and T_3 and T_4. As a result, there were three separate Hi Shift groups for each subsample, and since each shift group was separately made up, the overlap of children in these groups will vary from Shift 1 (T_1, T_2), to Shift 2 (T_2, T_3), to Shift 3 (T_3, T_4).

a. Anglo Male Children

Approach Style of Defensiveness (D_{AP}). There was a significant interaction for D_{AP} between T_3 and T_4, and this is shown in Figure 20. The Hi Shift group moved downward, and the Lo Shift group moved upward, in D_{AP}. Parallel downward trends appeared in the two No Shift groups. The major difference which occurs for the other two Shift periods involves the Lo Shift group for which there is a reversal of pattern - from an increase in D_{AP} between T_3 and T_4, to a decrease between T_1 and T_2, and T_2 and T_3. Overall, there generally is a decrease in approach style of defensiveness from T_1 to T_4, the only exception being already noted.
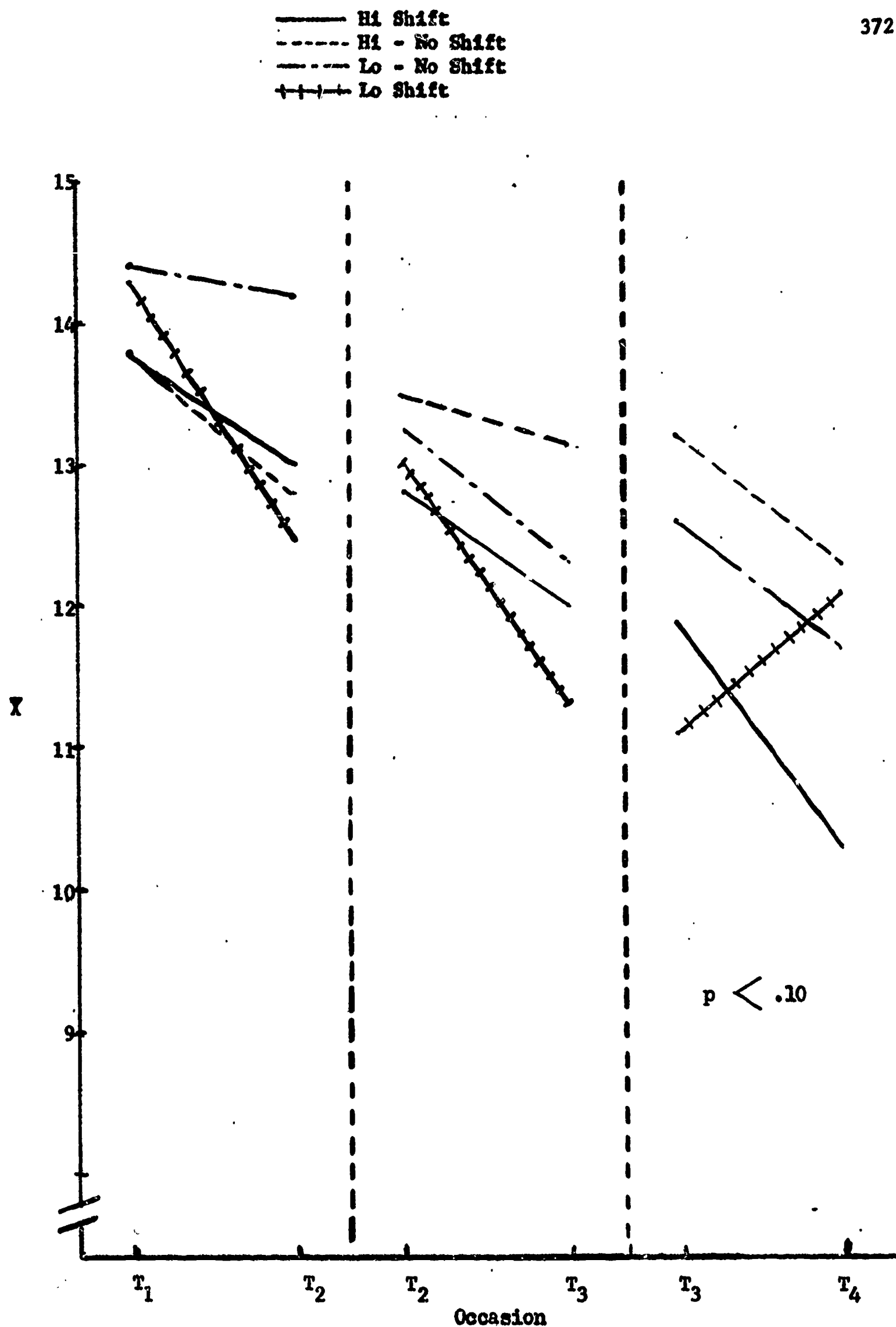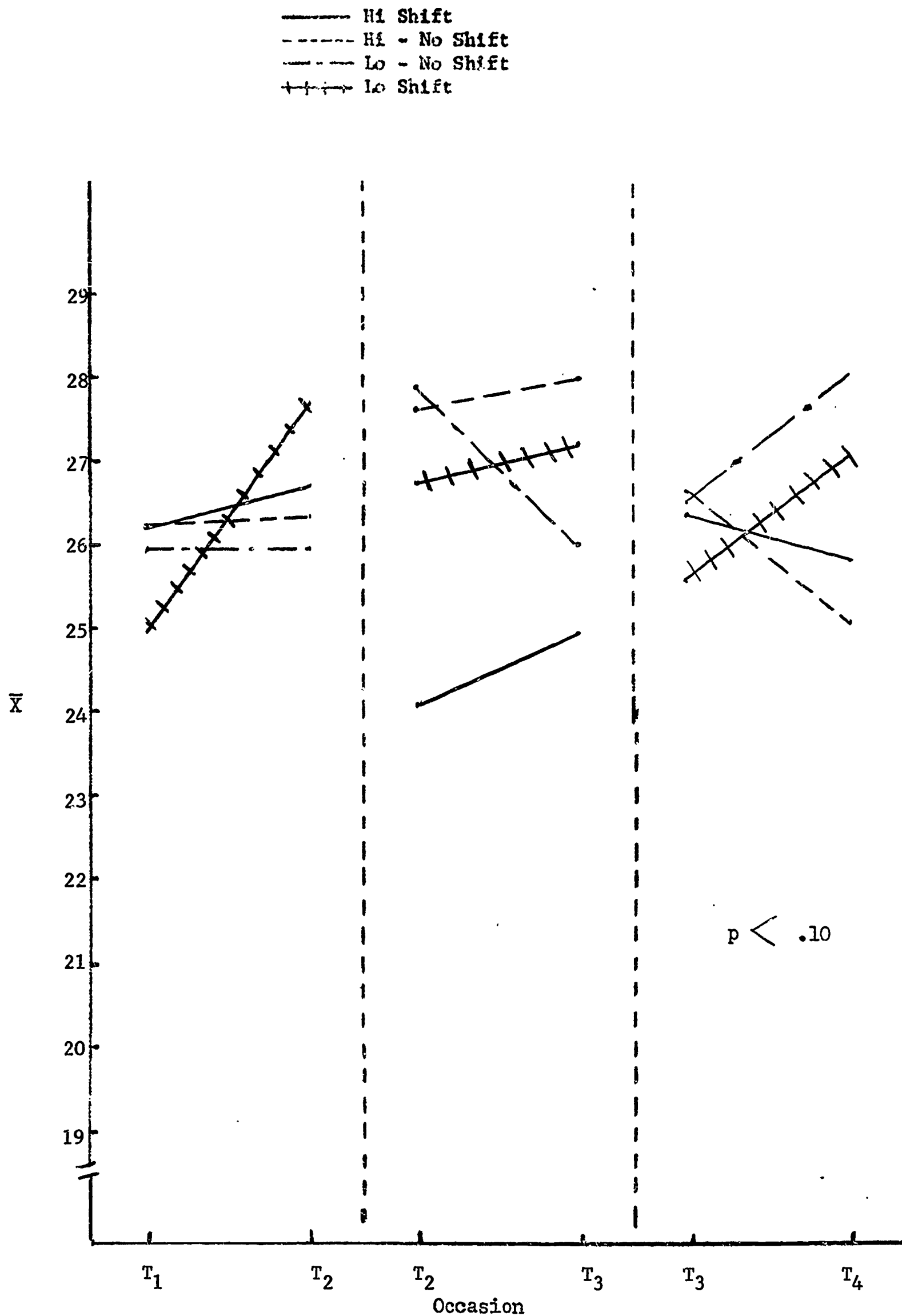
Figure 20. Anglo Male Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Approach Style of Defensiveness, where one or more of the interactions is significant beyond the .10 level.

Avoidance Style of Defensiveness (D_AV). In interpreting Figure 21, it needs to be pointed out that a high score actually means a low avoidance tendency. For the significant interactions which occurred between T_1 and T_2, and T_2 and T_3, D_{AV} increased in both instances in the Lo Shift group. But in the Lo-No Shift group there was a decrease in D_{AV} between T_1 and T_2, and an increase between T_2 and T_3. And, for the Hi Shift group there was a decrease between T_1 and T_2, and no change between T_2 and T_3. The Hi-No Shift group changed very little in the three periods.

Self Disparagement in Relation to Peers (SD). The results for SD are plotted in Figure 22, and examining the Hi-No Shift and Lo-No Shift groups first, we find a consistent pattern across the three periods: they increased in SD between T_1 and T_2, decreased between T_2 and T_3, and increased again between T_3 and T_4. A consistent pattern is shown, also, by the Hi Shift group - they increased on SD each time. Finally, the Lo Shift group shows a decrease on SD between T_2 and T_3, and T_3 and T_4, but an increase between T_1 and T_2.

Active Withdrawal (AW). In the time between T_1 and T_2 in Figure 23, there is an interaction between the Hi Shift and Lo Shift groups, on the one hand, and between the Hi-No Shift and Lo-No Shift groups on the other. Both of the No Shift groups increase in AW, while the Shift groups decrease (the Lo Shift group more than the other). This is especially important because different sources are used to obtain the information, i.e., from the children, in school anxiety, and from the teacher, in active withdrawal. Between T_2 and T_3 three of the four groups show an increase, the exception being the Hi Shift group which moves downward. And, in the period between T_3 and T_4 there is a tendency again for pairing to occur, with the Hi Shift and Hi-No Shift groups increasing in AW, and the other two groups decreasing in AW. These last two period interactions, however, are nonsignificant.

Peer Rejection (PR). The only major deviation with regard to PR, a shown in Figure 24, is an unusually large increase in PR associated with the Hi Shift group between T_3 and T_4. In this instance the children who increased in school anxiety had a marked increase in peer rejection. (Also, it should be mentioned that a constant of 1.0 was added to all peer nomination scores as a computational convenience.)
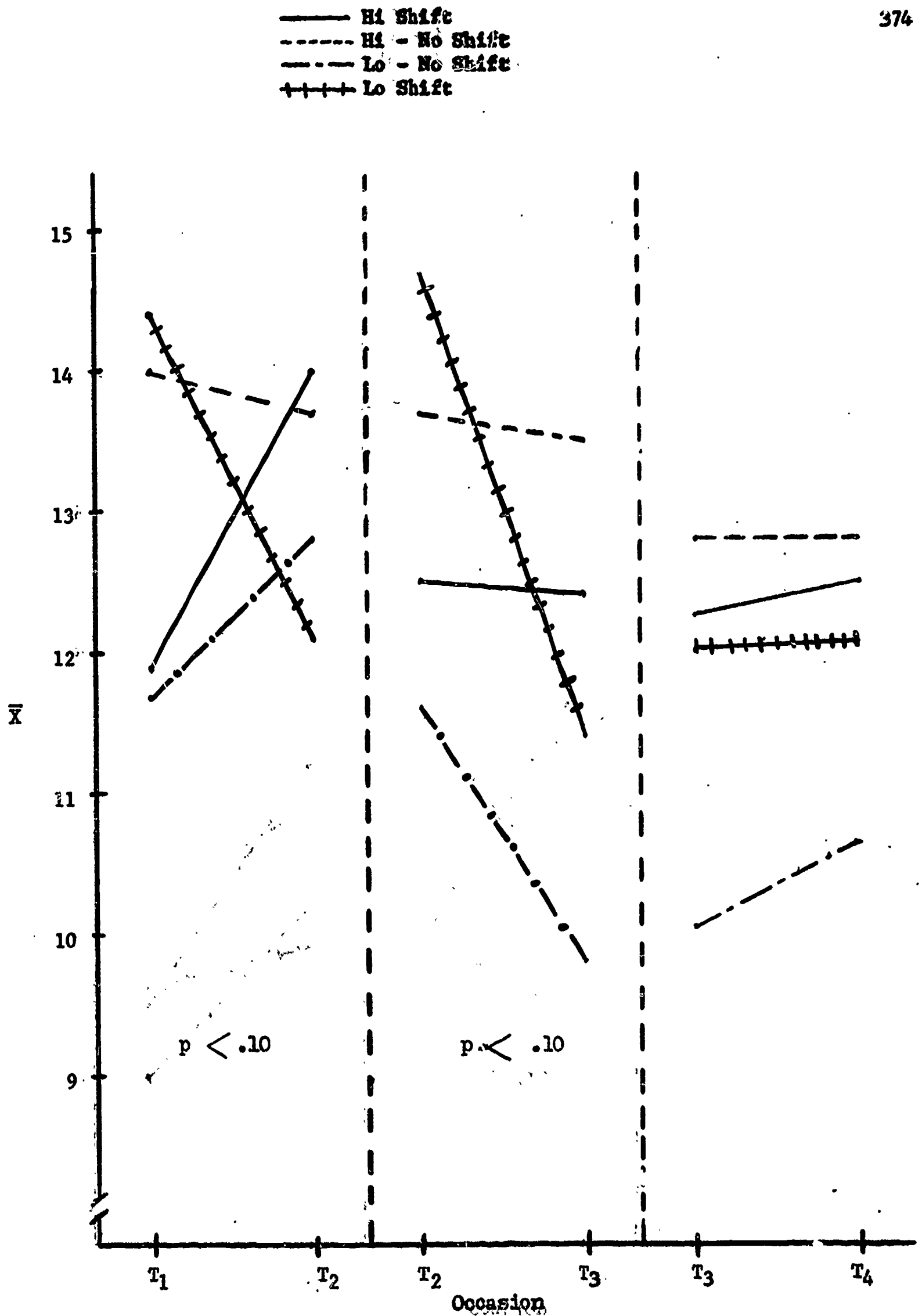
Figure 21. Anglo Male Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Avoidance Style of Defensiveness, whe one or more of the interactions is significant beyond the .10 level.
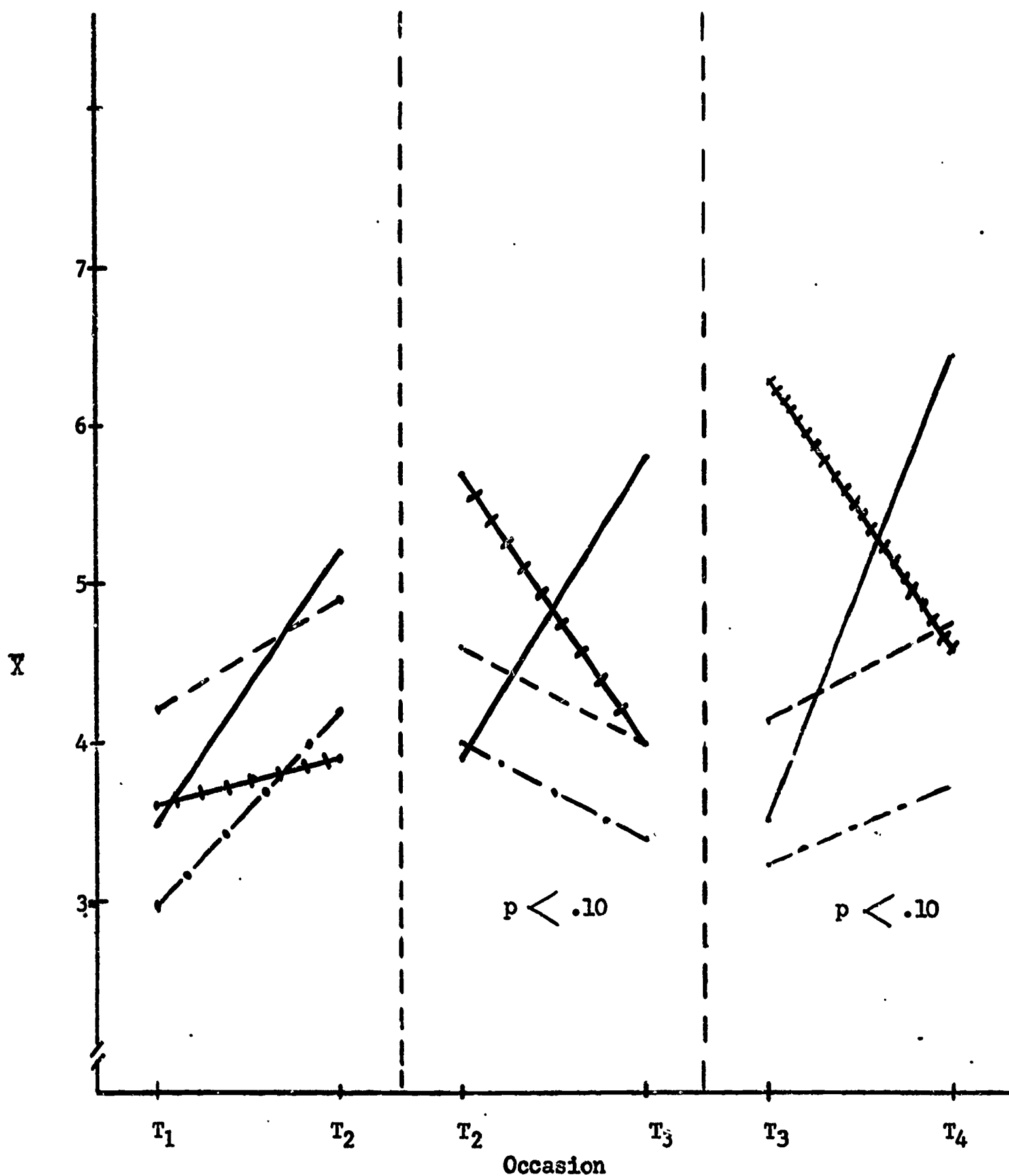
Figure 22. Anglo Male Interactions between Shifts in School
Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Self Disparage-
ment, in relation to Peers, where one or more of the interactions
is significant beyond the .10 level.
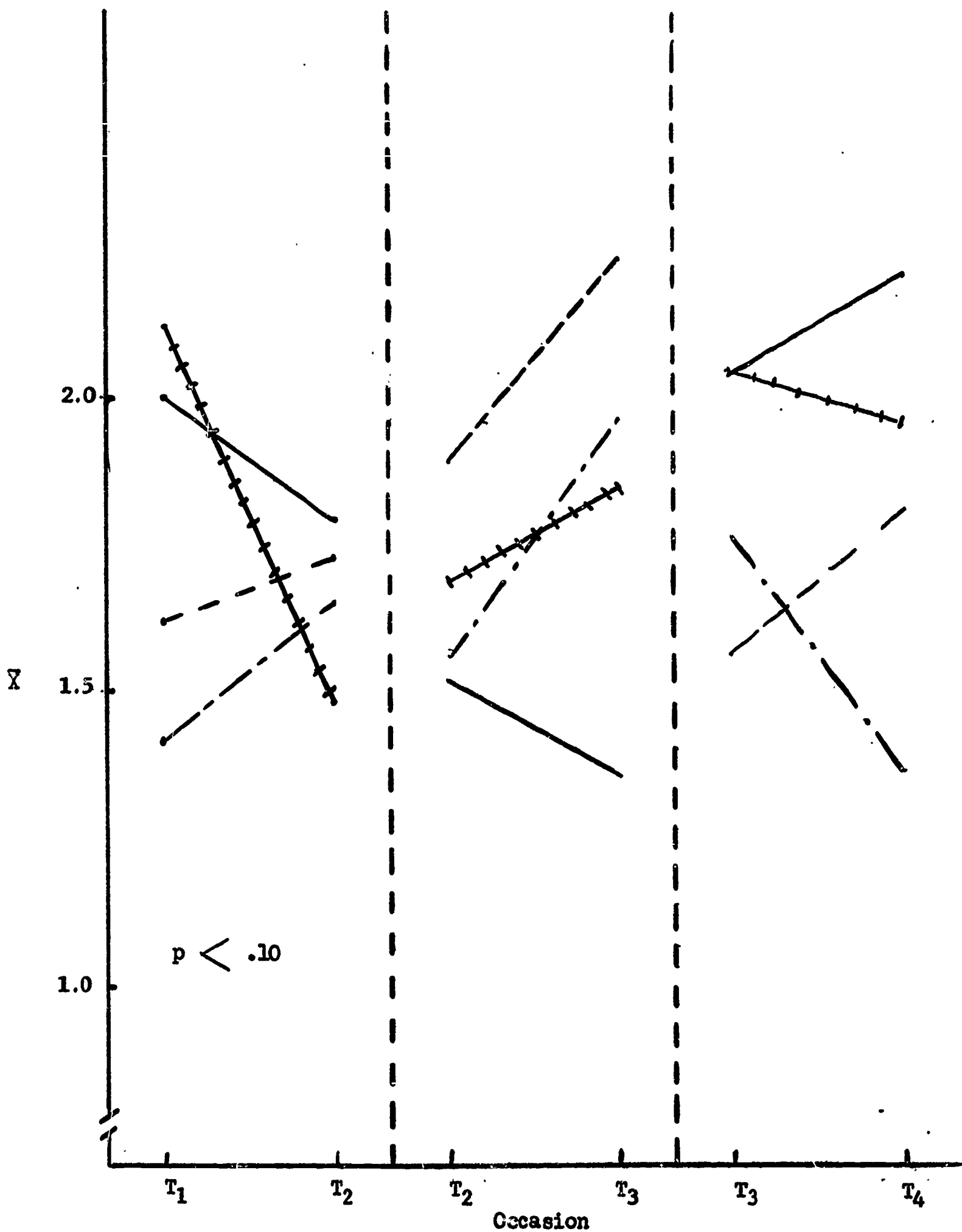
Figure 23 . Anglo Male Interactions between Shifts in School Anxiety
(during T_1-T_2, T_2-T_3, and T_3-T_4) and Active Withdrawal, where one
or more of the interactions is significant beyond the .10 level.
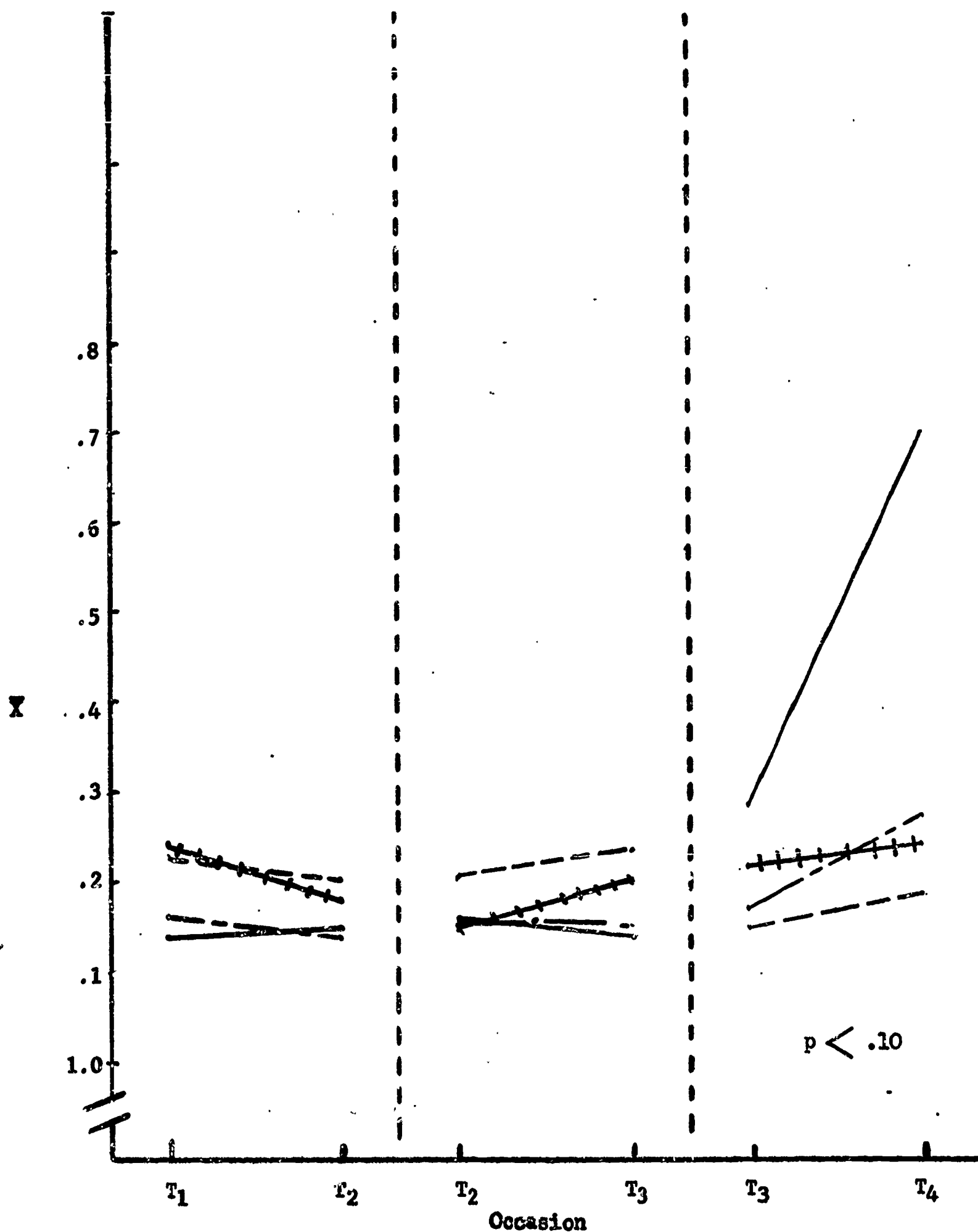
Figure 24 . Anglo Male Interactions between Shifts in School Anxiety
(during T_1-T_2, T_2-T_3, and T_3-T_4) and Peer Rejection, where one
or more of the interactions is significant beyond the .10 level.

CTMM Verbal (V) IQ. In Figure 25 we have plotted CTMM Verbal IQ means, and with regard to the period between T_3 and T_4, the Hi-No Shift and Hi Shift groups made parallel increases in CTMM V IQ. On the other hand, the Lo Shift group moved higher during the year, while the Lo-No Shift group moved lower. Thus, a decrease in school anxiety was accompanied by an increase in V IQ, although, with continued low school anxiety, there was a decrease in V IQ. For the period between T_2 and T_3, the Hi Shift, Lo Shift, and Hi-No Shift groups converged, at T_3; and the only group to show an increase in V IQ was the Hi-No Shift group. Between T_1 and T_2, all groups increased in V IQ, the largest increase occurring for the Hi Shift group, and the smallest occurring for the Hi-No Shift group.

b. Anglo Female Children

Avoidance Style of Defensiveness (D_{AV}). In interpreting the results of Figure 26, it must be remembered that a high D_{AV} score actually means low defensiveness, and so the interactions need to be considered with that in mind. There is a highly significant reversed trend for the D_{AV} means of the Lo Shift and Hi Shift groups, and the directional differences are as expected, since D_{AV} increases for the Lo Shift group and decreases for the Hi Shift group. Interestingly, the reversal becomes less pronounced from the $T_1 - T_2$ period to the $T_3 - T_4$ period, which indicates that the tendency to be extremely avoidance oriented progressively diminishes. At the same time, the pattern for the Hi-No Shift and Lo-No Shift groups is stable over these periods. The Hi-No Shift group is, of course, higher on D_{AV} than the Lo-No Shift group. In addition, there is a small, progressive change in D_{AV} means for these two groups over the three periods - the Hi-No Shift group becomes progressively less defensive (D_{AV}), and the Lo-No Shift group becomes progressively more defensive (D_{AV}).

Approach Style of Defensiveness (D_{AP}). For D_{AP} there is a pronounced interaction in Figure 27 involving the Lo Shift and Hi Shift groups in the T_1-T_2 period, with the latter increasing and the former decreasing in D_{AP}. These shift groups, however, do not maintain this pattern in the T_2-T_3 and T_3-T_4 periods, since their trend lines are much more parallel fo those two periods. But, for the other two groups the parallelness of the T_1-T_2 period gives way to a certain amount of interaction. Overall, it
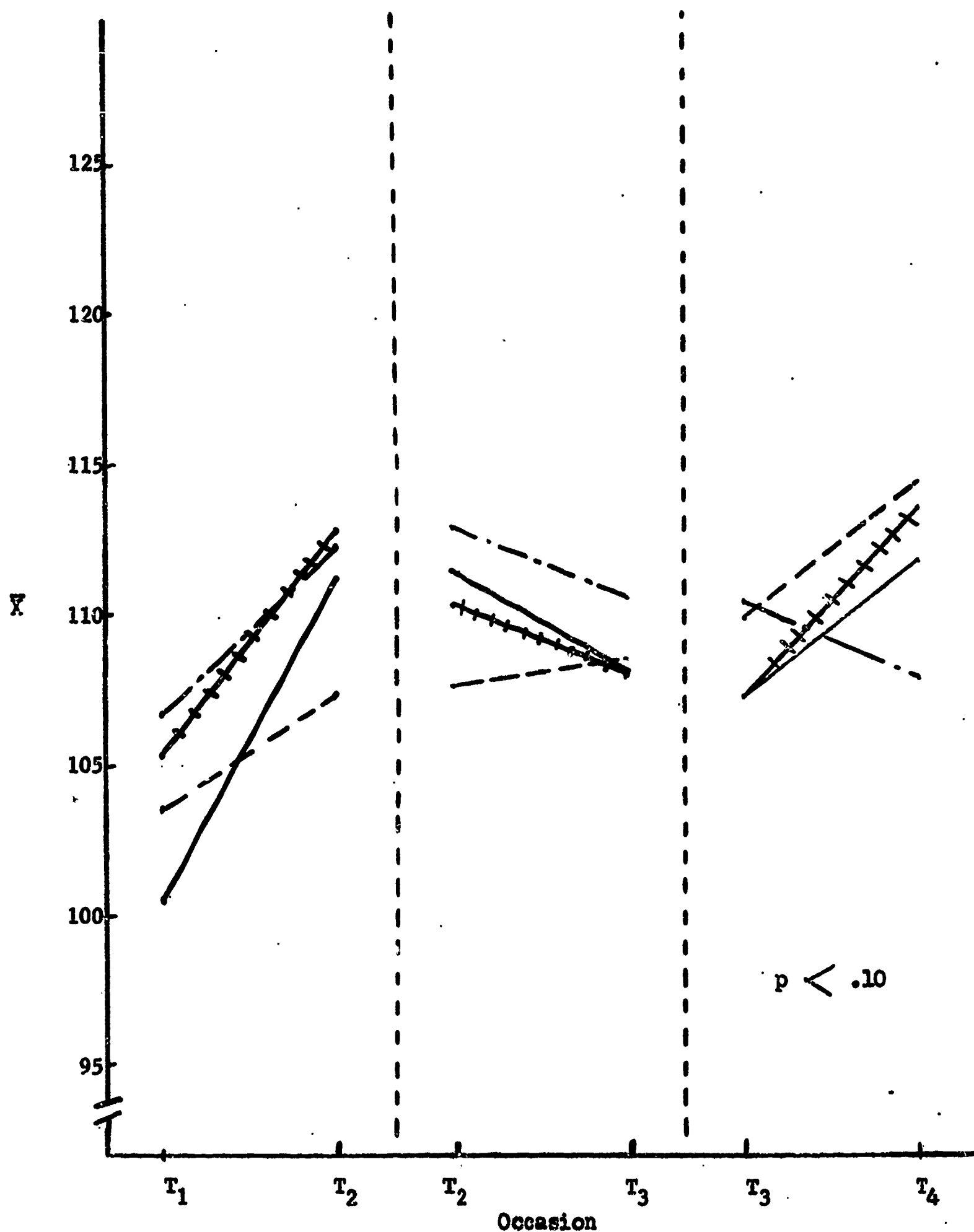
Figure 25. Anglo Male Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and CTMM Verbal IQ, where one or more of the interactions is significant beyond the .10 level.
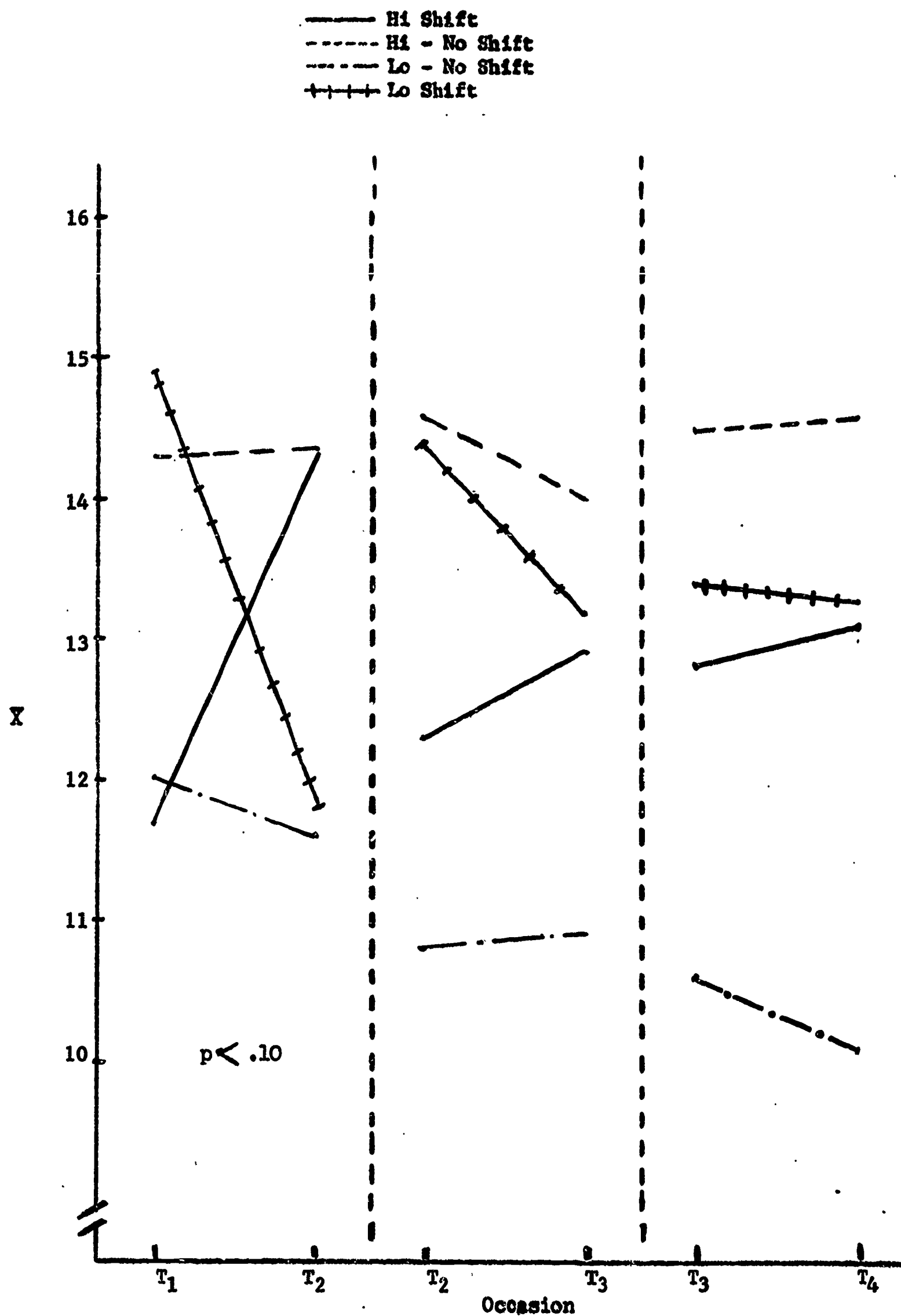
Figure 26. Anglo Female Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Avoidance Style of Defensiveness, where one or more of the interactions is significant beyond the .10 level.
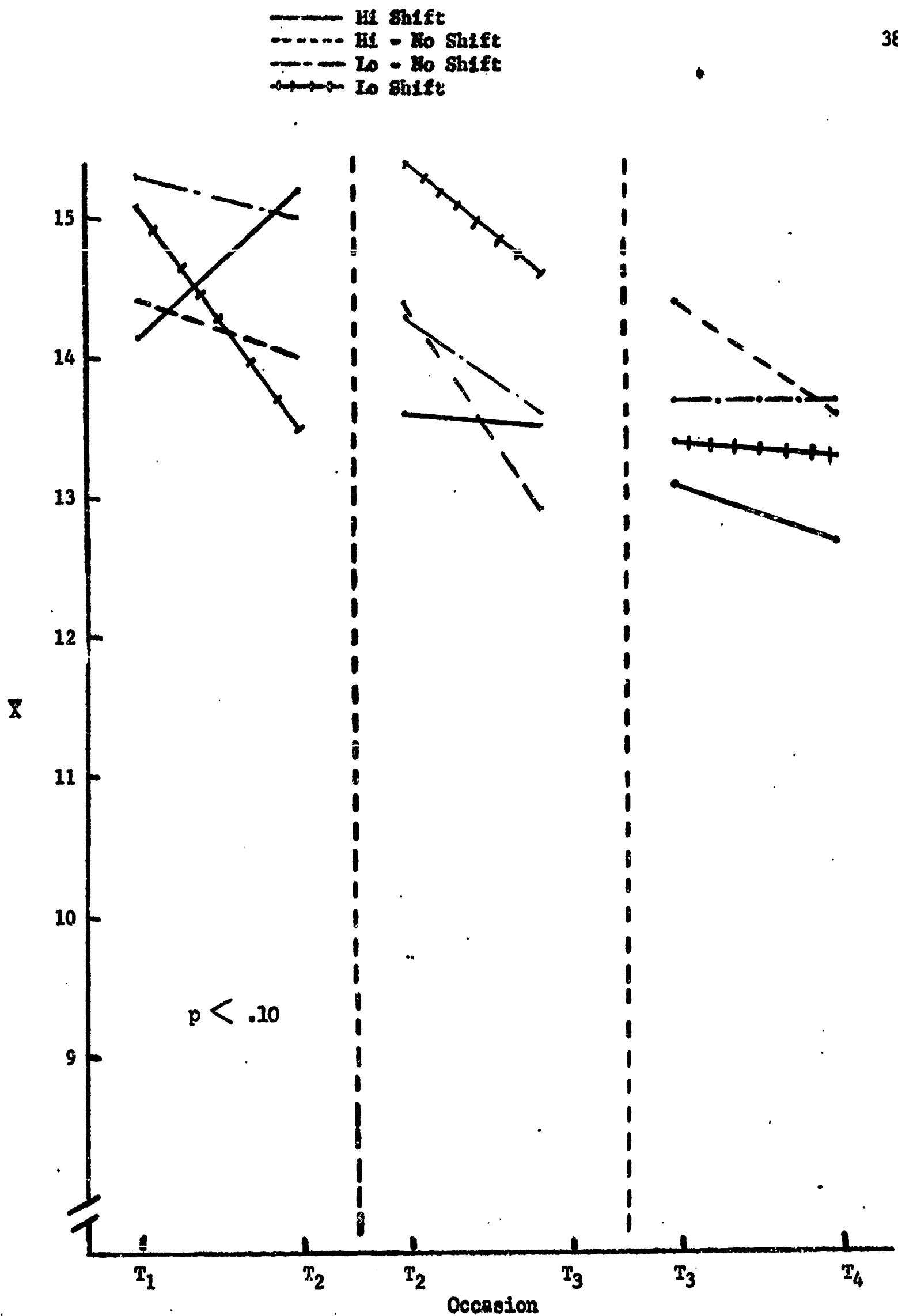
Figure 27. Anglo Female Interactions between Shifts in School Anxiety
(during T_1-T_2, T_2-T_3, and T_3-T_4) and Approach Style of Defensiveness,
where one or more of the interactions is significant beyond the
.10 level.

appears that there is a decrease in D_{AP} from T_1 to T_4.

Self Disparagement, in relation to Peers (SD). The results for the interaction of SD are graphed in Figure 28, where the major interaction during the T_1-T_2 period occurred between the Hi - No Shift group and the Lo - No Shift group. The Lo - No Shift group decreased in SD, while the Hi - No Shift group increased in SD. In other words, where there were no changes in school anxiety there still was a change in SD, with highly anxious children evidencing more self disparagement, and less anxious children evidencing less self disparagement between T_1 and T_2. The other two groups also showed an increase in SD between T_1 and T_2. However, between T_2 and T_3 these trends were considerably attenuated, and the results for the T_3-T_4 period are notable in that all groups tend to increase in SD again (with the most pronounced increase occurring for the Hi Shift group). Also, it should be noted that there is marked divergence in the groups across fourth and fifth grades, but not across the summer months. Looking at these results as a whole, it would appear that school anxiety tends to increase self disparagement of children.

Proneness toward Neuroticism (PTN). In Figure 29 it can be seen that, for the T_1-T_2 period, the major contributor to the interaction is the Lo Shift group, which decreases in PTN. The Lo - No Shift group also shows a decrease in PTN, but it is not nearly so pronounced a change. Between T_2 and T_3 the trends of the groups are fairly parallel, but between T_3 and T_4 the Lo Shift group again drops sharply in PTN. In addition, there is a general lack of convergence or divergence in the trends of the groups.

Peer Rejection (PR). As we have noted previously, all peer nomination scores had a constant of 1.0 added to them for convenience in computer processing, and this should be taken into consideration in examining Figure 30. The significant interaction in the T_2 - T_3 period is due principally to the Hi Shift group decreasing in PR, while the Hi-No Shift group increased in PR. Examining more closely specific groups, the Hi-No Shift group became less rejected by peers during both fourth and fifth grade, while the Hi Shift and Lo Shift groups became more rejected by peers during these same intervals of time.
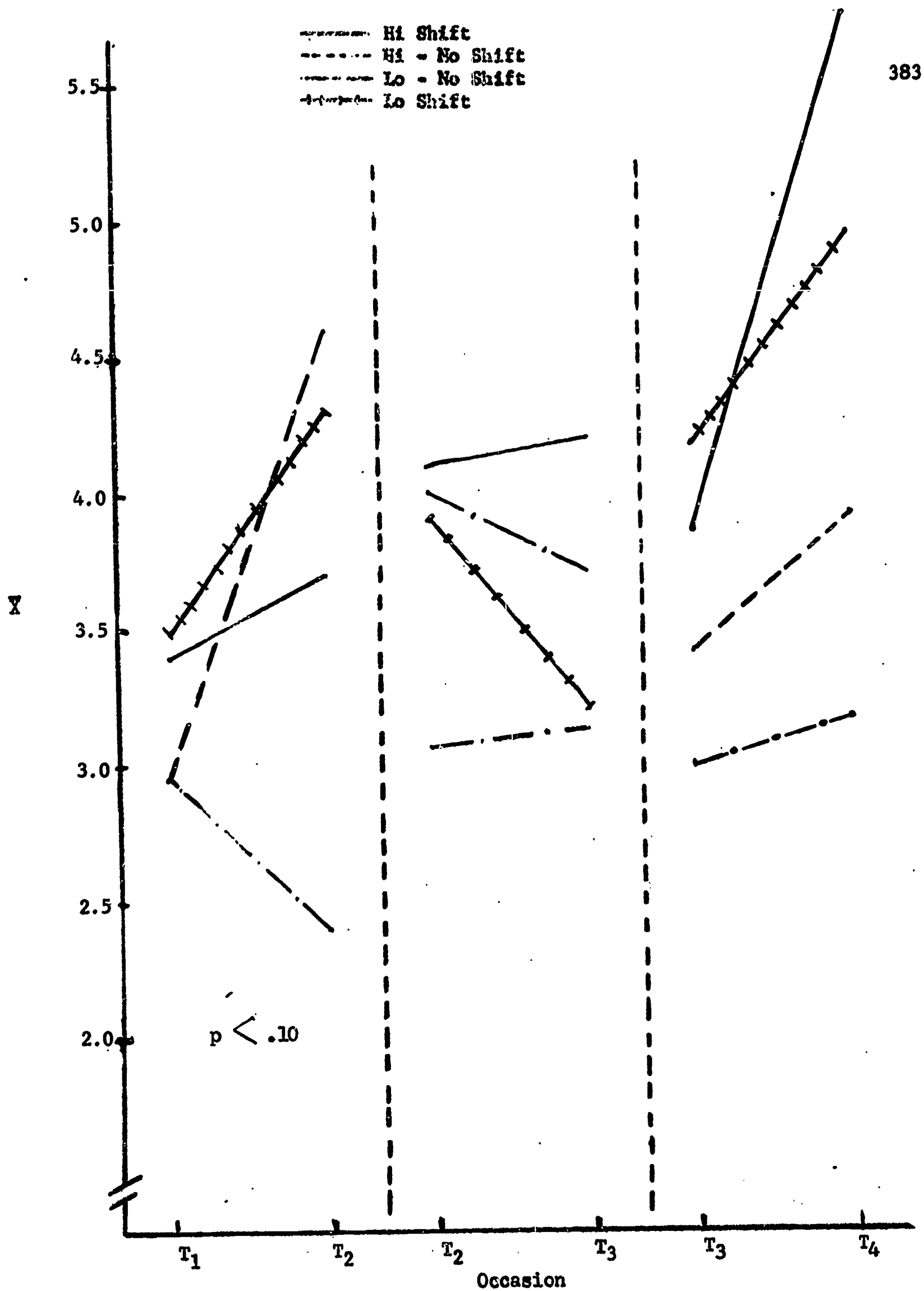
Figure 28. Anglo Female Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Self Disparagement, in relation to Peers, where one or more of the interactions is significant beyond the .10 level.
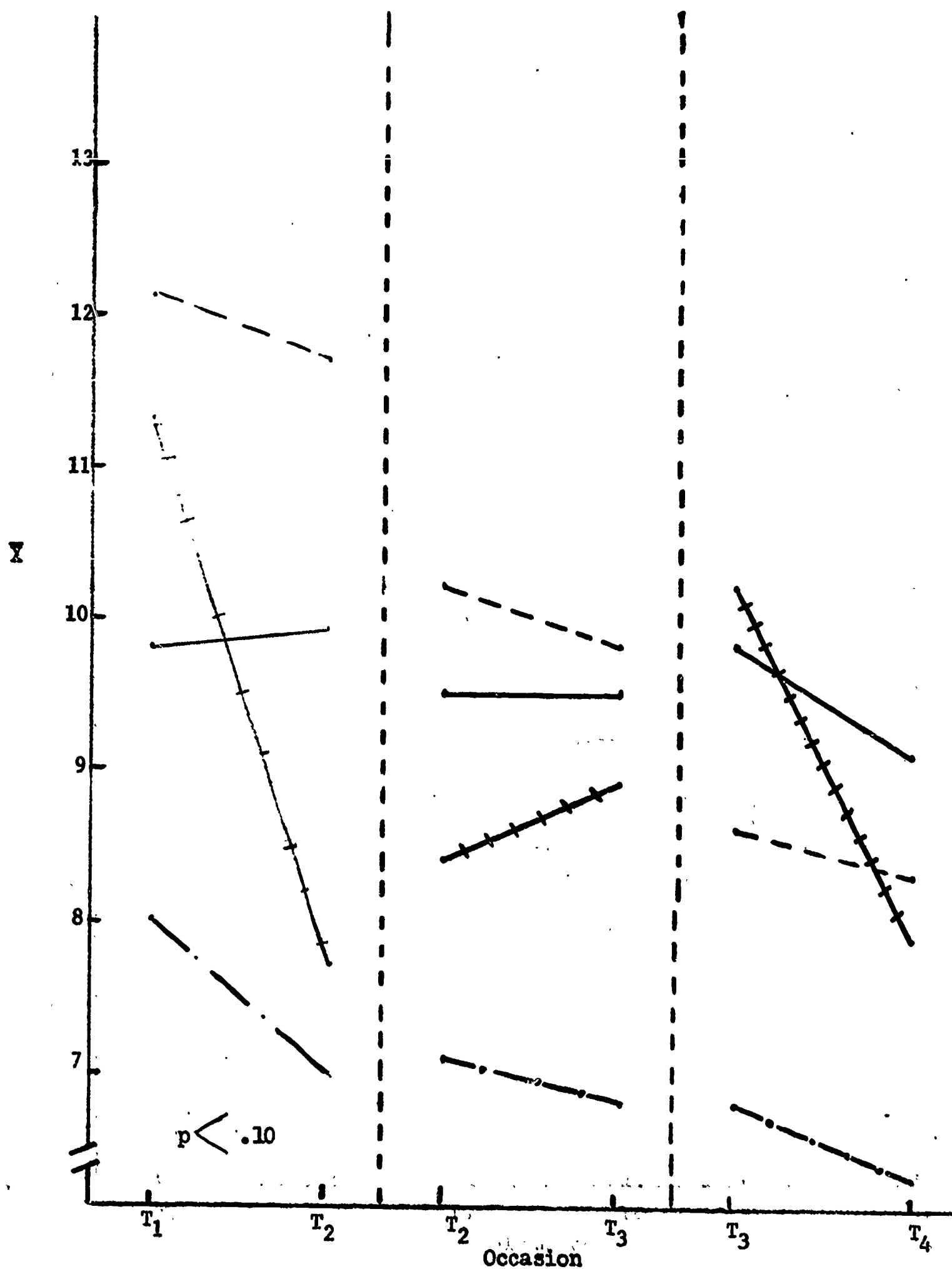
Figure 29. Anglo Female Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Proneness toward Neuroticism, where one or more of the interactions is significant beyond the .10 level.
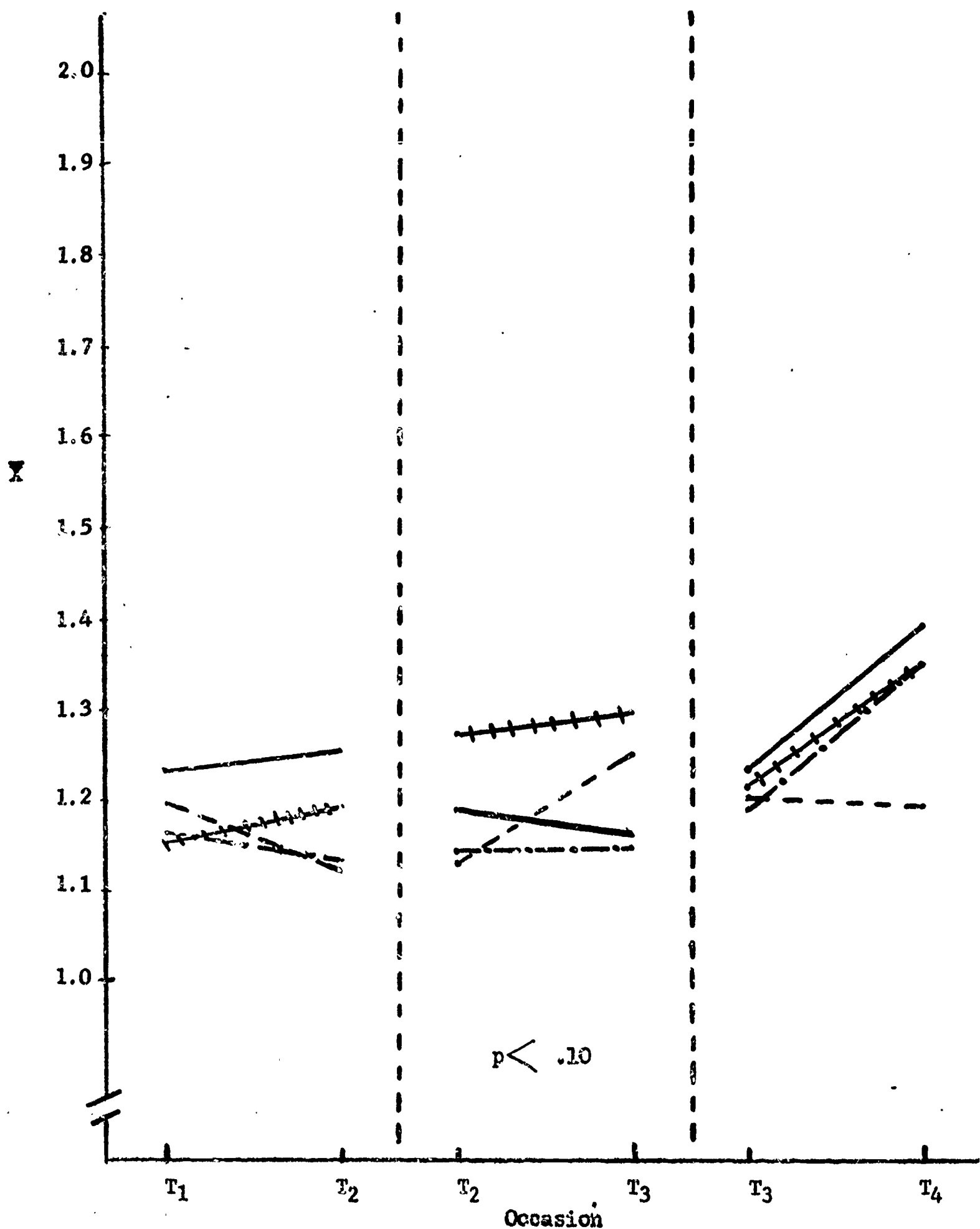
Figure 30. Anglo Female Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, T_3-T_4) and Peer Rejection, where one or more of the interactions is significant beyond the .10 level.

Neurotic Symptoms, Academic (NA). The results for NA are given in Figure 31, where most interaction effects are associated with the Hi Shift group. During both the T_1 - T_2 and the T_3 - T_4 periods they markedly increase in NA, while at the same time showing no change in NA between T_2 and T_3. The Lo Shift group behaves in a similar way, although the upward trend between T_1 and T_2 is not so strong, and there is a downward trend between T_2 and T_3. Surprisingly, the Hi-No Shift group decreases in NA during each of the three time intervals. Also, the groups tend to diverge during T_1 - T_2 and T_3 - T_4, and to converge during T_2 - T_3.

School Motivation (SM). A peculiarity in the data in Figure 32 for SM is obvious - all four groups have lower means in the T_3 - T_4 period than similar groups had in the other two periods - but no explanation can be offered for this apparent discrepancy. With respect to the T_1 - T_2 interval, the Lo Shift group increased markedly in SM, and there was a smaller increase in the Lo-No Shift group, while, at the same time, both the Hi Shift and the Hi-No Shift groups declined in SM. Decreases in SM also were evident in all but the Hi-No Shift group during the T_2 - T_3 period.

Grade Point Average (GPA). For GPA, shown in Figure 33, there is a minimum of interaction, and this is confined to the T_2 - T_3 period where the Lo Shift and Hi-No Shift groups decreased in GPA. Overall, GPA increased during T_1 - T_2 and T_3 - T_4, and decreased during T_2 - T_3.

MAT Verbal (V). Figure 34 presents the data on the MAT V interactions, and with respect to the T_2 - T_3 and T_3 - T_4 periods, the group especially responsible for the interaction trends is the Hi Shift group. That is, in both these instances an increase in anxiety was accompanied by a larger than expected increase in MAT V achievement. With the exception of this group, there is convergence among the other three groups during both periods. This may have something to do with a problem with regard to the MAT which was discussed earlier. During T_1 - T_2, the Lo-No Shift and Hi-No Shift groups made substantially greater progress than the other two groups.

CTMM Verbal (V) IQ. A significant interaction occurred during the T_3 - T_4 period with respect to the CTMM V IQ, as Figure 35 shows. The Lo-No Shift group actually declined in CTMM V IQ during this period, while the Lo Shift group made the most
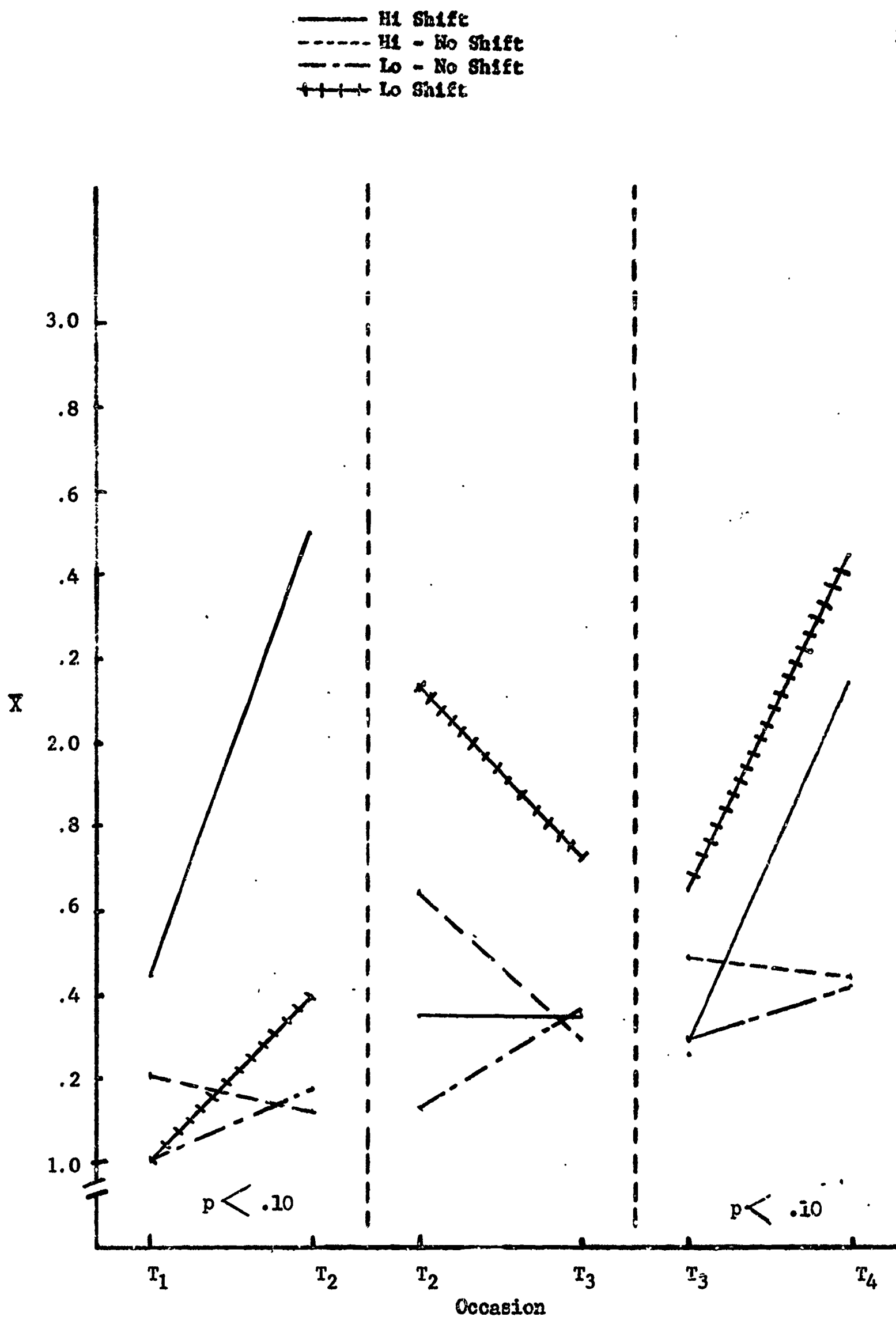
Figure 31. Anglo Female Interactions between Shifts ... School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Neurotic Symptoms, Academic, where one or more of the interactions is significant beyond the .10 level.
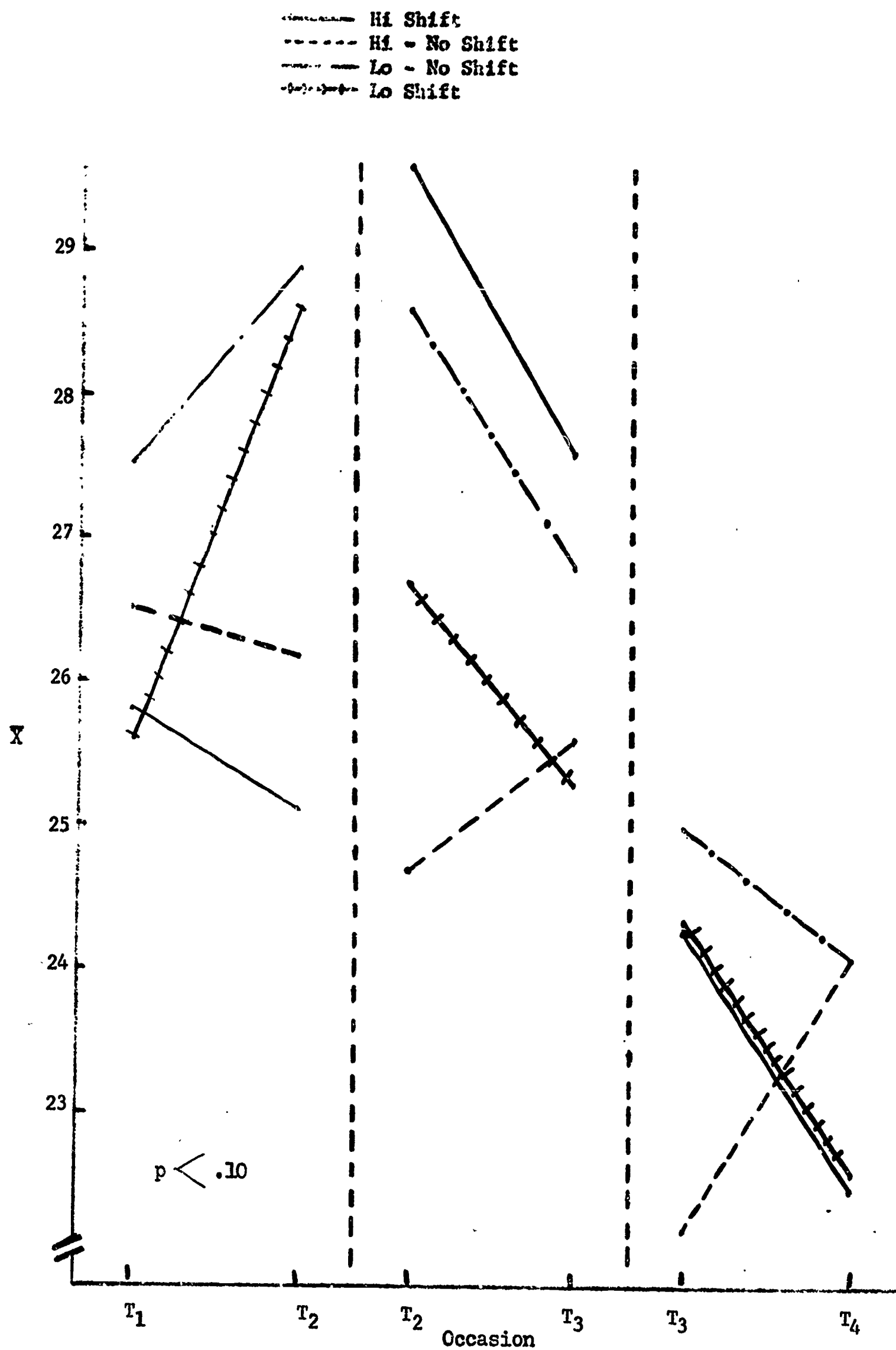
Figure 32. Anglo Female Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and School Motivation, where one or more of the interactions is significant beyond the .10 level.
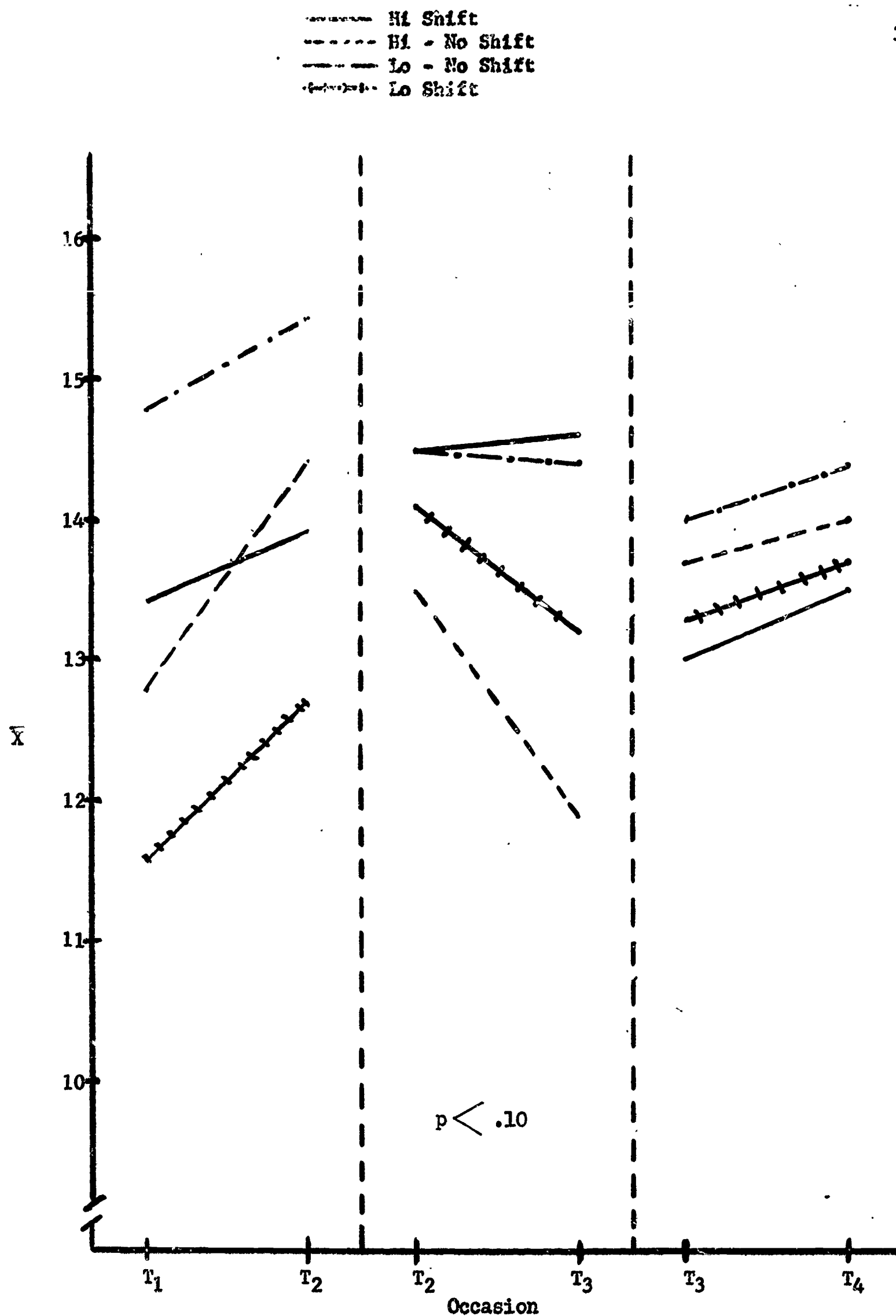
Figure 33. Anglo Female Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Grade Point Average, where one or more of the interactions is significant beyond the .10 level.
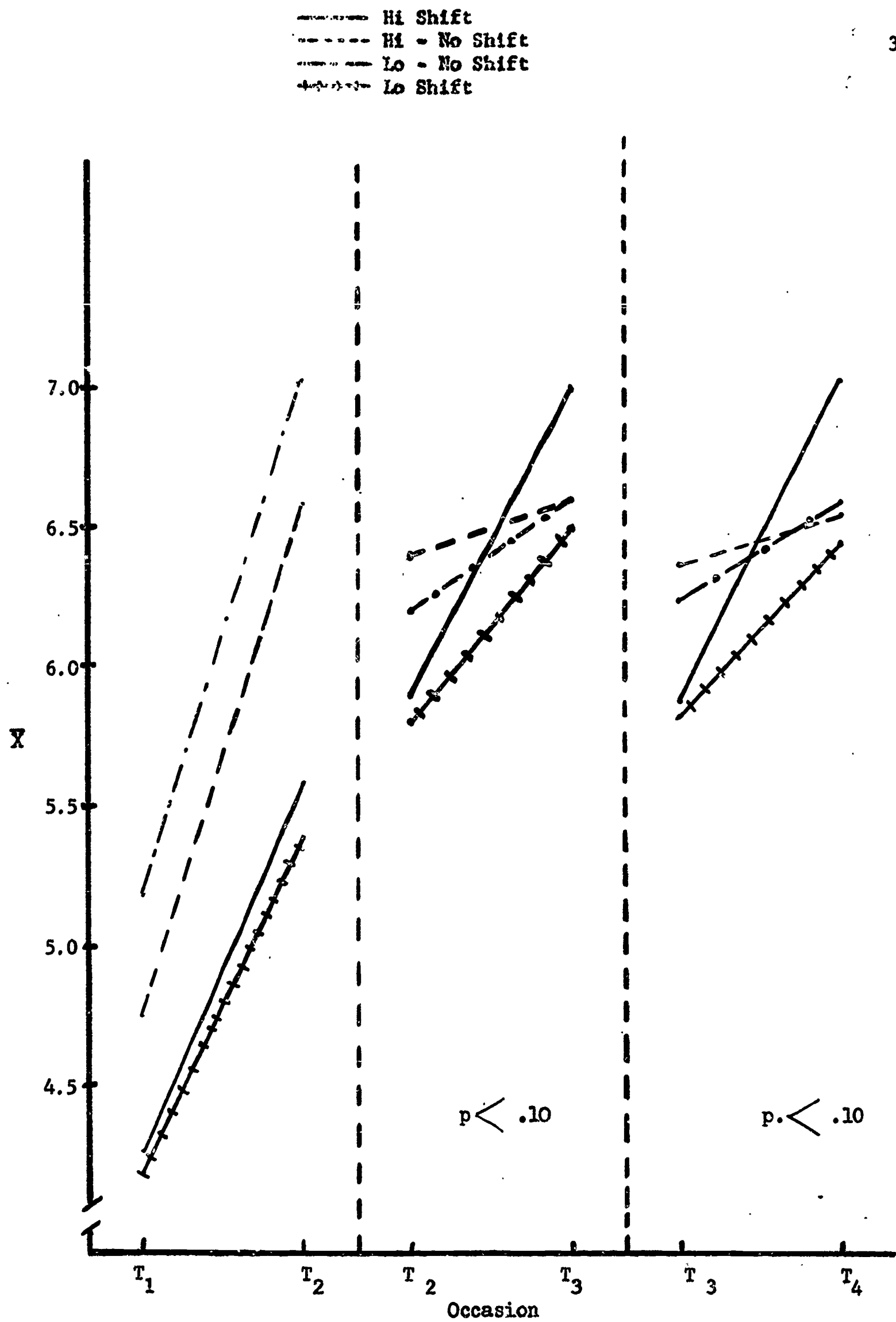
Figure 34. Anglo Female Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and MAT Verbal, where one or more of the interactions is significant beyond the .10 level.
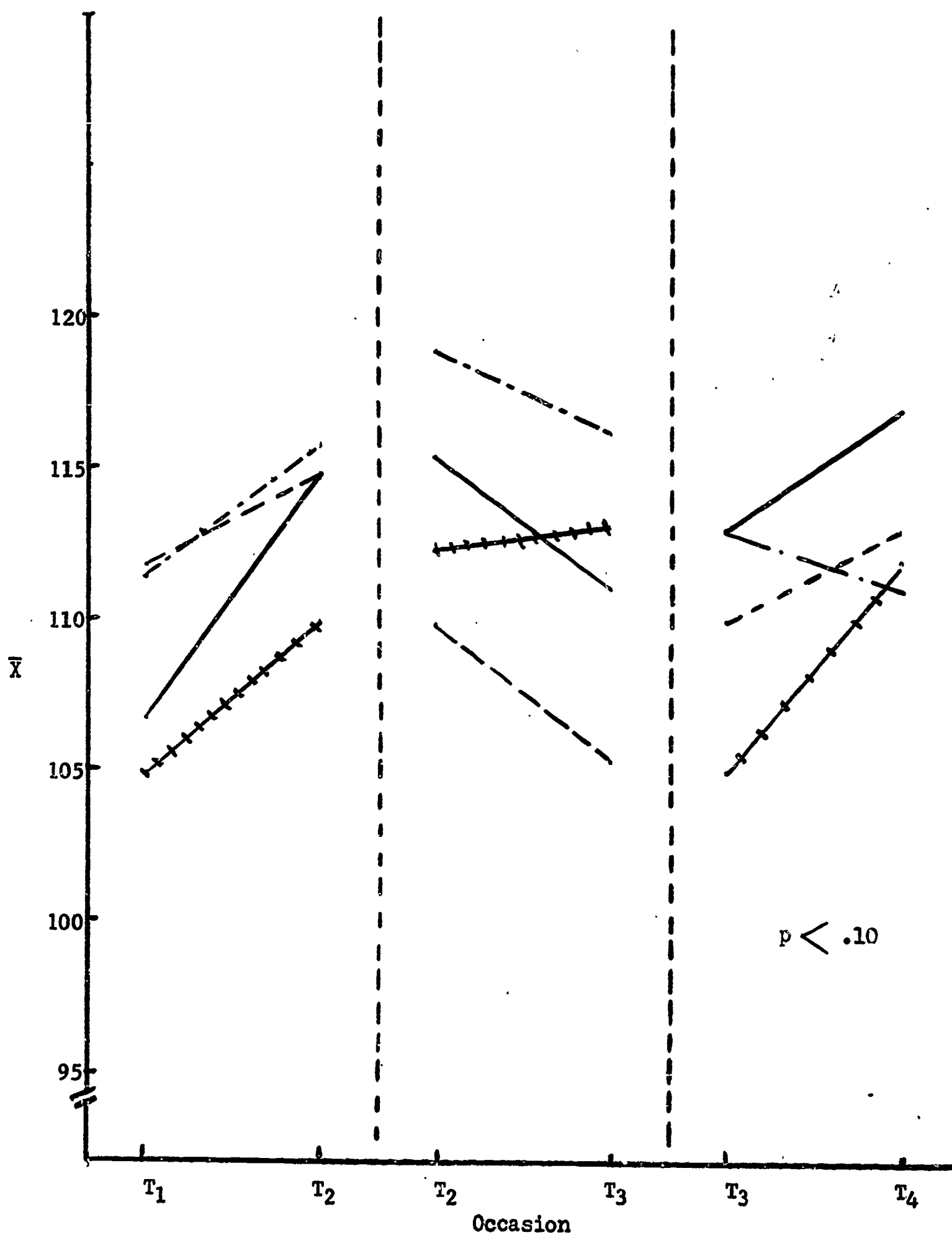
Figure 35. Anglo Female Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and CTMM Verbal IQ, where one or more of the interactions is significant beyond the .10 level.

progress. Across the $T_2 - T_3$ period there was a general decline, with the exception of the Lo Shift group. And during the $T_1 - T_2$ period, the greatest increase occurred in the Hi Shift group. Thus, in the fourth and fifth grades, the greatest overall improvement in CTMM V IQ occurred in the Lo Shift and Hi Shift groups. Perhaps change in school anxiety is in some ways more significant than status - be it high or low.

c. Non-Anglo Male Children

Avoidance Style of Defensiveness (D_{AV}). With respect to D_{AV}, the graphed means in Figure 36 indicate pronounced interaction trends during all three periods of time. In general, the Lo Shift group shows declines in all three periods, making by far the largest drop of any group between T_1 and T_2. Of course, in interpreting this it must be remembered that a high D_{AV} score represents low avoidance tendencies. The Hi Shift group increases in D_{AV} during the $T_2 - T_3$ and $T_3 - T_4$ periods, but makes no change during the $T_1 - T_2$ period. The Lo-No Shift group moves downward between $T_1 - T_2$, stays the same between $T_2 - T_3$, and moves downward again during the $T_3 - T_4$ period. The Hi-No Shift group decreases in D_{AV} between T_1 and T_2, increases between T_2 and T_3, and hardly changes between T_3 and T_4.

Approach Style of Defensiveness (D_{AP}). Between T_1 and T_2, in Figure 37, there is one group which most decidedly differs from the pattern, and this is the Hi Shift group which increases in D_{AP}. In the $T_3 - T_4$ period the group which deviated the most is the Lo-No Shift group which decreases in D_{AP}. Overall, there is a decline in D_{AP} from T_1 to T_4 in all groups.

Proneness toward Neuroticism (PTN). There are in Figure 38, which graphs the PTN means, pronounced interactions in all three periods. In the $T_1 - T_2$ period the three groups with similar trends (downward) are the Hi-No Shift, the Lo-No Shift, and the Lo Shift groups, with the last group having the sharpest decline. The remaining group (Hi Shift) increases in PTN during the period. In the $T_2 - T_3$ period the groups are divided, with the Hi-No Shift and the Hi Shift groups increasing in PTN, and the remaining two groups decreasing in PTN. The same pairing up occurs with respect to the $T_3 - T_4$ period, where the Hi-No Shift and Lo Shift groups decrease in PTN, and
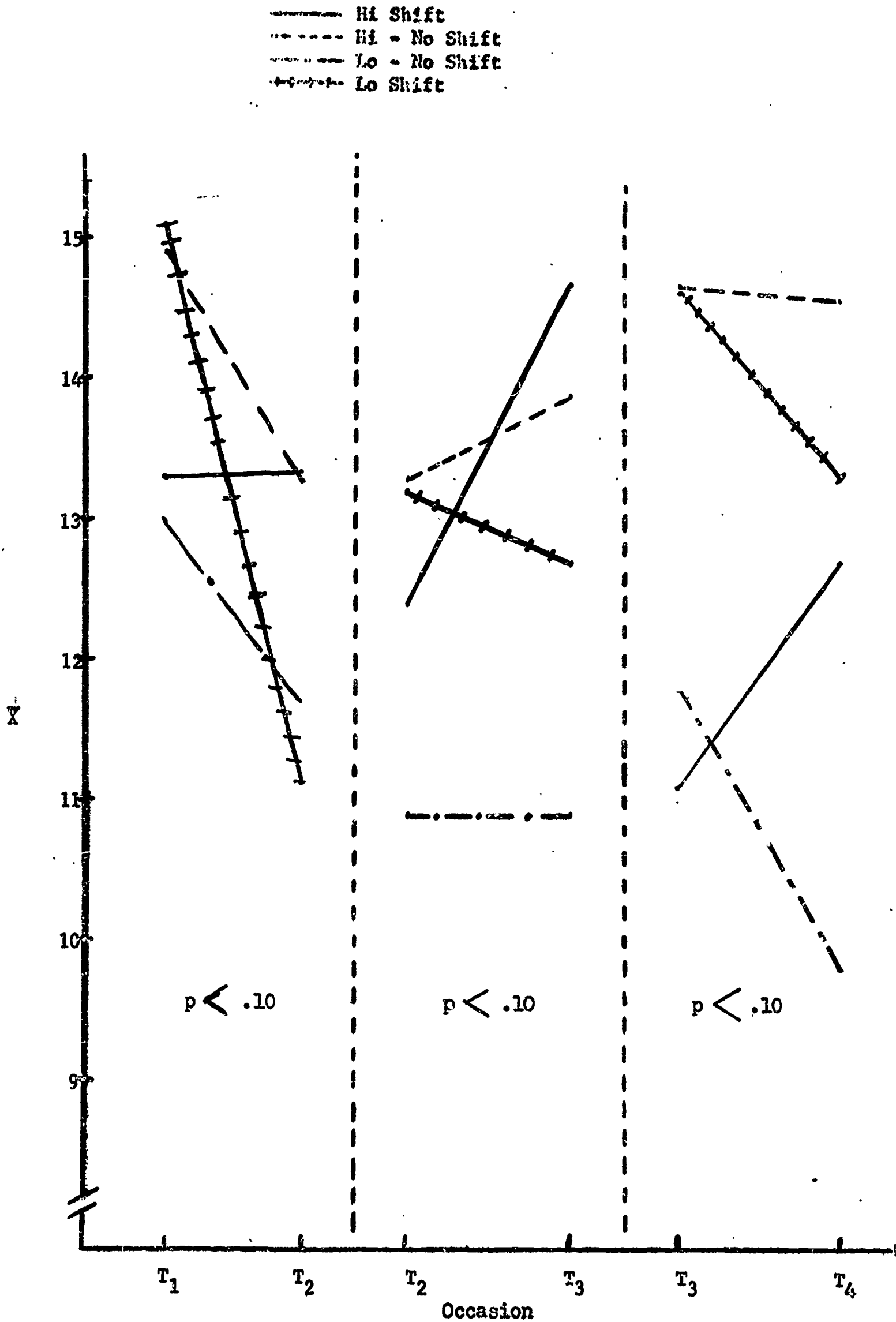
Figure 36. Non-Anglo Male Interactions between Shifts in School
Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Avoidance Style of
Defensiveness, where one or more of the interactions is significant
beyond the .10.
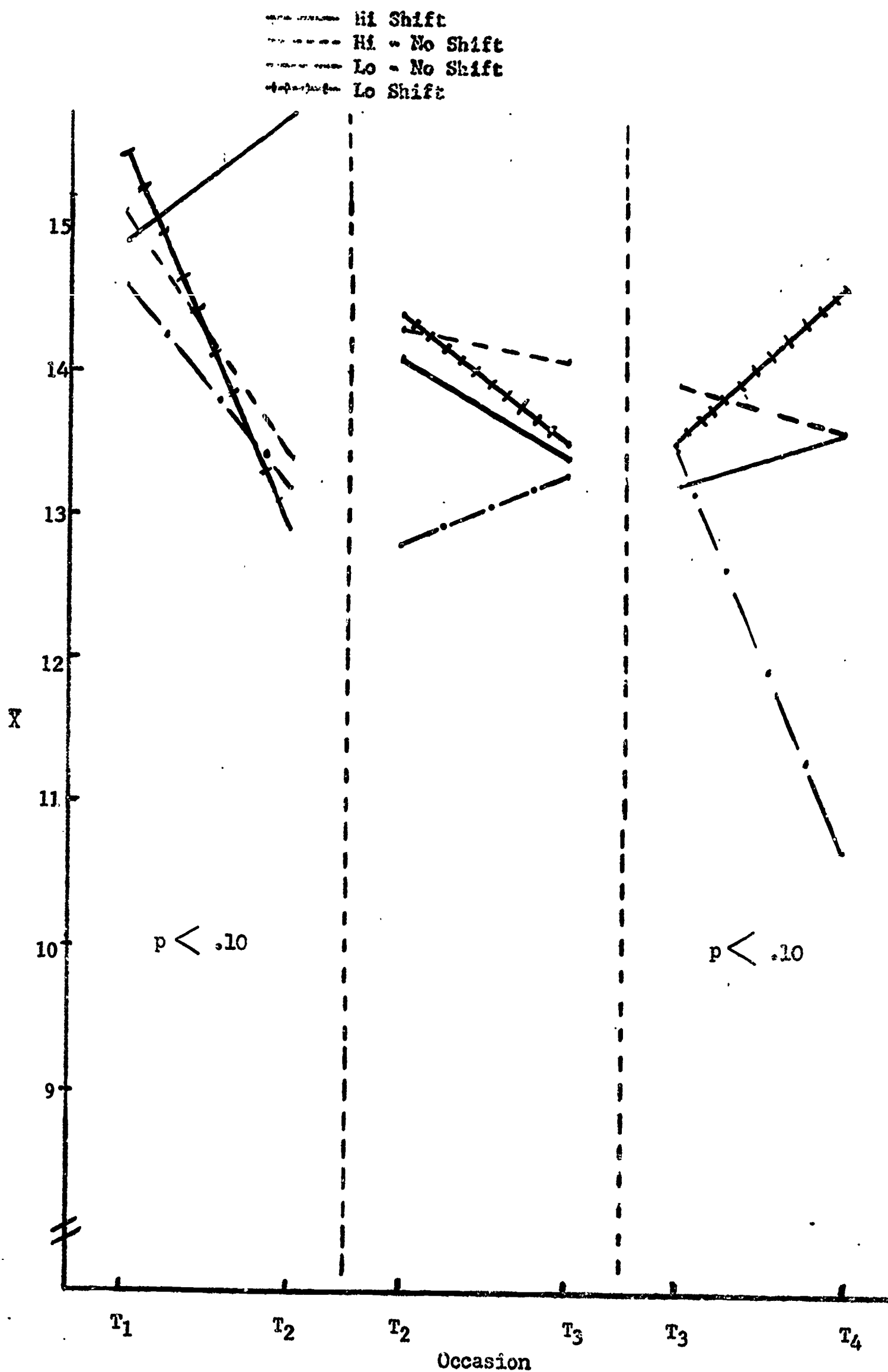
Figure 3 7. Non-Anglo Male Interactions between Shifts in School
Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Approach Style
of Defensiveness, where one or more of the interactions is sig-
nificant beyond the .10 level.
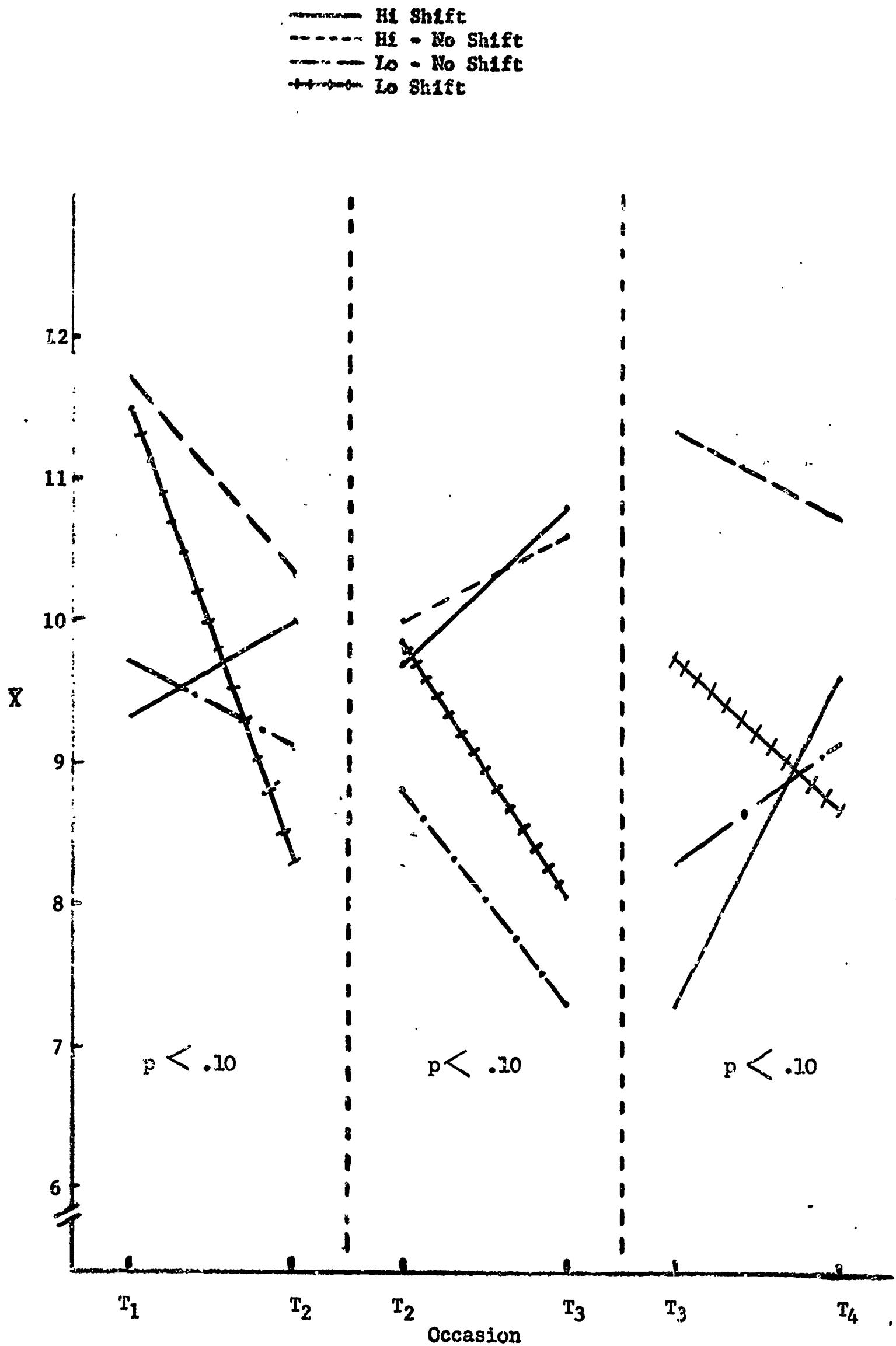
Figure 38. Non-Anglo Male Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Proneness toward Neuroticism, where one or more of the interactions is significant beyond the .10 level.

the Lo-No Shift and Hi Shift groups increase in PTN.

Self Disparagement in Relation to Peers (SD). Data on SD are graphed in Figure 39, and one of the most interesting interaction patterns involves the Hi-No Shift and the Lo Shift groups. They increase in SD, but strongly diverge during the T_1 - T_2 period; in the T_2 - T_3 period they decrease in SD and converge; and in the T_3 - T_4 period, they again diverge (although only the Hi Shift group increases). The other two groups tend to follow similar patterns across each of the time periods, increasing between T_1 - T_2, decreasing between T_2 - T_3, and increasing again between T_3 - T_4. Between T_1 and T_4, the largest overall increase occurs for the Hi Shift group (followed closely by the Hi-No Shift group), and the smallest overall increase occurs in the Lo Shift group.

Active Withdrawal (AW). In terms of AW there is a pronounced interaction between T_3 and T_4, as Figure 40 shows, and this is caused by the marked increases in AW in the Lo Shift and Hi Shift groups. Since the two groups which did not shift in school anxiety also did not change in AW, it appears, in this instance, that change in school anxiety is more important than level. In the other two periods there generally was a downward trend in AW, the only exception being the Lo Shift group which actually increased in AW between T_1 and T_2.

Neurotic Symptoms, Social (NS). In the period shown in Figure 11 in which a strong interaction occurs, i.e., the T_3 - T_4 period, the groups pair up as follows: the Lo Shift and Hi-No Shift groups decrease in NS, and the Hi Shift and Lo-No Shift groups increase in NS - and data are not available for the T_1 - T_2 period.

School Motivation (SM). In Figure 42 the interaction between T_2 and T_3 involves the Hi-No Shift group which decreases in SM, while all the other groups increase. In both the T_1 - T_2 and the T_3 - T_4 periods there is a general decline in SM, the sharpest drop occurring for the Hi Shift group between T_3 and T_4. With respect to the overall change between T_1 and T_4, the largest increase in SM occurred for the Lo-No Shift group, and the largest decrease (only one group decreased) occurred in the Hi Shift group.

MAT Nonverbal (NV). In Figure 43 there is an interaction for the T_2 - T_3 period which appears to result primarily from the Lo-No Shift group which did not change, for
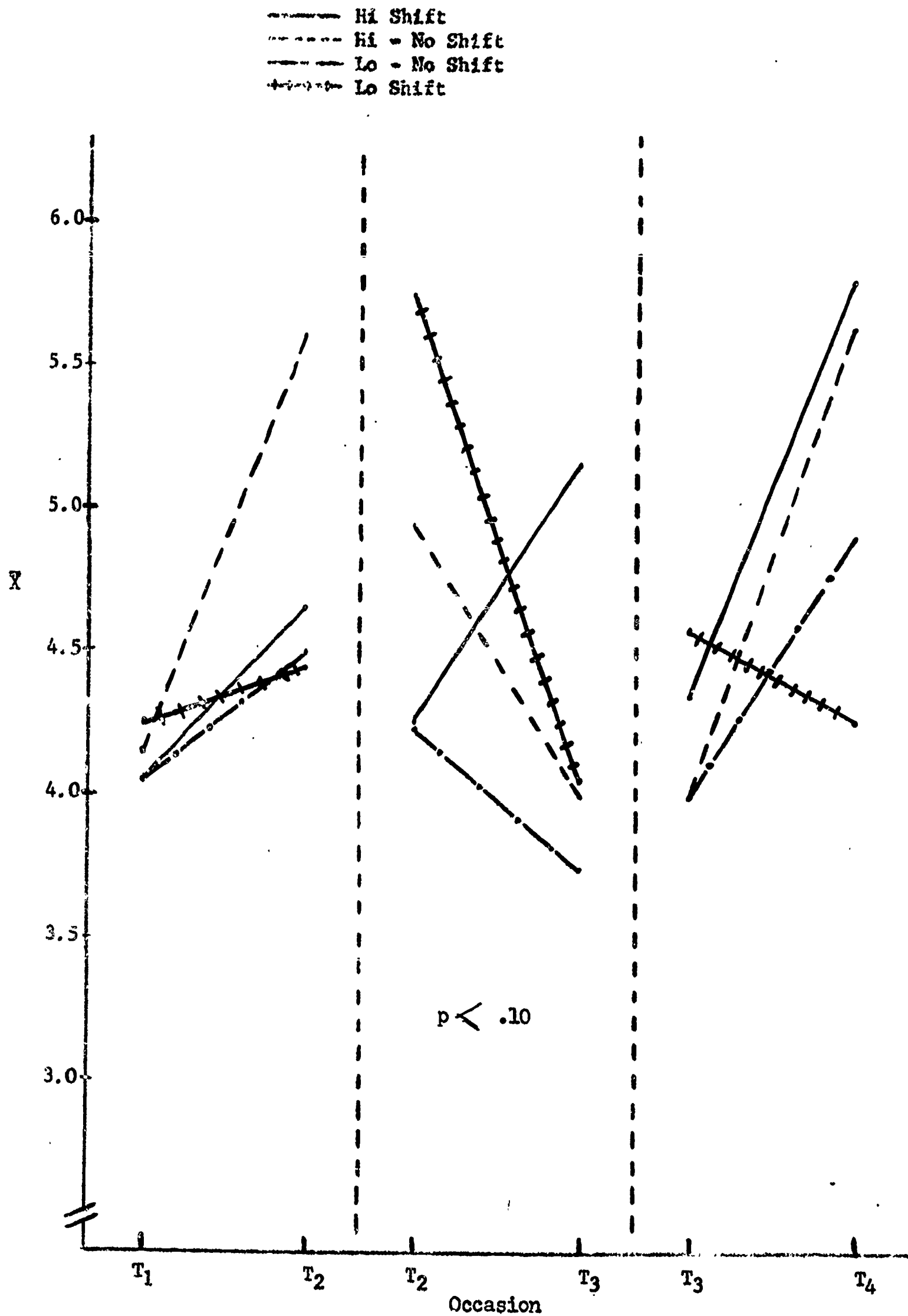
Figure 39. Non-Anglo Male Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Self Disparagement, in relation to Peers, where one or more of the interactions is significant beyond the .10 level.
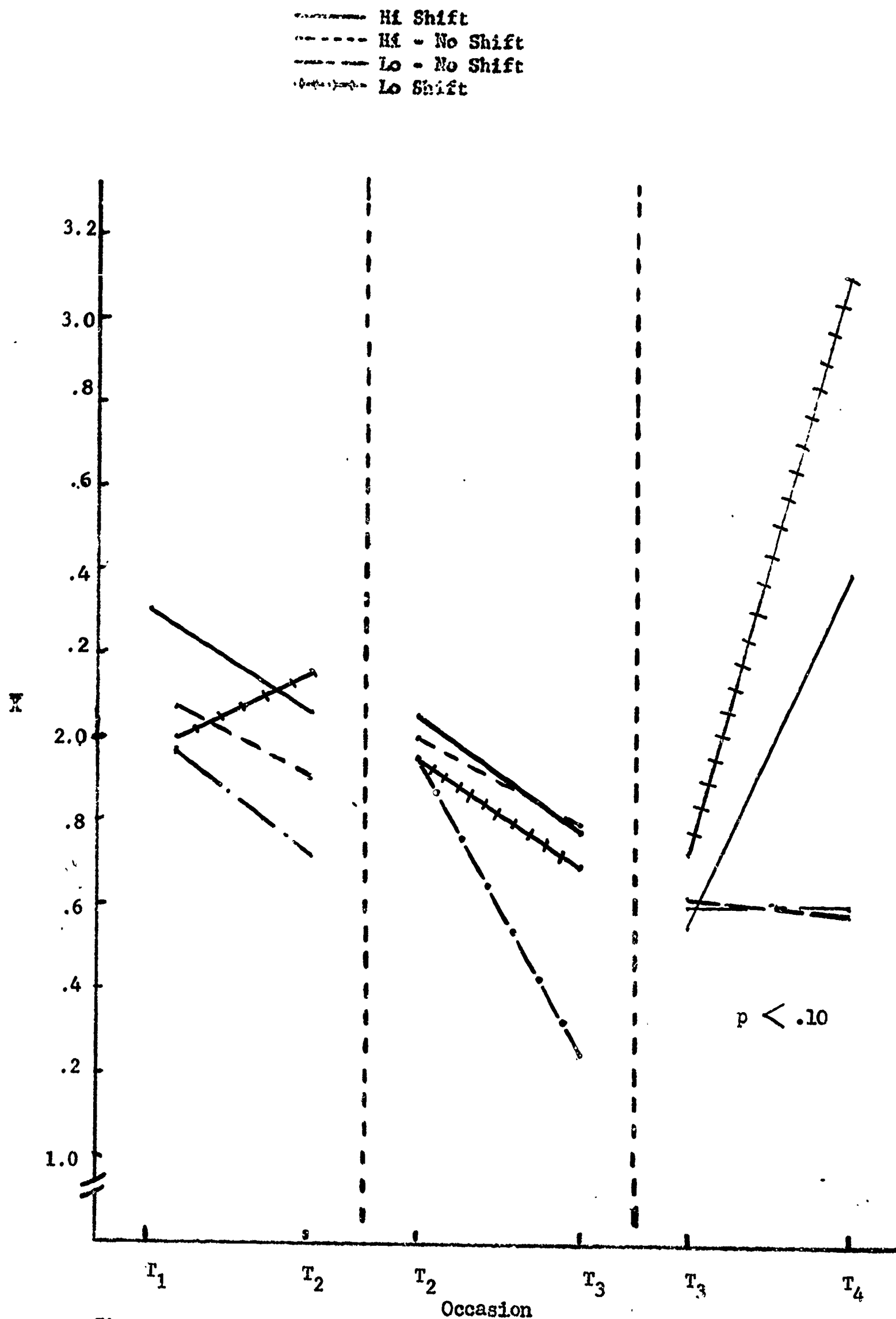
Figure 40 . Non-Anglo Male Interactions between Shifts in School Anxiety (during T1-T2, T2-T3, and T3-T4) and Active Withdrawal, where one or more of the interactions is significant beyond the .10 level.

Hi Shift
Hi - Lo Shift
Lo - Ho Shift
Lo Shift

NA

$p < .10$

T₁ T₂ T₂ T₃ T₃ T₄

Occasion
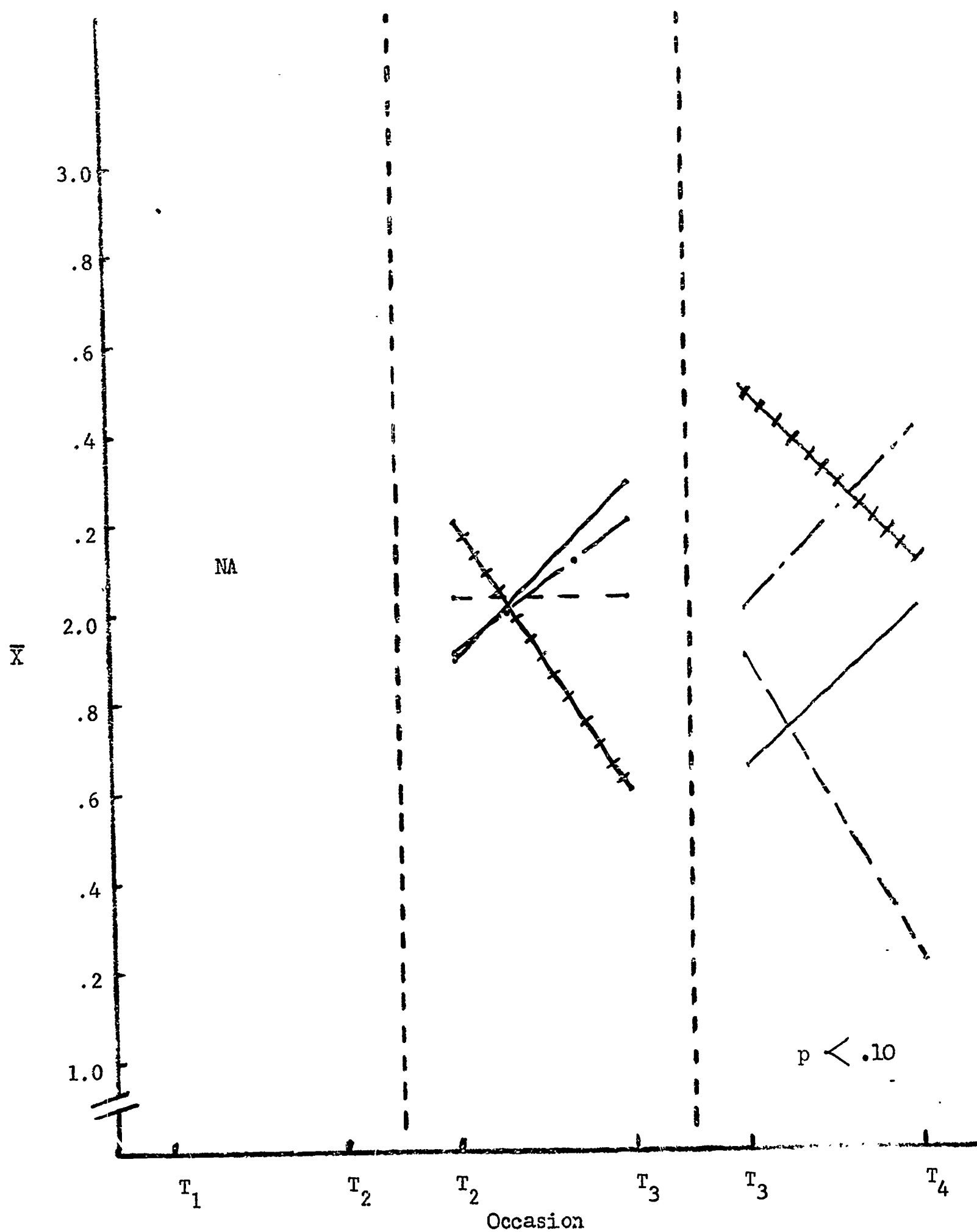
Figure 41. Non-Anglo Male Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Neurotic Symptoms, Social, where one or more of the interactions is significant beyond the .10 level.
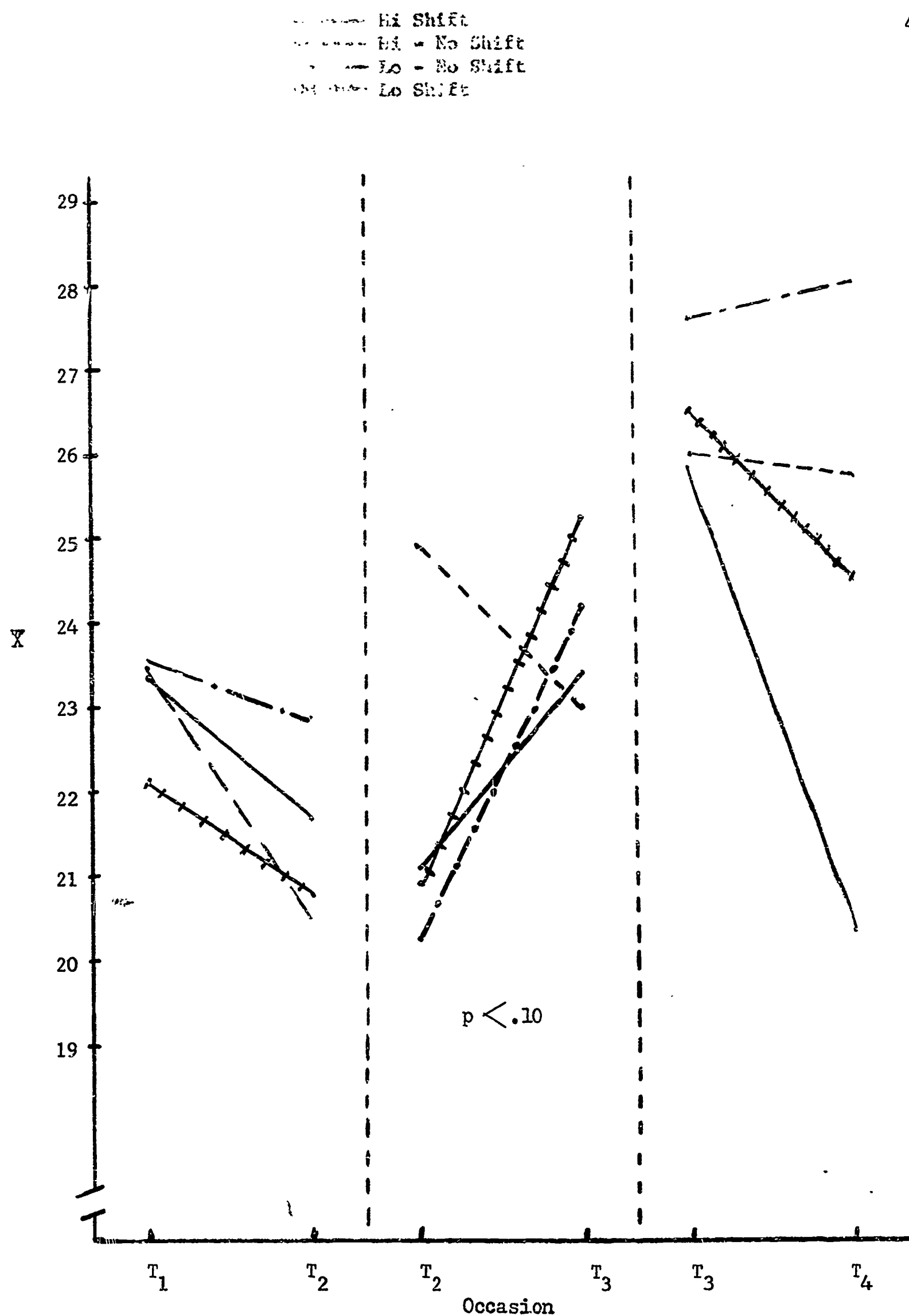
Figure 42. Non-Anglo Male Interactions between Shifts in School
Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and School Motivation,
where one or more of the interactions is significant beyond the
.10 level.
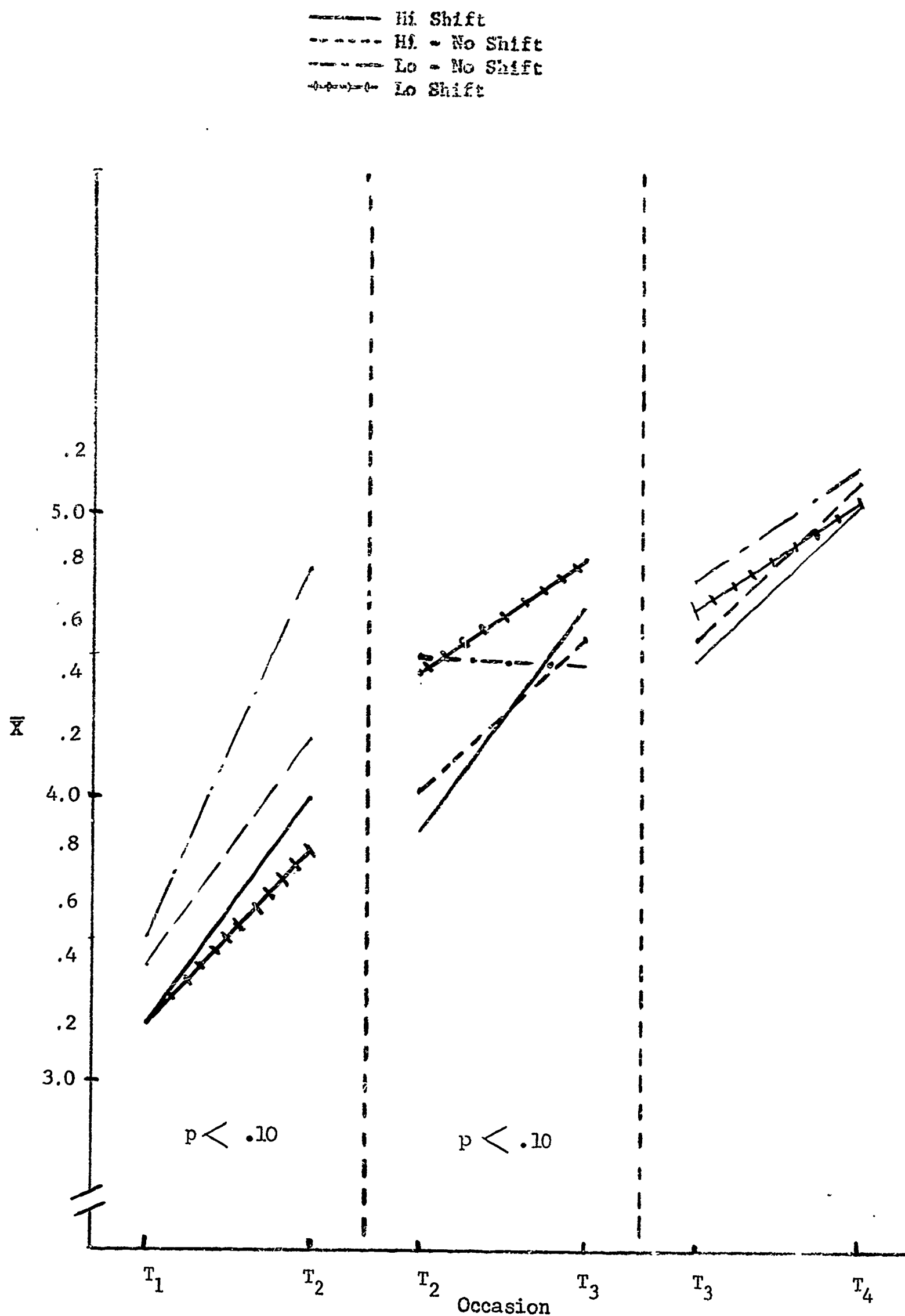
Figure 43. Non-Anglo Male Interactions between Shifts in School
Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and MAT NonVerbal,
where one or more of the interactions is significant beyond
the .10 level.

all the other groups move upward to about the same degree. In the T_1 - T_2 period the interaction seems to result from greater progress by the Lo-No Shift and Hi Shift groups. Overall, there is a strong trend upward, as one would expect. However, as previously noted, the MAT was a special problem, and for this reason, the data for T_2 - T_3, and T_3 - T_4, cannot be adequately assessed.

MAT Verbal (V). In Figure 44, for the T_2 - T_3 period there was an interaction derived from a decrease in MAT V in the Lo-No Shift group, and an increase in the other three groups, with the largest increase found for the Hi-No Shift group. Between T_1 and T_2 there is a uniform increase in all groups, but the Lo-No Shift group is much higher on both means. A similar situation exists for the T_3 - T_4 period, with the exception of the Hi-No Shift group which decreased in MAT V. (But the same qualification of the data made earlier applies here.)

d. Non-Anglo Female Children

Avoidance Style of Defensiveness (D_{AV}). Remembering that a high D_{AV} score actually means low defensiveness, the interactions for D_{AV} are given in Figure 45. On examination, it is clearly evident that the major interaction is between the Lo Shift and the Hi Shift groups. In general, the Hi Shift group decreases in D_{AV}, while the Lo Shift group increases. Also, it is interesting that the Hi-No Shift group parallels, to some degree, the pattern of the Lo Shift group between T_1 and T_2, and T_3 and T_4, but moves in the opposite direction between T_2 and T_3.

Approach Style of Defensiveness (D_{AP}). In the T_1 - T_2 period in Figure 46 there are two groups which increase in D_{AP}, namely, the Hi Shift and Lo-No Shift group although the increase is much more pronounced in the former group. And, the two groups which decrease in D_{AP} are the Lo Shift and Hi-No Shift groups. During T_2 - T_3 the Lo Shift and Lo-No Shift groups decrease in D_{AP}, while the other two make no appreciable change. In the T_3 - T_4 period the general direction of the trends of the groups is downward. Overall, therefore, there is a decrease in D_{AP} (from T_1 to T_4).

Self Enhancement through Derogation of Others (SE). The main interaction present in the T_1 - T_2 period, as shown in Figure 47, is due to the Lo Shift group, which decreases in SE, and the Hi Shift group, which increases in SE. During T_2 - T_3, all
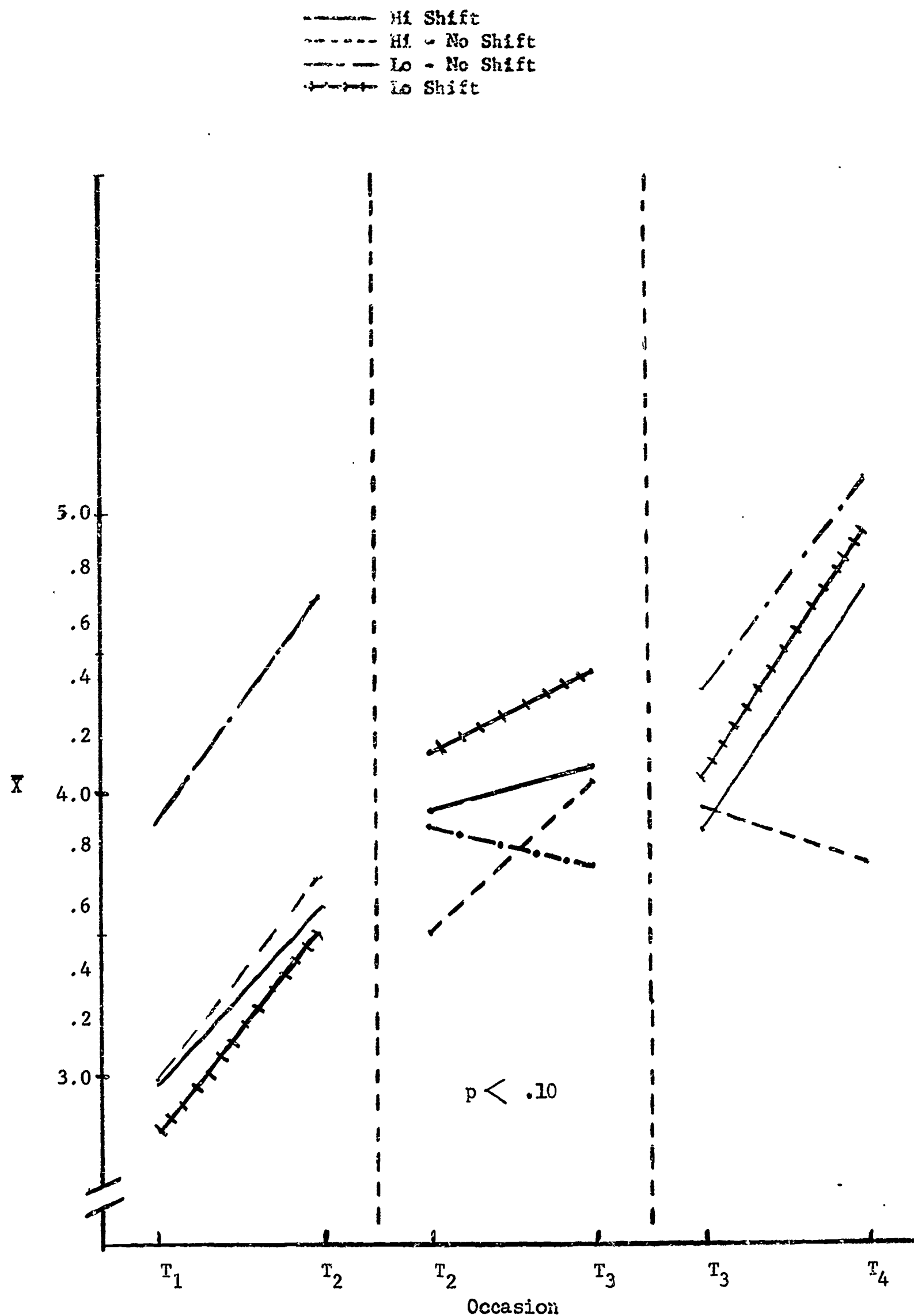
Figure 44. Non-Anglo Male Interactions between Shifts in School
Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and MAT Verbal, where
one or more of the interactions is significant beyond the .10
level.
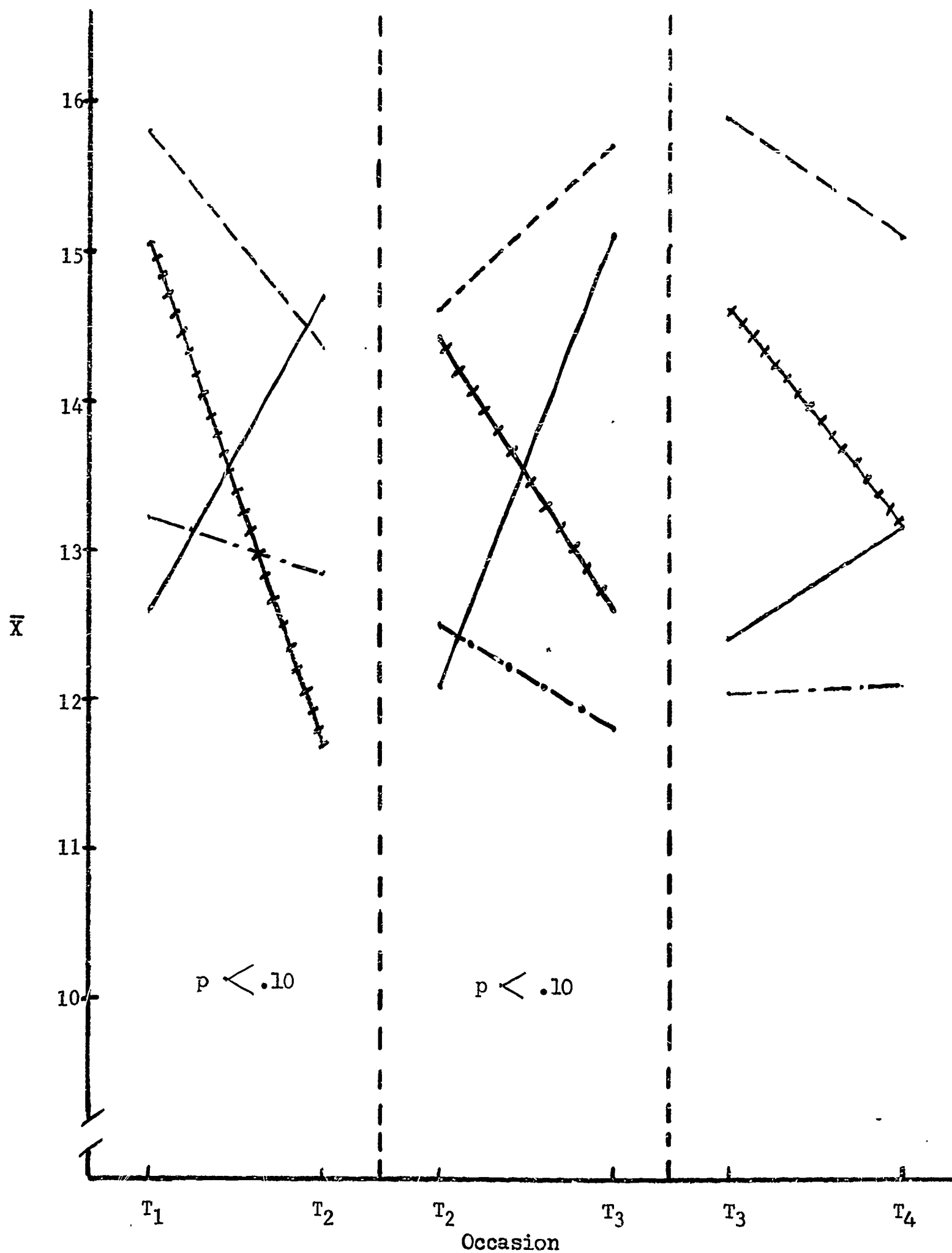
Figure 45. Non-Anglo Female Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Avoidance Style of Defensiveness, where one or more of the interactions is significant beyond the .10 level.
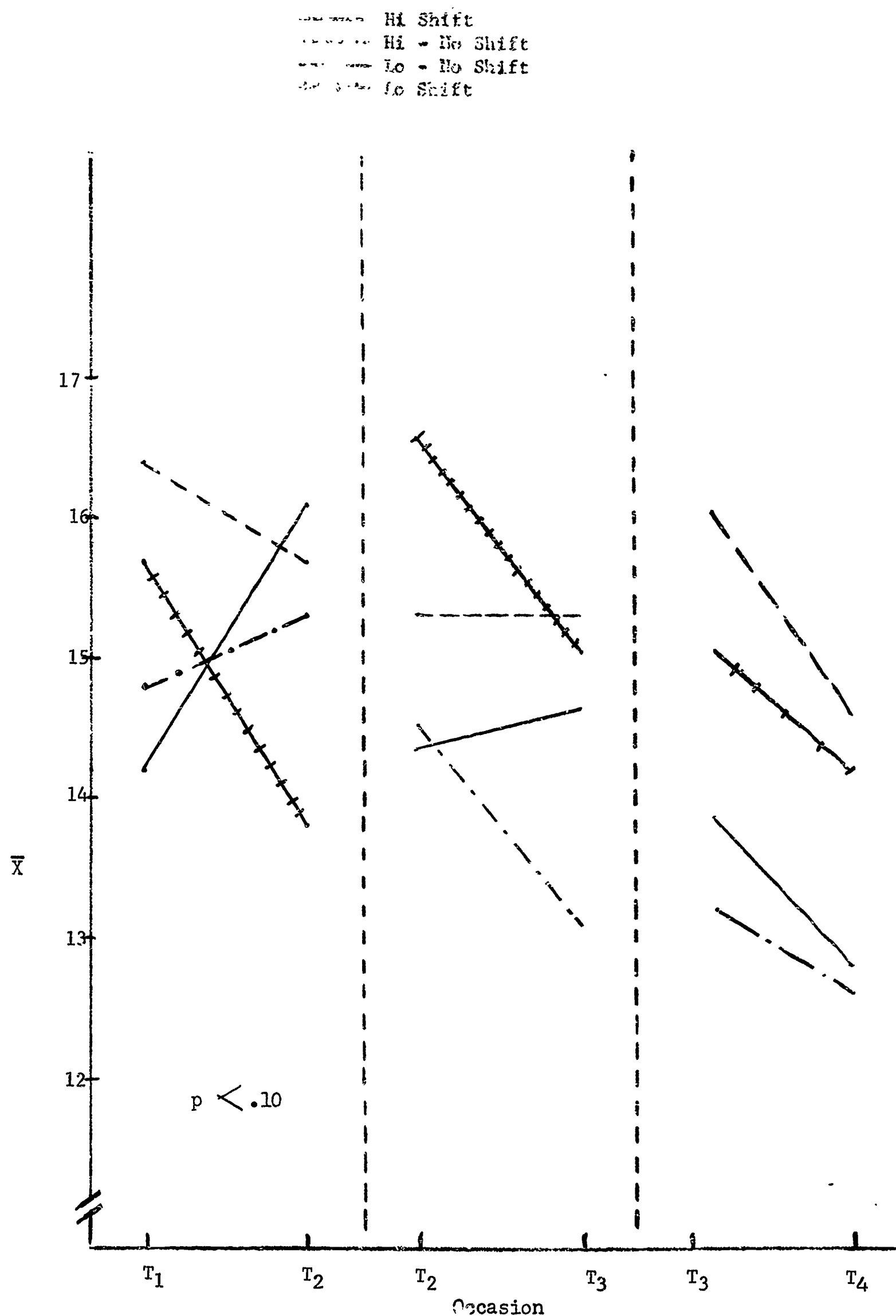
Figure 46. Non-Anglo Female Interactions between Shifts in School
Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Approach Style of
Defensiveness, where one or more of the interactions is significant
beyond the .10 level.
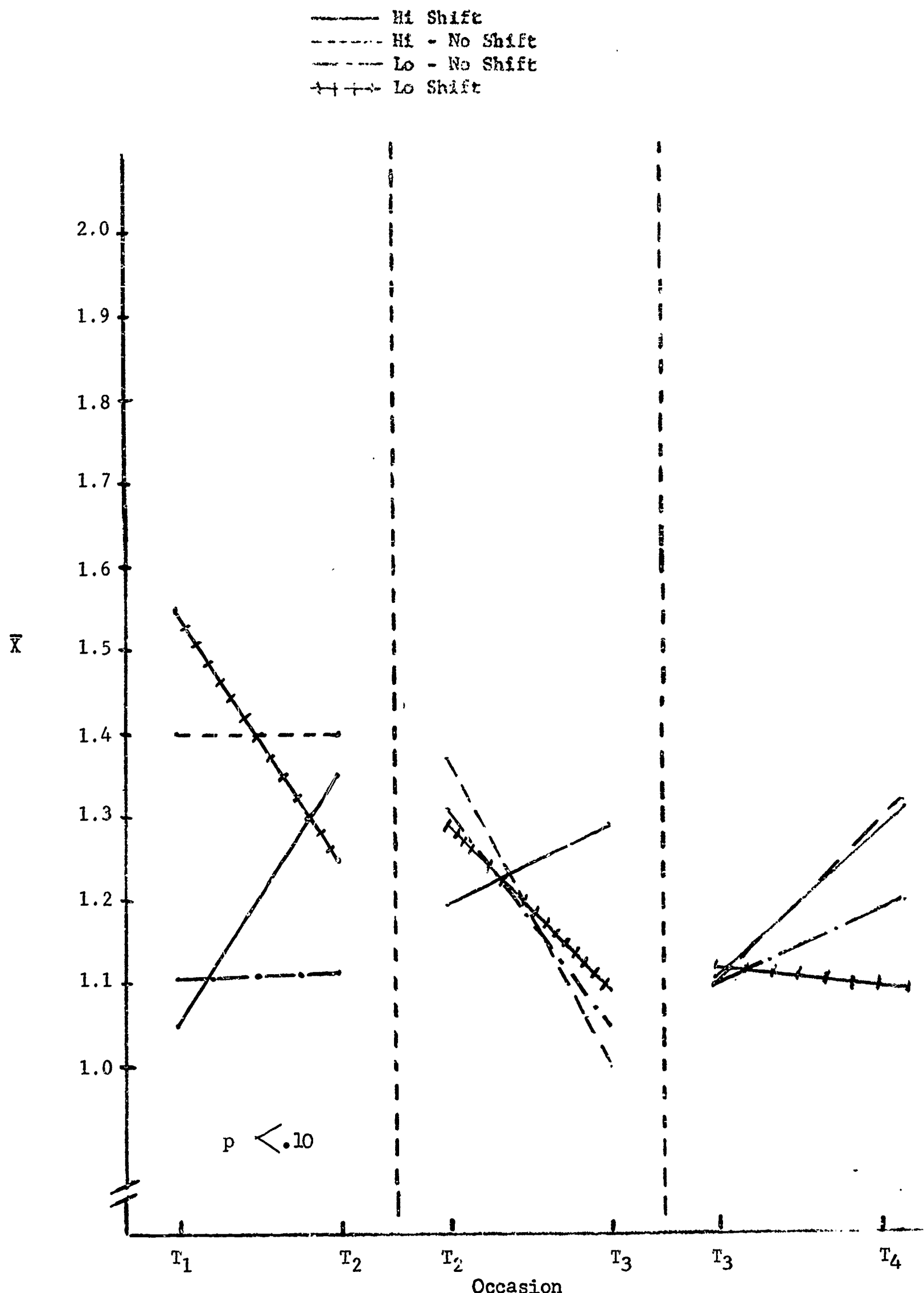
Figure 47. Non-Anglo Female Interactions between Shifts in School
Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Self Enhancement
through Derogation of Others, where one or more of the inter-
actions is significant beyond the .10 level.

but one group (the Hi Shift group) declines in SE, and in the $T_3 - T_4$ period they diverge and generally increase.

Active Withdrawal (AW). In regard to AW there is in Figure 48 an interaction between T_1 and T_2 created by a decrease in AW in the Lo Shift group, and an increase in AW in the Hi-No Shift group, as well as an increase in AW in the Hi-No Shift group. Between T_3 and T_4 there are strong general increases in AW, with the exception of the Lo Shift group which decreases in AW. In view of the strength of the increases in the other groups, it is significant that this group, which decreased in anxiety, showed, at the same time, a decrease in AW behavior. Between T_1 and T_4, the Lo Shift group actually decreased in AW, while the other three groups increased - the least increase occurring in the Lo-No Shift group, with the greatest increase occurring in the Hi Shift group.

Proneness toward Neuroticism (PTN). In Figure 49 the interaction between T_1 and T_2 is accounted for by the Hi Shift groups, which increase in PTN, and the Lo-No Shift group, which decreases in PTN. The other two groups have much higher PTN scores, and shift downward on PTN during the $T_1 - T_2$ period. In the $T_2 - T_3$ period, the Lo Shift group decreases in PTN, while the other groups increase somewhat. In the $T_3 - T_4$ period there is little change in any of the groups.

Neurotic Symptoms, Social (NS). There is an interaction between T_3 and T_4 in Figure 50 for NS, with the Lo Shift group as the primary cause, for it decreases in NS while the other groups increase. Data for the $T_1 - T_2$ period were not available.

School Motivation (SM). In the $T_3 - T_4$ period in Figure 51 the Hi-No Shift and the Hi Shift groups decrease in SM, while the Lo-No Shift and Lo Shift groups increase in SM. In the $T_1 - T_2$ period the only prominent shift in SM is in the Lo Shift group. And, between T_2 and T_3 the only group not to increase in SM is the Lo-No Shift group.

MAT Nonverbal (NV) Achievement. In the $T_1 - T_2$ and $T_3 - T_4$ periods in Figure 52 there are generally parallel upward trends in MAT NV. But between T_2 and T_3 the Hi-No Shift and Hi Shift, groups increase more than the other two groups. As previously noted, the amount of increase between T_3 and T_4 appears to have been attenuated by instrument factors.
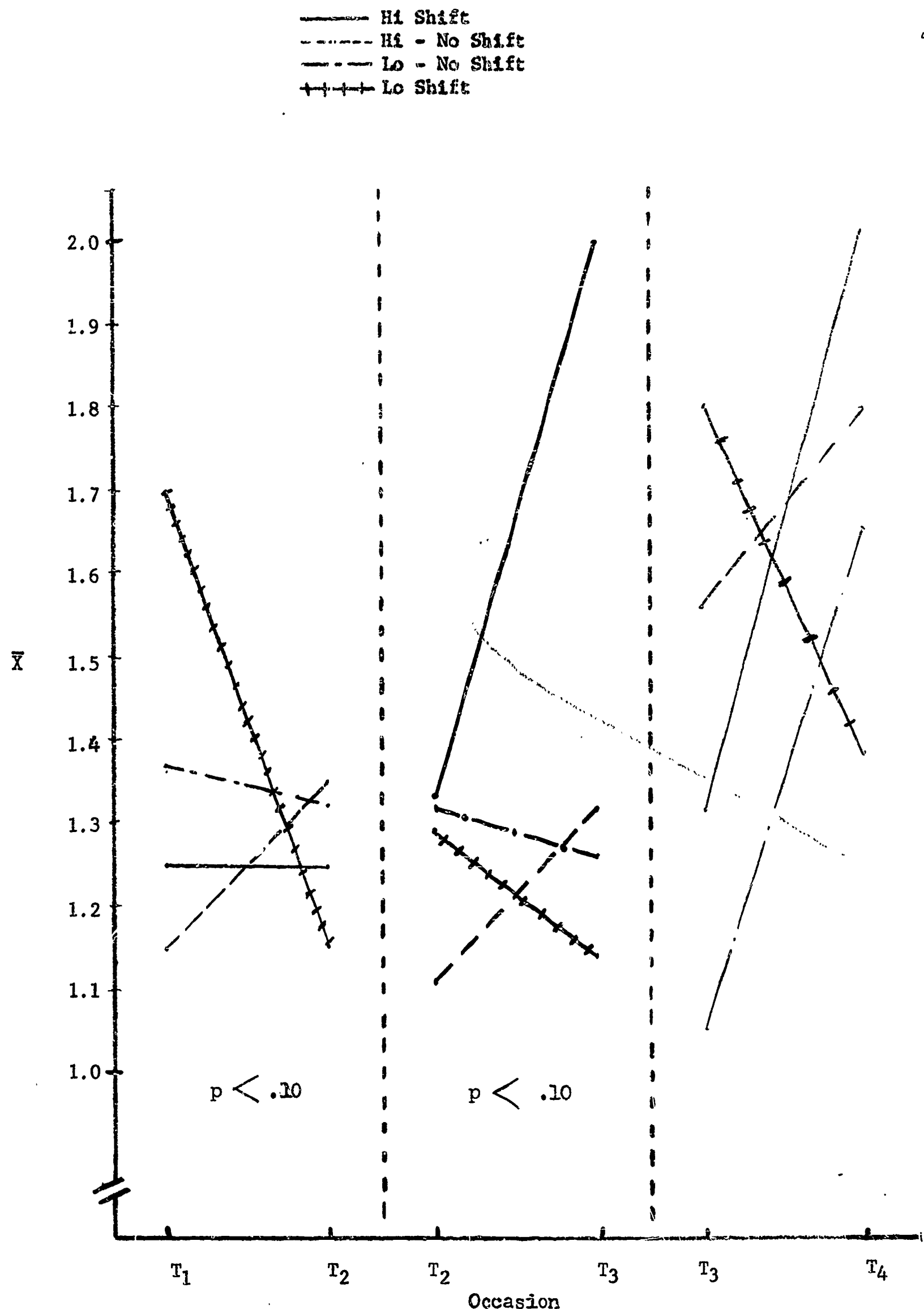
Figure 48. Non-Anglo Female Interactions between Shifts in School Anxiety (during T1-T2, T2-T3, and T3-T4) and Active Withdrawal, where one or more of the interactions is significant beyond the .10 level.
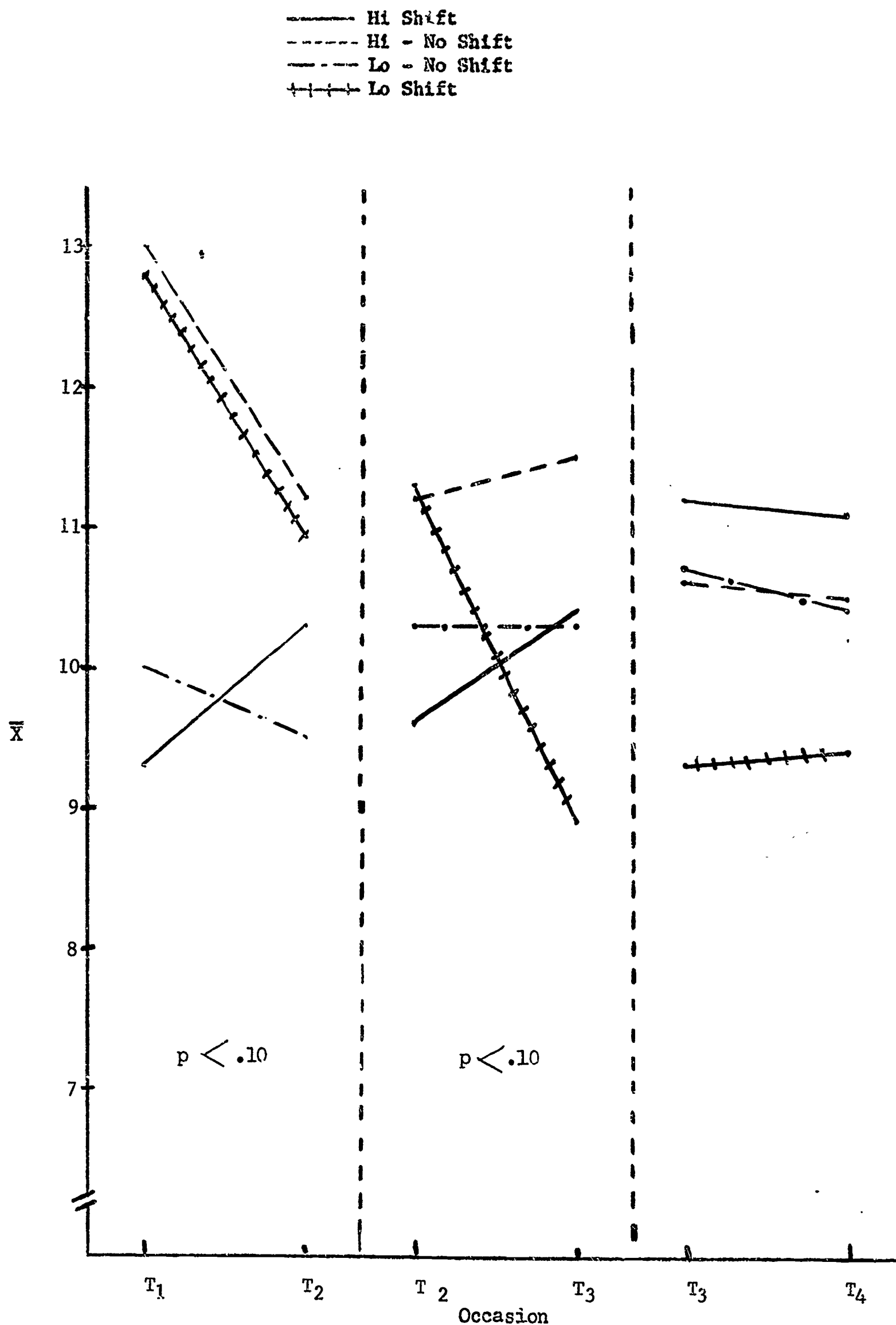
Figure 49. Non-Anglo Female Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Proneness toward Neuroticism, where one or more of the interactions is significant beyond the .10 level.
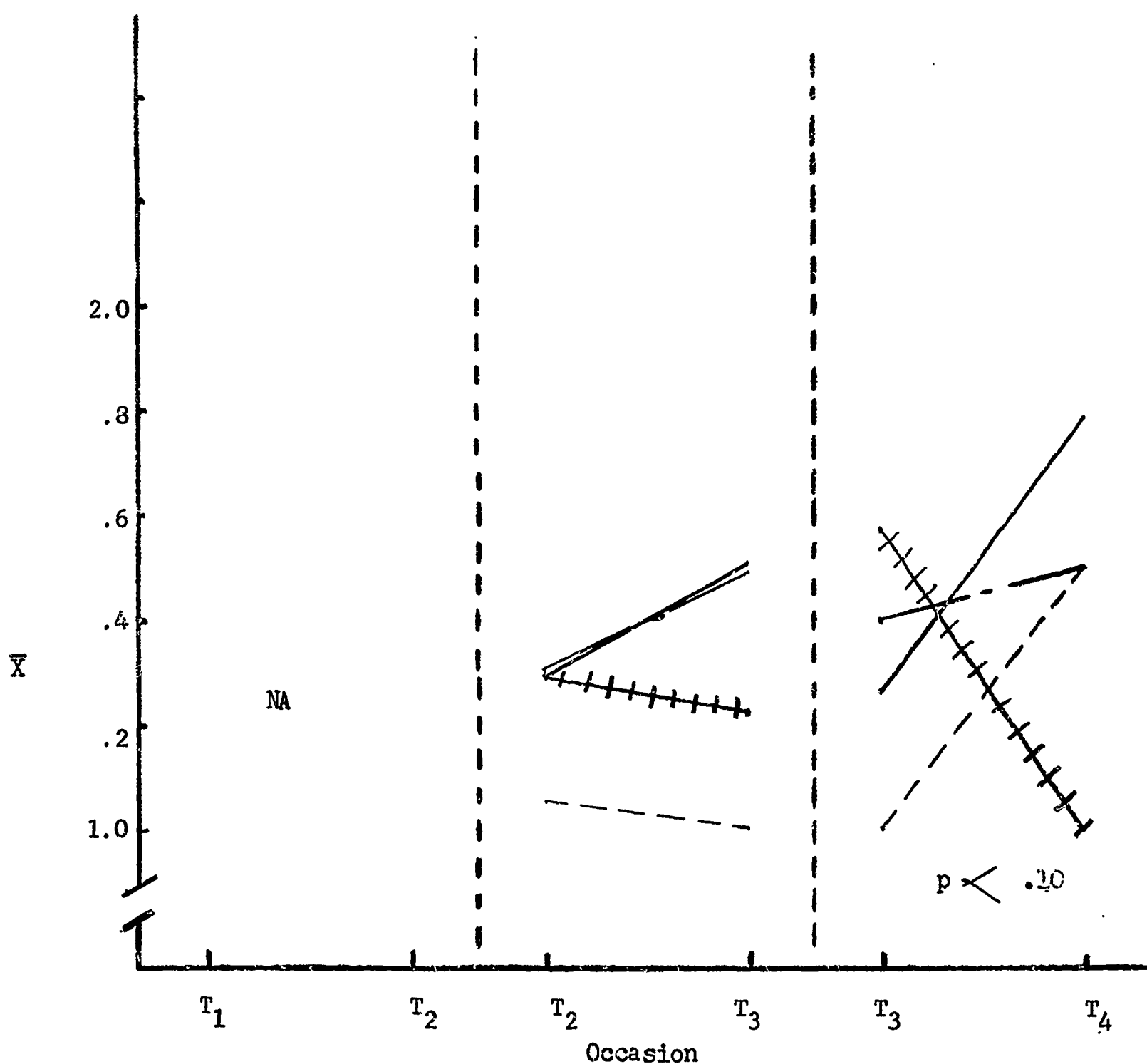
Figure 50. Non-Anglo Female Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and Neurotic Symptoms, Social, where one or more of the interactions is significant beyond the .10 level.

Figure 51. Non-Anglo Female Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and School Motivation, where one or more of the interactions is significant beyond the .10 level.
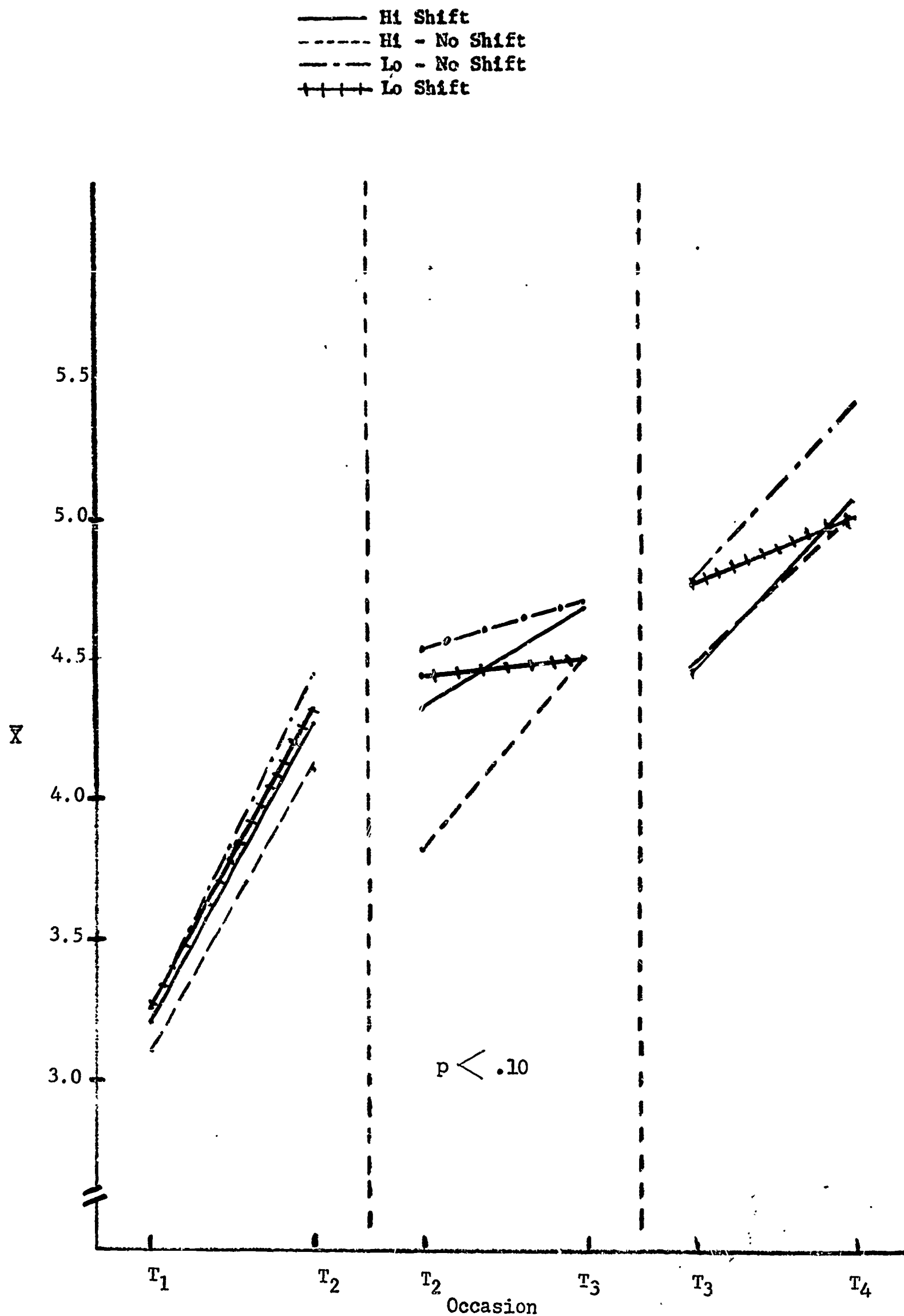
Figure 52. Non-Anglo Female Interactions between Shifts in School
Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and MAT NonVerbal, where
one or more of the interactions is significant beyond the .10
level.
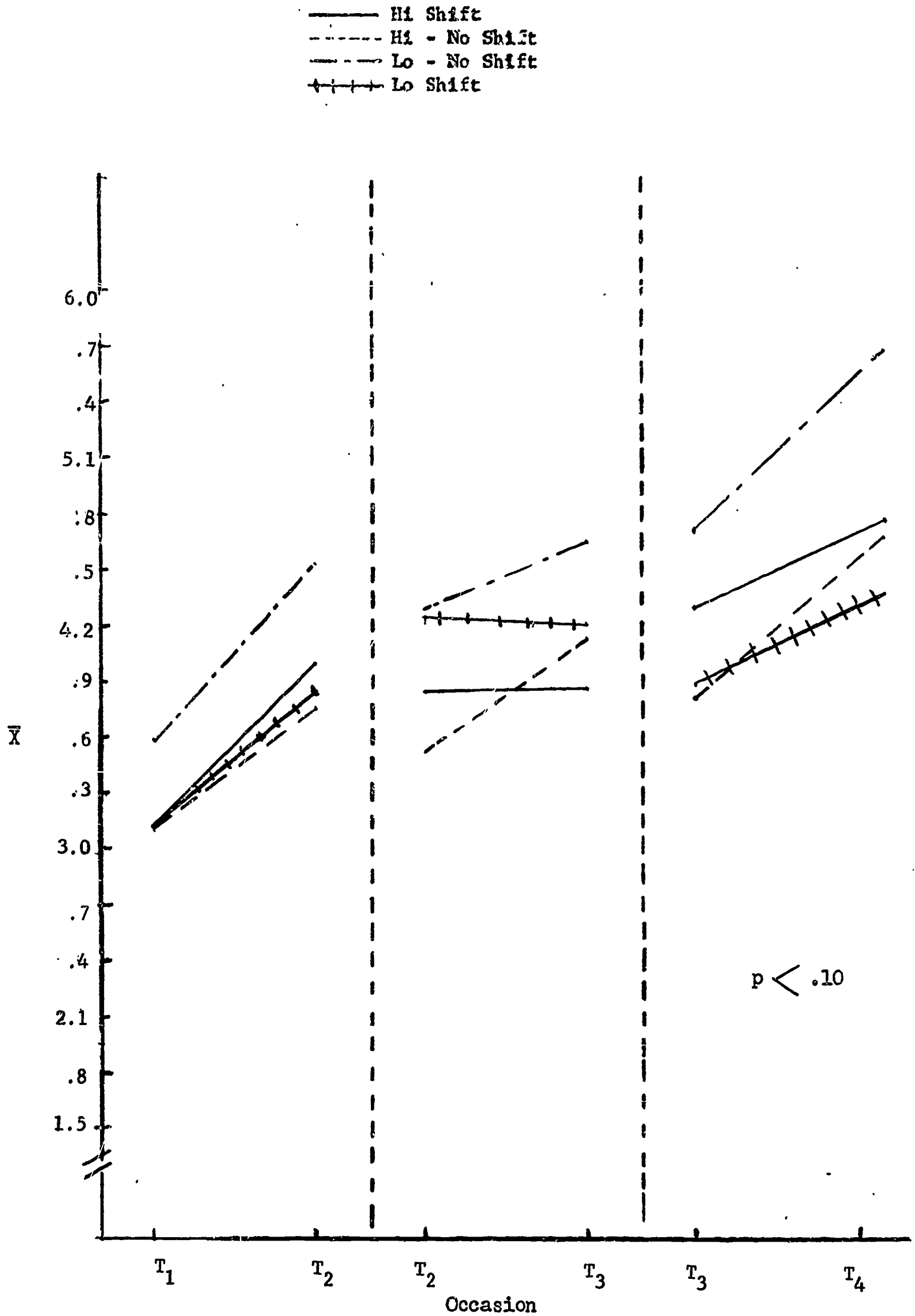
Figure 53. Non-Anglo Female Interactions between Shifts in School Anxiety (during T_1-T_2, T_2-T_3, and T_3-T_4) and MAT Verbal, where one or more of the interactions is significant beyond the .10 level.

MAT Verbal (V) Achievement. Between T_3 and T_4, in Figure 53, the Lo-No Shift and the Hi-No Shift groups increase in MAT V more strongly than the other two groups. And, essentially the same pattern occurs between T_2 and T_3, but not between T_1 and T_2 where uniform increases occur.

Chapter 4

Discussion and Implications

In this chapter we will be concerned with raising certain questions about school anxiety and endeavoring to present a point of view consistent with our findings. There are three reasons for doing this. First, the results of this project are complex, and it is therefore difficult to see their relationship to crucial questions about anxiety without a specific effort to deal with the findings at this level. And second, at this stage in our research on school anxiety it is as important to know what we have not accomplished as it is to know what we did accomplish. An lastly, the tendency to weight individual, single findings in the direction of one's preconceptions often leads to a somewhat narrow and restrictive consideration of the implications of a study, unless this is balanced by a broader perspective.

School Anxiety and Neurotic Anxiety

It will be remembered that school anxiety was considered to be related to external dangers which have a locus in school situations, and in this way school anxiety was differentiated from neurotic anxiety. As some would say, we were differentiating objective anxiety from neurotic anxiety. To the degree that we were measuring school anxiety, therefore, it is reasonable to believe that the strength of school anxiety is related to the degree of external danger or threat perceived in the school situation. And, of course, the degree of threat perceived is supposed to be related to the needs of the individual which he considers to be important, and which he sees as being possibly fulfilled in school situations. This, then, is the general conceptual differentiation which we made. But it is one thing to say school anxiety is differentiable from other types of anxiety, and it is another to offer empirical evidence to this effect.

With regard to this question, it is possible to give only a qualified answer. The results presented in Chapters 2 and 3 do provide the basis for several observations relevant to the problem. In the first place, it was consistently found that school anxiety has substantial correlations with proneness toward neuroticism, which is a variable which has neurotic anxiety as its major component. In addition, throughout the project predictions derived from earlies studies using other anxiety measures were confirmed for school anxiety. To mention but one example, many developmental psychologists have found that the acquisition of appropriate sex-role behaviors is more crucial for boys than girls. Therefore, difficulties in this area of socialization are more likely to lead to anxiety for boys than girls. And, using a preliminary edition of our school anxiety scale, and a newly developed measure of M-F, we were able to obtain results which conformed to these expectations.

But there is more to the issue than this. Granted that school anxiety overlaps with other types of anxiety.(and there was never any serious doubt about this), a more critical question concerns whether school anxiety contributes something in addition to anxiety-in-general. And to this question a definite affirmative answer can be given. School anxiety was consistently, and in predictable ways, more highly related to many of the variables studied in this project than was proneness toward neuroticism. The most outstanding examples of this were the relationships obtained between these two measures of anxiety and a variety of measures of intellectual and academic functioning in school. Although proneness toward neuroticism was regularly related to these same variables, the correlation coefficients were almost never as high as those for school anxiety. And, even in the area of neurotically oriented classroom behavior, the results were essentially the same, although it must be admitted that the relationships obtained for school anxiety were complex, and their signif-icance was difficult to comprehend. Therefore, the delineation made between

school anxiety and neurotic anxiety in Chapter 1 still stands, for, on the
basis of our findings, it is not possible to further elaborate and expand upon
that conceptual distinction.

School anxiety as a trait or state

Another dimension on which we can differentiate school anxiety is in terms
of whether it is a trait or state. The empirical evidence distinguishing
anxiety as a trait from anxiety as a state has been profusely produced by
Cattell and his co-workers (Cattell, 1966). Anxiety as a trait is considered
to be a relatively stable characteristic of the individual which is a part of
his personality and which is not subject to a high degree of change over time.
Anxiety as a state, on the other hand, is defined as a variable that covaries
over occasions of measurement, i. e., it fluctuates over time to a considerable
degree more than anxiety as a trait. This is a crucial distinction for this
research project because one of the project's major objectives was to endeavor
to discover whether school anxiety is systematically related to in-school
experience. It raises important questions, too, about those children who showed
marked changes in school anxiety over the period of a school year.

To take these questions one at a time, it was shown that school anxiety
had a high degree of stability across the school year, since this stability
coefficient was of the order of .60-.70. It is possible, of course, that the
stability of anxiety across the school year is simply a reflection of the lack of
significant changes in the in-school and out-of-school conditions of children.
And this point of view also can be taken with regard to relationships between
school anxiety and early school experiences; for the fact that we could predict
school anxiety so well from first grade intellectual and academic information
may simply mean that children's experiences in school don't change much from
first grade on in terms of basic, psychologically important dimensions. There

is also the possibility that school conditions do change over time, but that the changes are such as to leave the rank order of the children largely undisturbed.

To untangle some of these questions, we identified children whose school anxiety remained stable for specific periods of time, and children whose school anxiety shifted upward or downward during these same periods of time. These subgroups were extensively studied in a series of analyses in terms of all the information we had on them. But, although there were many significant results in a statistical sense, it was very difficult to discern an overall psychologically meaningful pattern in them. In other words, although it is obvious from a review of the massive tables in Chapter 3 that a great many significant results were obtained in association with stability and instability in school anxiety, an underlying conceptual framework for integrating these findings eluded the investigations. And, so, while we would tentatively conclude that school anxiety is best considered as a trait variable, we offer little definitive and conclusive evidence in behalf of this view.

School Anxiety and Defensiveness

Considerable attention has been given to the role of defenses against experiencing anxiety, for, it is well established, at least at the conceptual level, that the amount of anxiety experienced is related to the adequacy of the individual's defenses. And, on the basis of a review of the literature, the relationship between anxiety and styles of coping with anxiety appears to be one of the crucial aspects of needed anxiety research.

In this research project we took our cue from the literature and gave considerable emphasis to defensiveness. And we can report that there were significant and systematic changes in measures of defensiveness over time, and that these changes in defensiveness are closely and intimately linked to changes in school anxiety. Thus, there evidently is an interplay between

what is involved, psychologically speaking, in school anxiety, and what is involved in defensiveness as we measured it. But what? Correlations between defensiveness, especially what we referred to as the avoidance style of defensiveness, and school anxiety were among the most consistent relationships that we obtained. Yet the correlates of defensiveness were not the same as the correlates of school anxiety. For example, as previously noted, school anxiety was strongly related to measures of intellectual and academic functioning; but defensiveness, except in some isolated cases, was not. At the same time, there were a number of instances where our defensiveness scales did correlate with other variables studied, including variables which were not possibly confounded by being derived from the same source - namely, the child. One question, then, is: What was our school anxiety scale measuring that our defensiveness scales also were measuring? And, to put the question into its other context: What were our defensiveness scales measuring which our anxiety scale was not? Using a common source of information, namely, self reports from the children, could explain the relationship between school anxiety and defensiveness, but it could not account for the relationships obtained for variables derived from independent sources of information. It would seem to be necessary, therefore, to regard our school anxiety scale as something more than a measure of anxiety, and to regard our measures of defensiveness as something more than measures of test-taking attitudes.

Type of School Anxious Children

Still another problem which we attempted to deal with at a conceptual and analytic level is the problem of whether there are types of school anxious children. If we can generalize from the research of Sarason and other investigators, it appears that many school anxious children might be described as dependent, inhibited, shy, and conforming. However, there ought to be, also, a significant number of school anxious children who behave in aggressive, hostile,

ways, One might then suppose that this second type of school anxious child is likely to result from a failure to achieve a certain integration of behavior within school settings which is satisfactory to the child; with the consequence that he has given up these primary, more basic styles of reacting to anxiety, and has resorted to an aggressive form of reaction and adaption to school. We did not, however, obtain the kind of evidence that could be used to analyze such a sequence of events. We did find, however, that more of our school anxious children were described by the first set of characteristics, i. e., shyness, conforming, and so on, than by the second. Whether classroom conditions are partly responsible for these different types of behavioral correlates of school anxiety we are unable to say for sure. We did make an exploratory study of this aspect of the problem (which, however, was not reported) and found marked variations from class to class, and from one year to the next when children changed classes. But due to the smallness of the samples, formal analysis of the data appeared to be inadvisable. In closing this discussion, we agree with Sarason (1966) that much systematic research needs to be done in this area.

School Anxiety and School Motivation

Another area of considerable interest in this project was the relationship between school anxiety and school motivation. As we have previously noted in other contexts, it is the contention of many theorists that anxiety arises when there is a threat to an important need or motive for which the individual anticipates satisfaction, but at the same time sees this potential satisfaction threatened by uncertain circumstances, i. e., there is a substantial element of doubt about what is going to happen. Thus, it would appear that school anxiety should be a function of the strength of school motivation, since the stronger school motivation is the more difficult it is likely to be to satisfy it. Other theorists, notably Atkinson and his co-workers (Atkinson and Feather, 1966),

would tend to disagree with this line of reasoning (not necessarily as it is applied to school anxiety and school motivation, but as regards test anxiety and achievement motivation) and would argue that measures of motivation and anxiety should generally be uncorrelated. Our results are certainly no test of the alternatives implicit in these conceptions, but we did find that school anxiety and school motivation interacted in intriquing and provocative ways, as a review of the relevant data in Chapter 3 reveals. For one thing, it appears that school anxiety "acts" in a positive fashion for some types of children in much the same way that school motivation more typically does. In effect, it might be called a moderator variable in regard to school motivation, although the dynamics of this relationship were not deciphered very well in our analysis. In general, of course, school motivation was the stronger of the two influences operating in the realm of school intellectual, academic, and social behavior.

School Anxiety and Sex and Socio-cultural differences

All of the ideas which we have developed up to now are intimately related to two factors which characterize children in school, and these are their sex and socio-cultural status. There is a great deal of evidence gathered from a number of different sources (See Ruebush, 1963, for particulars), and with several different anxiety questionnaires and other instruments measuring anxiety, which indicates that one cannot generalize equally well from information about anxiety to the behavior of boys and girls. And our results are no exception, for we found a great many differences between boys and girls in relationships between school anxiety and our other variables. It is particularly noteworthy that these relationships were frequently stronger for girls than boys, which is contrary to much of the research literature in which test anxiety was studied. But, in view of the added social emphasis in our school anxiety scale, in contrast to the academic emphasis of the TASC, this is not surprising.

A more significant contribution was made, however, by our analyses of school anxiety among Non-Anglo children. There have been only a few anxiety studies in which Negro and Mexican-American children were included in substantial numbers as subjects. It was deliberate intent on our part, therefore, to give a great deal of attention to these types of children. And our efforts paid handsome dividends, for some of our most significant findings were those involving comparisons of Anglo and Non-Anglo children. In particular, we obtained convincing evidence that Negro and Mexican-American children are more anxious in school, although we were much less successful in showing whether or not school conditions contributed materially to this state of affairs. One of our tentative findings, however, was that Negro and Mexican-American children are not penalized in situations when incidental learning, i. e., learning which does not depend on specific instruction, occurs. We found, also, that the correlates of school anxiety were not the same for Non-Anglo children as they were for Anglo children. Our generalizations are limited, however, by the apparently significant differences in the school environments of Anglo and Non-Anglo children, since we cannot be sure that some of the differences we obtained were not products of these circumstances. For example, from our analyses of relationships of peer acceptance and peer rejection to other variables, it appears that elementary schools in different socio-cultural neighborhoods vary in their status systems, i. e., in terms of what it takes to be highly accepted and influential, or rejected and ignored, in one's peer group. In addition, although Non-Anglo children were higher on many of the classroom behavior variables, these variables were less frequently related to school anxiety and school motivation for Non-Anglo children than for Anglo children. But, as before, it is difficult to put these findings into a conceptual framework without more knowledge of the socio-cultural milieu of the schools.

Antecedents of School Anxiety

We employed several strategies in searching for evidence of the operation of
cause-and-effect in regard to school anxiety, including the examination of rela-
tionships between school anxiety and a number of behavioral, academic, and intel-
lectual variables over time, and the determination of what happened to school
anxiety under in-school and out-of-school influences. But only circumstantial
and spotty evidence was obtained which seemed to be in accord with the require-
ments of a cause-and-effect sequence, and it was generally not possible to unambig-
uously interpret these results within a cause-and-effect framework. Of this most
ambitious of our aims, therefore, it would have to be said that we were only mar-
ginally successful, for few of our substantive findings could conclusively be
identified as antecedents or consequences of school anxiety. At a methodological
level, however, we demonstrated the usefulness of the in-school and out-of-school
paradigm, and revealed some of the uncertainties and unresolved problems involved
in the application of cross-lagged correlational designs to the study of cause-
and-effect relationships.

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APPENDIX A

I'm going to ask you some questions which are different from the kinds of questions you usually have in school. These questions are about how you think and feel, and so have no right or wrong answers. First we'll hand out the answer sheets, and then I'll tell you more about the questions... . .

First I want you to print your names in the spaces at the top of the sheet. Let me show you how it's done. . . . (boxes are repro- duced on the blackboard, tester prints his name, explaining as he goes). Now you print your name in the spaces on your answer sheet, putting your first name in the spaces on the left side, and your last name in the spaces on the right. . . . Below your name is a place to write in your school. . . . Then to the right of that are the letters "B" and "G". If you're a boy put a circle around the "B", and if you're a girl put a circle around the "G". . . . Then write in the name of your teacher, writing only her last name. . . .

As I said before, I'm going to ask you some questions. These questions are different from other school questions. There are no right or wrong answers, and your teacher and principal will not see the answers you give. I will read each question, and you are to listen to it, and then put an "X" in the box on your answer sheet that best shows how you think or feel about the question. Sometimes you will be able to show how you think or feel by answering the question "yes" or "no". Let me read a practice question to show you how this works. Suppose I read the question: Do you like to play football? For this question your answer sheet would look like this. . . (appropriate boxes are put on the blackboard). . . . So if you like to play football you would show this by putting an "X" in the box under the word "yes", and if you don't you would put the "X" in the box under the word "no". (illustrated on the blackboard). . . . For other questions I will ask, you will be able to show how you think or feel by deciding between two things. For example, suppose that I read this question: Which do you like better, watching television; or reading a book? . . . (appropriate words and boxes are put on the blackboard). . . . Now, if you like watching television better you would put your "X" in the box under the word "television", and if you like reading a book better you would put your "X" in the box under the word "book".

Now, I'm going to ask you questions about how you think and feel about school, and about a lot of other things. Remember, your answer depends on how you think and feel, and your teacher and principal will not see the answers you give. So, listen carefully to each question and answer it by deciding how you think and feel. If you don't understand a question, ask me about it.

Now let's start by everybody putting their finger on Number 1. Here is the first question. Number1 . . . . (the first question is read) . . . . If you . . . (appropriate reference is made to the question content) . . . Put your "X" in the box under "yes", and if you . . . (appropriate reference is made to the question content) put your "X" in the box under "no". Now let's go to the next question. Number 2. . . (question is handled as in the preceding. And with all subsequent questions the number is given, and the question is read; but the additional remarks included for Numbers 1 and 2 are discon- tinued). . . .

D1.   When you are worried about something, do you like to talk about it?

SM2.   When you see other children having trouble doing an assignment do you wish you could go over and help them?

SA3.   If you are sick and miss school, do you worry that you will fall behind in your schoolwork?

PTN4. Do you always think that mother's way of doing things is better; or do you sometimes think your own way is better?

SA5.   Do you worry when the teacher says that she is going to ask you questions to find out how much you know?

SA6.   Do you feel uncomfortable when eating in front of your classmates?

PTN7. Do you sometimes speak angrily to your parents; or is it wrong to do so?

SA8.   Do you sometimes dream at night that you did poorly on a test you had in school that day?

PTN9. In dreams do animals chase you; or are dreams nice?

SA10. Do you worry a lot _while_ you are taking a test?

PTN11. Can others do things better; or can you do most things well?

AT12. Is it hard for you to do as well as the teacher expects you to do in class?

PTN13. In a game on the playground, do you stand around; or run a lot?

SM14. Do you think that you learn more working with others than when working by yourself?

L15.   Do you ever worry?

SA16. Do you sometimes dream at night that the teacher is angry because you do not know your lessons?

SM17. Do you always raise your hand in class when you know the answer?

PTN18. Would you like better to hear stories about bears; or have . bears here now?

SM 19. Do you try hard to make all the children in class like you?

SA20. Do you often have the fear that other children might think you dumb?

SA21. Does playing softball and other games make you scared because you are afraid of getting hurt?

PTN22. When your friends argue, do you keep quiet till they finish; or join the argument?

PTN23. Are most children sometimes unkind; or are most children kind to you?

D24. Are you sorry for some of the things you have done?

D25. Do you like to play in the snow?

PTN26. Do loud noises scare you; or do you just laugh at them?

SA27. Do you usually feel nervous when speaking to the principal?

D28. Are there some people that you don't like?

L29. Are you ever unhappy?

SA30. Are you sometimes afraid of expressing yourself in class because you think you might make a foolish mistake?

SA31. When the teacher says that she is going to call upon some boys and girls in the class to do arithmetic problems, do you hope that she will call upon someone else and not on you?

AT32. Do you find it hard to keep up with the rest of the class?

SM33. Do you prefer doing school assignments by yourself rather than doing them with other children in class?

SM 34. Is it hard for you to wait for the teacher to call on you when you have a good idea?

PTN35. Do you think you do not smile much; or smile a great deal?

D36. Do you sometimes feel like hurting someone?

PTN37. Do new teachers frighten you; or do you usually like them?

SA38. Are you often worried that the teacher will scold or punish you?

SM39. Do you pay close attention to what the teacher says when she explains something?

SA40. When it is your turn to get up and recite in class, do you feel your heart pounding hard?

D41. Sometimes when you get mad, do you smash something?

SA42. When you are at home and you are thinking about your arithmetic lesson for the next day, do you become afraid that you will get the answers wrong when the teacher calls upon you?

SA43. When the teacher is teaching you about arithmetic, do you feel that other children in the class understand her better than you?

SM44. When you are working in a group do you usually volunteer for more work than anyone else in the group?

SM45. When you make something in class do you try to make sure that all the other children see it?

PTN46. In your group is someone else the leader; or are you the leader?

PTN47. Do people think that you make many mistakes; or few mistakes?

ST48. Have you been physically attacked by any children in class?

D49. Do you wish your teacher paid more attention to you?

ST50. Are you as good in games like kickball as other students in class?

ST51. Do your classmates often make fun of you for the way you play in school games?

ST52. Do you often feel that your classmates ever want to do what you want to do?

L53. Has anyone ever been able to scare You?

SM54. Would you be willing to give up some of your play time in order to run for an office in class?

ST55. Do other children in class seem to like you?

SA56. Do you worry about being promoted, that is, passing from the _____ grade to the _____ grade at the end of the year?

AT57. Do you often wish the teacher would slow down until you understand what she is saying better?

ST58. Does your mother bring cookies, help at class parties, and do other things like the mothers of the other children in class?

D59. Since you started school, have you ever felt like crying?

ST60. Are the clothes you wear to school as nice as those most of the children wear?

D61. Do you sometimes dream about things you don't like to talk about?

SA62. Do you worry a lot _before_ you take a test?

SA63. Do you think you worry more about school than other children?

D64. When you get mad do you ever tell anyone else about it?

SA65. _After_ you have taken a test do you worry about how well you did on the test?

SA66. If you did very poorly when the teacher called on you, would you probalby feel like crying even though you would try not to cry?

D1. Do you sometimes have arguments with your mother and father?

D2. When someone scolds you does it make you feel badly?

L3. Do you ever worry about knowing your lessons?

SM4. Do you try to be one of the best students in your class?

SA5.. When the teacher asks you to get up in front of the class and read aloud, are you afraid that you are going to make some bad mistakes?

SA6. Do your knees shake when you are asked to recite in class?

SA7. Do you feel sick when you see a fight between your classmates?

SA8. Do you dislike acting in plays because you are afraid that other children will laugh at you?

SA9. Do you find it difficult to ask the teacher for help?

SA10. Do you feel embarrassed when you are asked to sing in front of others?

SA11. Do you sometimes have a fear of fainting in class?

SA12. When you are home and you are thinking about your reading lesson for the next day, do you worry that you will do poorly on the lesson?

D13. When you hurt somebody's feelings, does it make you feel badly?

SA14. Do you sometimes shake all over when you are asked to recite in class?

SA15. Are you afraid of being disliked by other children in class?

SM16. When the teacher fails to notice and comment on your work does it make you unhappy?

SA17. When you are in bed at night, do you sometimes worry about how you are going to do in class the next day?

D18. Does it bother you if the teacher chooses someone else instead of you to do something for her (or him)?

SM19. When the teacher gives an assignment do you get busy on it right away?

AT20. Does your teacher sometimes give you a lower grade than you think you deserve?

SM21. Is getting a paper back with a good mark on it the best thing that happens to you in school?

SM22. When someone misses school because of illness do you try to be the first one to help him catch up?

PTN23. Are your feelings easily hurt; or not easily hurt?

PTN24. Do you think you could do well at just a few things; or almost anything?

SM25. Do you hate to miss school because you don't like to get behind in your work?

SA26. Do you always feel uncomfortable when you do not know what is expected of you in class?

AT27. If you made a mistake while reciting would some children laugh at you?

SA28. Do you sometimes dream at night that you are in school and cannot answer the teacher's question?

AT29. Do you work hardest when you know that what you do will be compared with what other students in class do?

D30. Do you like to go on trips with your mother and father?

D31. When someone makes you mad, do you ever tell them about it?

PTN32. If people wanted you to do something you did not want to do would you get angry; or just go along?

SA33. Does your voice sometimes shake when you are asked to recite in class?

PTN34. Could you do better in your work; or are you doing as well as you should.

D35. Is it hard for you to tell someone you're scared?

ST36. Does the teacher in class seem to like you?

ST37. Are most of the children in class friendly to you?

AT38. Do you have a hard time keeping up with the other students in class?

PTN39. When mother calls you in the morning, do you find it hard to wake up; or do you just jump right up?

PTN40. Do your plans often not work; or do they work out well?

SM41. When children are upset and cry because they do not have their lesson do you feel sorry for them?

PTN42. Which story would you like better, how Indians make clothing; or one about killing Indians?

SM43. Do you get angry when you are working on something important in class and someone interrupts you?

PTN44. Would you rather read a book; or play ball?

SA45. If anything happens which tends to make you look foolish, do you tend to think about it for a long time afterwards?

SA46. Do you worry that you might forget your lines when you recite a poem in front of the class?

AT47. Do some of your friends think you are a sissy because you make good grades?

D48. Do you lose your temper sometimes?

PTN49. Would you rather collect stamps; or play football?

SA50. Do you dread choosing up sides to play games because you are usually one of the last ones chosen?

PTN51. If people push you in a bus, do you get mad; or just smile?

L52. Do you ever worry about something bad happening to someone you know?

SA53. When you are taking a hard test, do you forget some things you knew very well before you started taking the test?

SA54. Do you wish a lot of times that you didn't worry so much about tests?

PTN55. Would you rather be a tap dancer; or a soldier?

SA56. When you are taking a test, does the hand you write with shake a little?

SM57. If you are in a hurry to finish your lesson and are not sure how to spell a word do you usually stop and look it up in the dictionary?

L58. Have you ever been afraid of getting hurt?

ST59. Do you get along well with those children in class who are looked up to by the other children?

SM60. Do you generally do what your friends like to do even though sometimes you want to do something else?

SM61. Is it important to you that everybody in class like you?

PTN62. If a trick is played on you, do you get a little angry; or do you laugh?

AT63. Do the students who do poorly on the tests the teacher gives lose the approval of the teacher?

PTN64. When you are hurried do you just leave your clothes; or do you still put them away?

AT65. Do the children who are smart get privileges other children in class do not get?

L66. When you were younger, were you ever scared of anything?

SA1. When the teacher says that she is going to find out how much you have learned, do you get a funny feeling in your stomach?

D2. If you think someone doesn't like you, does it bother you?

PTN3. Would you rather listen to music; or ride a bicycle?

SM4. If you were elected to an office in class would you hurry home after school so you could tell your mother about it?

D5. Do you like to go to the beach in the summertime?

PTN6. When someone is slow does it bother you; or does it not bother you?

SM7. To get others to like you do you try to find nice things to say about them?

PTN8. In a play would you rather be a speed pilot; or a famous writer?

AT9. Do you get as much approval from the teacher in class as you would like to get?

D10. Are there some things you just don't like to talk about?

D11. When you've done something wrong, is it hard for you to say you're sorry?

PTN12. If someone has a new idea, do you wait a while to make sure; or do you say it is good?

SA13. Do you sometimes worry about being different from many of the children in your class?

SA14. Do you usually feel awkward meeting new students who have just come into the class?

PTN15. When you say, "I bet I'm right," are you, in the end, wrong most of the time; or right most of the time?

SA16. When the teacher says that she is going to find out how much you have learned, does your heart begin to beat faster?

D17. Are you sometimes afraid of getting into arguments?

PTN18. Would you rather draw pictures of birds; or hunt birds?

ST19. Do some children in class say things to hurt your feelings?

PTN20. If two children were fighting on the playground, would you go tell the teacher; or let them fight?

L21. Have you ever had a scary dream?

ST22. Does it seem like most of the children in class never pay any attention to you?

SA23. When the teacher says that she is going to give the class a test, do you get a nervous or funny feeling?

SM24. Before turning in school work do you always make a last minute check for mistakes?

SA25. Do you dislike reciting in class because you might make a mistake and others would laugh at you?

L26. Do you ever worry about what is going to happen?

AT27. Do you expect to do better school work in the future than you have in the past?

ST28. Do you get along well with the teacher in class?

D29. When one of your friends won't play with you, do you feel badly?

D30. Do you feel it's important to think about how you can get people to like you?

SM31. Would you like to represent your class in a contest between rooms even if it meant extra work for you?

AT32. Is it hard for you to have as good a report card as your parents expect you to have?

ST33. Do some children in class seem to get angry when you do better than they do?

SA34. Are you afraid other children will laugh at you when you show your work to them?

SA35. Are you frequently afraid you may make a fool of yourself?

SA36. Are you afraid of school tests?

SM37. When you have done well on something do you feel pleased with yourself even when no one else in class notices what you have done?

SM38. If a child is new in class and is having trouble making friends do you make a special effort to be friendly to him?

SA39. When the teacher says that she is going to give the class a test, do you become afraid that you will do poorly?

SA40. Do you worry a lot about your school work because you are afraid your parents might find out you are not doing as well as they expect you to do?

L41. Do you ever worry about what people think of you?

SA42. Do you feel nervous if the whole class watches you when you are making something?

SA43. Do you sometimes dream at night that other boys and girls in your class can do things you cannot do?

ST44. Do your classmates sometimes make fun of the way you look and talk?

PTN45. Would you rather talk with your teacher; or talk with a good friend?

SM46. Do you work with others every chance you get in class?

SA47. Do you feel nervous when others look at work you have done?

SM48. Do you waste time in class when you are supposed to be working

SA49. When the teacher is teaching you about reading, do you feel that other children in the class understand her better than you?

SA50. While you are on your way to school, do you sometimes worry that the teacher may give the class a test?

SM51. Do you do extra work for the teacher whenever you have the opportunity?

L52. Do you ever worry that you won't be able to do something that you want to do?

SA53. Are you often worried that you might be sick in class?

SM54. Do you like for the teacher to call on you a lot?

SA55. While you are taking a test do you usually think you are doing poorly?

SM56. Do you have ideas that you sometimes just cannot wait to tell the whole class about?

PTN57. Would you rather work with books in a library; or be a General in the Army?

SA58. When the teacher asks you to write on the blackboard in front of the class, does the hand you write with sometimes shake a little.

AT59. Do you get as much approval from other children in class as you would like to get?

PTN60. Does your mother buy your toys; or do you buy your own?

D61. Do you feel cross and grouchy sometimes?

PTN62. In your school work do you often forget; or do you feel sure you can remember things?

D63. Do you feel terrible if you break something which belongs to somebody else?

PTN64. When a small thing upsets you, do you get so mad you want to throw things; or can you keep calm?

SA65. When you recite in class do you often wonder what others are thinking of you?

PTN66. Do they say you shout at people when you get excited; or do they think you are patient?

NAME [| | | | | | | | | | | | | | | | | | | | | | | | | | | | |]

SCHOOL _____   B G   DATE _____

[| | | | | | | | |]

TEACHER _____

	yes	no
1	☐	☐
2	☐	☐
3	☐	☐

	mother's	own way
4	☐	☐

	yes	no
5	☐	☐
6	☐	☐

	speak angrily	wrong
7	☐	☐

	yes	no
8	☐	☐

	chase you	nice
9	☐	☐

	yes	no
10	☐	☐

	others do better	do things well
11	☐	☐

	yes	no
12	☐	☐

	stand around	run a lot
13	☐	☐

	yes	no
14	☐	☐
15	☐	☐
16	☐	☐
17	☐	☐

	stories	bears here
18	☐	☐

	yes	no
19	☐	☐
20	☐	☐
21	☐	☐

	keep quiet	join
22	☐	☐

	unkind	kind
23	☐	☐

	yes	no
24	☐	☐
25	☐	☐

	scare	laugh at them
26	☐	☐

	yes	no
27	☐	☐
28	☐	☐
29	☐	☐
30	☐	☐
31	☐	☐
32	☐	☐
33	☐	☐

NAME

SCHOOL _____ B G   DATE

TEACHER _____

	yes	no		do not smile	smile a great deal		yes	no
34	☐	☐	35	☐	☐	36	☐	☐

	frighten you	liked them		yes	no		yes	no
37	☐	☐	38	☐	☐	39	☐	☐

	yes	no		yes	no		yes	no
40	☐	☐	41	☐	☐	42	☐	☐

	yes	no		yes	no		yes	no
43	☐	☐	44	☐	☐	45	☐	☐

	someone else	you		make mistakes	few mistakes		yes	no
46	☐	☐	47	☐	☐	48	☐	☐

	yes	no		yes	no		yes	no
49	☐	☐	50	☐	☐	51	☐	☐

	yes	no		yes	no		yes	no
52	☐	☐	53	☐	☐	54	☐	☐

	yes	no		yes	no		yes	no
55	☐	☐	56	☐	☐	57	☐	☐

	yes	no		yes	no		yes	no
58	☐	☐	59	☐	☐	60	☐	☐

	yes	no		yes	no		yes	no
61	☐	☐	62	☐	☐	63	☐	☐

	yes	no		yes	no		yes	no
64	☐	☐	65	☐	☐	66	☐	☐

Form II

NAME ☐☐☐☐☐☐☐☐☐☐☐☐▨☐☐☐☐☐☐☐☐☐☐☐☐

SCHOOL _____ B G   DATE _____

☐☐☐☐☐☐☐☐

TEACHER _____

	yes	no		yes	no		yes	no
1	☐	☐	2	☐	☐	3	☐	☐
4	☐	☐	5	☐	☐	6	☐	☐
7	☐	☐	8	☐	☐	9	☐	☐
10	☐	☐	11	☐	☐	12	☐	☐
13	☐	☐	14	☐	☐	15	☐	☐
16	☐	☐	17	☐	☐	18	☐	☐
19	☐	☐	20	☐	☐	21	☐	☐

	yes	no		easily hurt	not easily hurt		a few things	almost anything
22	☐	☐	23	☐	☐	24	☐	☐

	yes	no		yes	no		yes	no
25	☐	☐	26	☐	☐	27	☐	☐
28	☐	☐	29	☐	☐	30	☐	☐

	yes	no		get angry	go along		yes	no
31	☐	☐	32	☐	☐	33	☐	☐

NAME [dashed box grid]

SCHOOL _____ B G   DATE [dashed box grid]

TEACHER _____

	do better	as well as should		yes	no		yes	no
34	☐	☐	35	☐	☐	36	☐	☐

	yes	no		yes	no		hard to wake up	jump right up
37	☐	☐	38	☐	☐	39	☐	☐

	not work	work out well		yes	no		make clothing	killing
40	☐	☐	41	☐	☐	42	☐	☐

	yes	no		read a book	play ball		yes	no
43	☐	☐	44	☐	☐	45	☐	☐

	yes	no		yes	no		yes	no
46	☐	☐	47	☐	☐	48	☐	☐

	stamps	football		yes	no		get mad	just smile
49	☐	☐	50	☐	☐	51	☐	☐

	yes	no		yes	no		yes	no
52	☐	☐	53	☐	☐	54	☐	☐

	tap dancer	soldier		yes	no		yes	no
55	☐	☐	56	☐	☐	57	☐	☐

	yes	no		yes	no		yes	no
58	☐	☐	59	☐	☐	60	☐	☐

	yes	no		get angry	laugh		yes	no
61	☐	☐	62	☐	☐	63	☐	☐

	leave them	put clothes away		yes	no		yes	no
64	☐	☐	65	☐	☐	66	☐	☐

Form III

NAEE ⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚▨⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚

SCHOOL _____ B G   DATE _____

⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚

TEACHER _____

	yes	no		yes	no		music	bicycle
1	☐	☐	2	☐	☐	3	☐	☐

	yes	no		yes	no		bother you	not bother you
4	☐	☐	5	☐	☐	6	☐	☐

	yes	no		speed pilot	writer		yes	no
7	☐	☐	8	☐	☐	9	☐	☐

	yes	no		yes	no		make sure	say it is good
10	☐	☐	11	☐	☐	12	☐	☐

	yes	no		yes	no		wrong	right
13	☐	☐	14	☐	☐	15	☐	☐

	yes	no		yes	no		draw pictures	hunt
16	☐	☐	17	☐	☐	18	☐	☐

	yes	no		tell the teacher	let them		yes	no
19	☐	☐	20	☐	☐	21	☐	☐

	yes	no		yes	no		yes	no
22	☐	☐	23	☐	☐	24	☐	☐
25	☐	☐	26	☐	☐	27	☐	☐
28	☐	☐	29	☐	☐	30	☐	☐
31	☐	☐	32	☐	☐	33	☐	☐

NAME: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐▨☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

SCHOOL _____ B G   DATE _____
                                       ☐☐☐☐☐☐☐☐☐
TEACHER _____

	yes	no		yes	no		yes	no
34	☐	☐	35	☐	☐	36	☐	☐
37	☐	☐	38	☐	☐	39	☐	☐
40	☐	☐	41	☐	☐	42	☐	☐

	yes	no		yes	no		teacher	good friend
43	☐	☐	44	☐	☐	45	☐	☐

	yes	no		yes	no		yes	no
46	☐	☐	47	☐	☐	48	☐	☐
49	☐	☐	50	☐	☐	51	☐	☐
52	☐	☐	53	☐	☐	54	☐	☐

	yes	no		yes	no		work with books	be a General
55	☐	☐	56	☐	☐	57	☐	☐

	yes	no		yes	no		mother	buy own
58	☐	☐	59	☐	☐	60	☐	☐

	yes	no		forget	can remember		yes	no
61	☐	☐	62	☐	☐	63	☐	☐

	throw things	keep calm		yes	no		shout at people	are patient
64	☐	☐	65	☐	☐	66	☐	☐

School_____   Grade_____

Teacher_____   Date_____

       On the pages which follow you will be asked to indicate how
your pupils compare with each other in different classroom behaviors.
For each quality, sort the slips with the children's names into five
groups, from those most like this quality, to those least like
this quality, as indicated in the example of a class given on the
next page. Notice that the middle group will have the most names
in it, and the two extreme groups will have the fewest names in them.
The extreme groups should have approximately 10% of the class
each; the next two groups should have about 20% of the class in
each one; and the middle group should have approximately 40%.
After the pupils have been sorted into these five groups, record
the numbers from the slips in the appropriate sets of boxes, putting
one number to a box. The number of boxes provided with solid lines
is appropriate for a TYPICAL CLASS OF 30 PUPILS; if there are more
than 30 pupils (as will often be the case), or if the class is not
typical, you may make use of the boxes with broken lines as well.
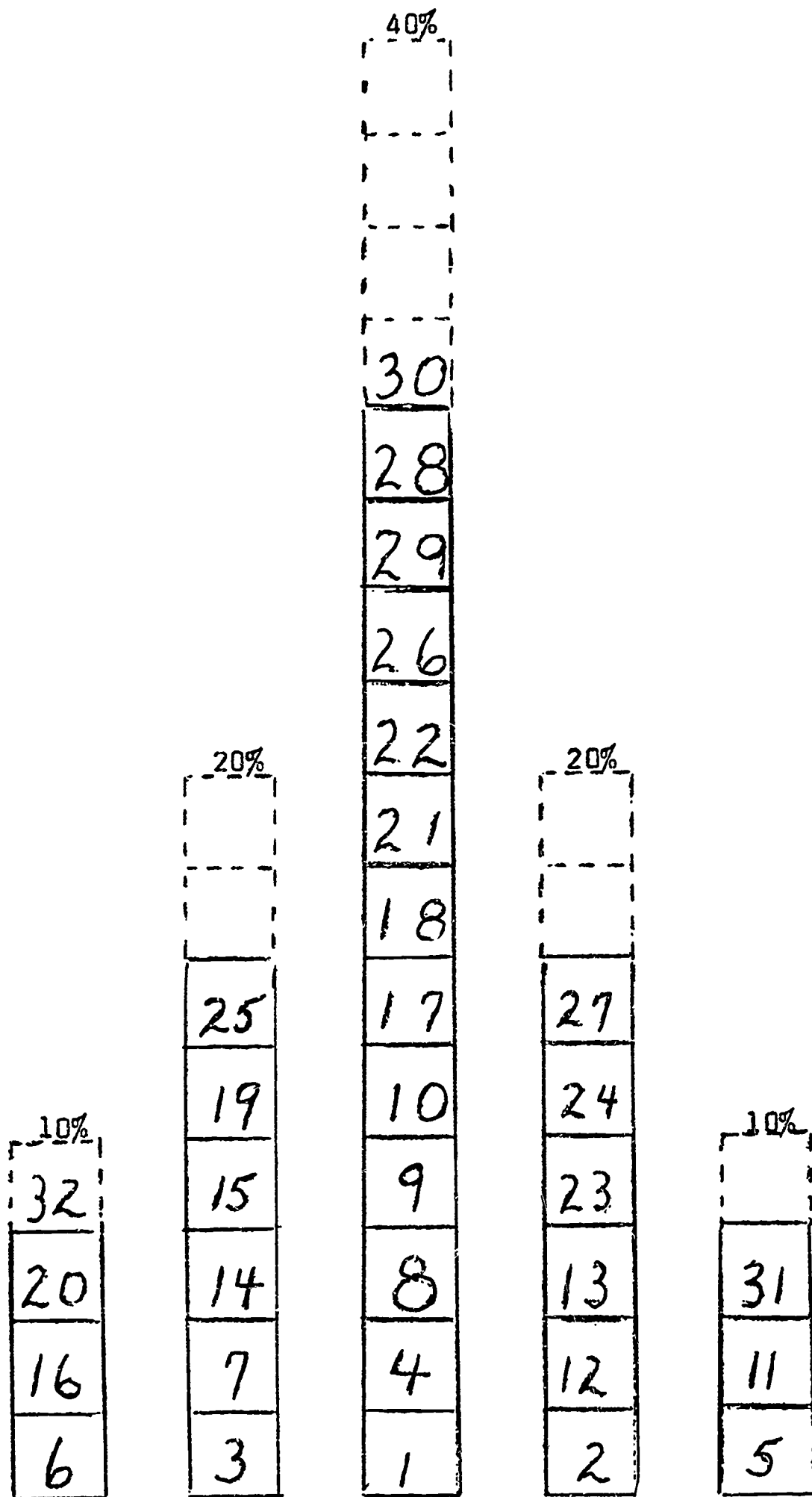
The figure shows a quasi-normal (Q-sort) distribution chart with columns of numbered cards arranged beneath percentage markers.

40% column (center, top to bottom): 30, 28, 29, 26, 22, 21, 18, 17, 10, 9, 8, 4, 1

20% columns (left and right of center):
- Left 20%: 25, 19, 15, 14, 7, 3
- Right 20%: 27, 24, 23, 13, 12, 2

10% columns (outer left and right):
- Left 10%: 32, 20, 16, 6
- Right 10%: 31, 11, 5

Least like this   Most like this

Quality on which children are compared:

STRIKINGLY ATTENTIVE TO TASKS

40%

20%   20%

10%   10%
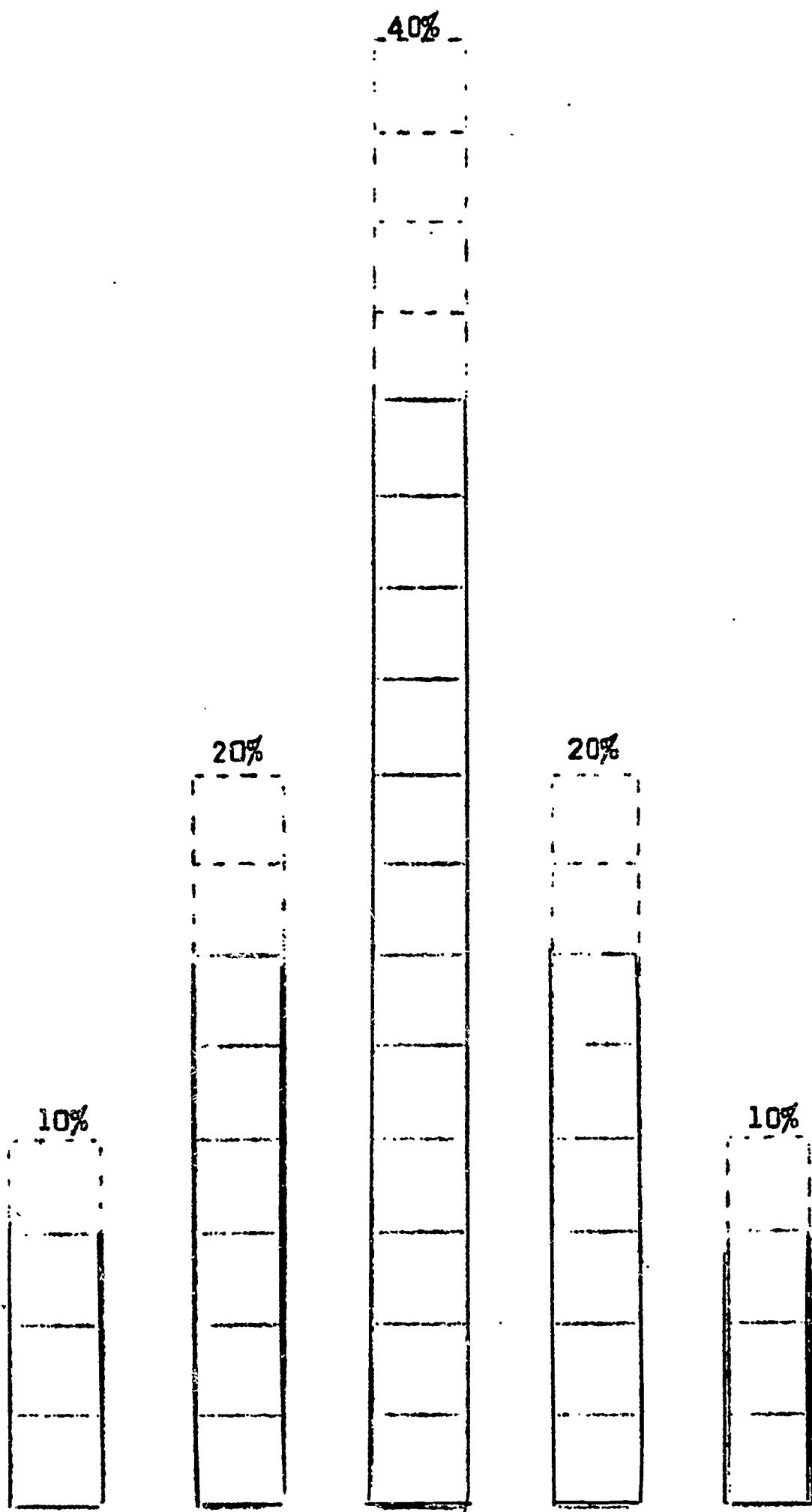
Least like this   Most like this

Quality on which children are compared:

SHOWS EVIDENCE OF STRONG PLEASURE IN GOOD WORK
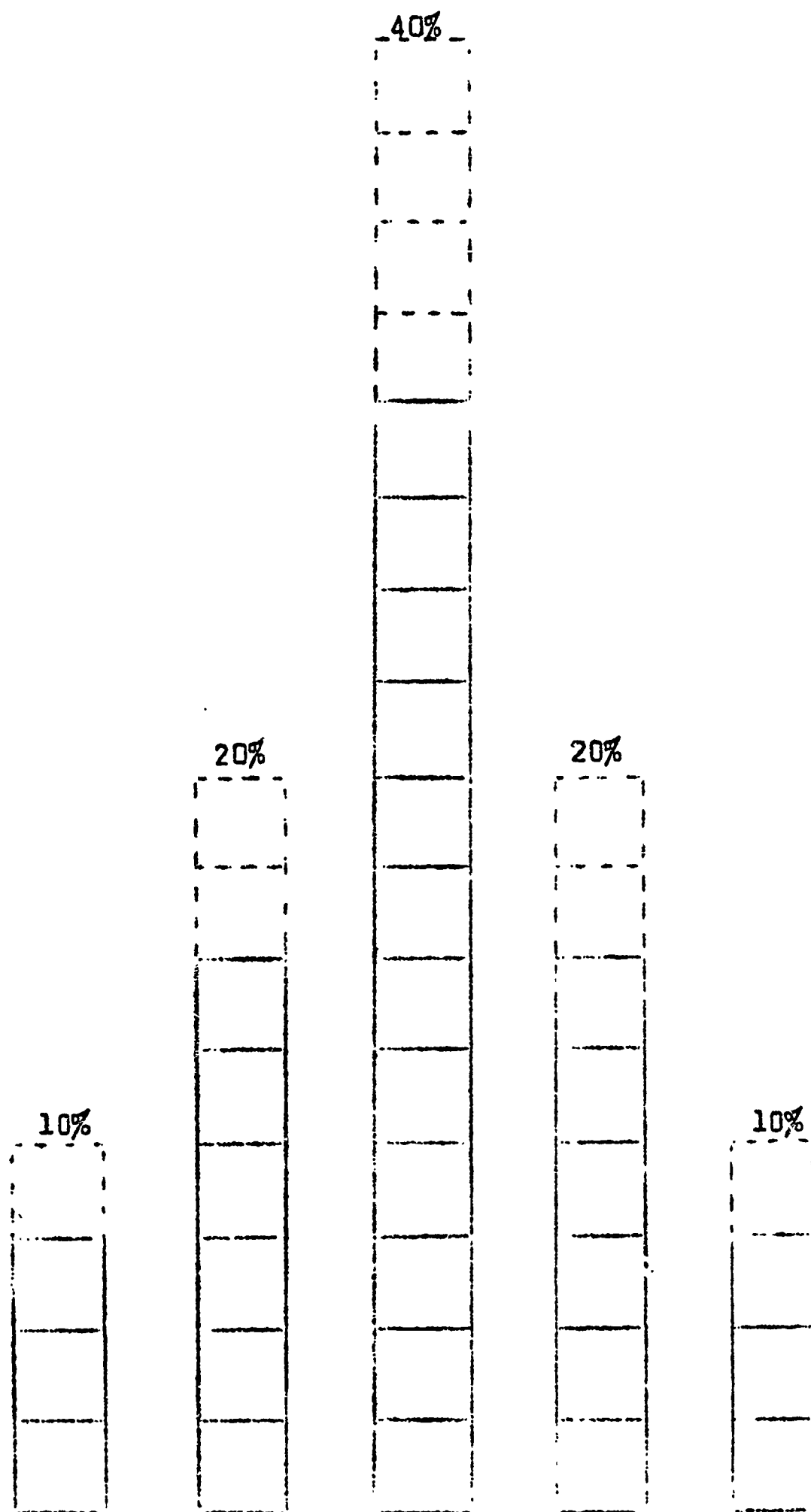
Least like this   Most like this

Quality on which children are compared:

ENJOYS WORKING WITH OTHERS AND PARTICIPATING ACTIVELY IN GROUPS
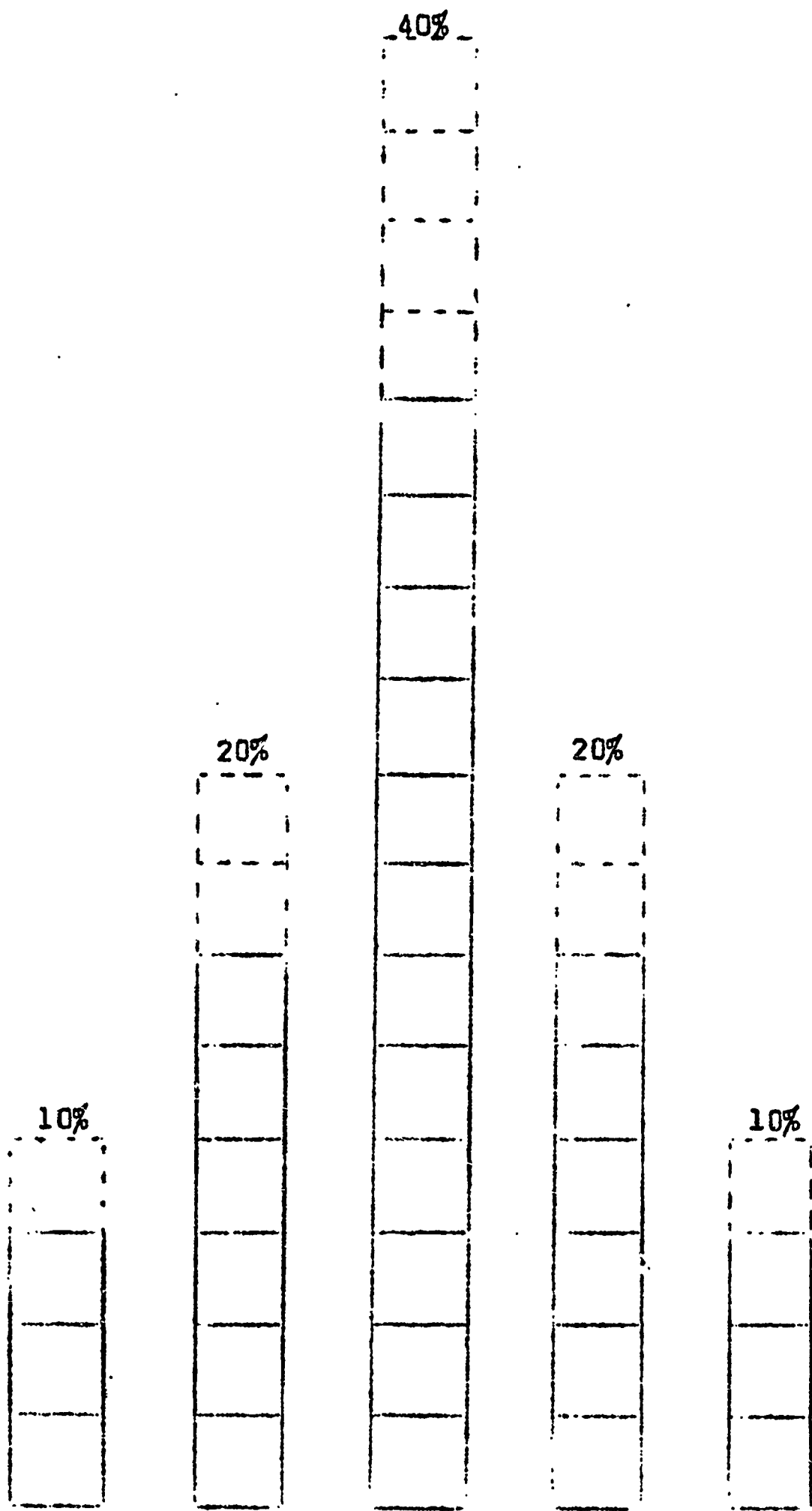
Least like this   Most like this

Quality on which children are compared:

CONCERNED WITH LESSONS AND CAREFUL ABOUT WORK

40%

20%   20%

10%   10%
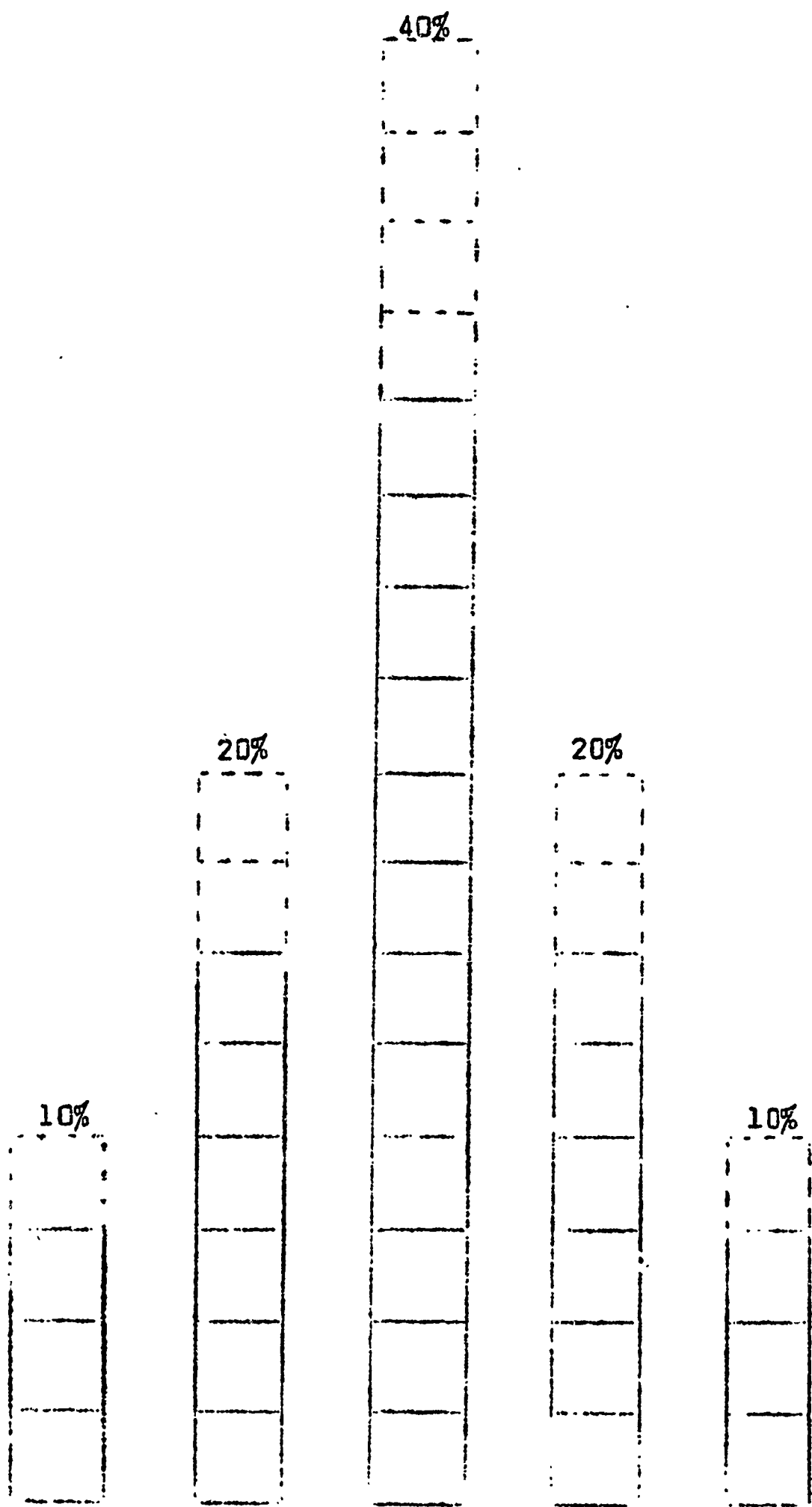
Least like this   Most like this

Quality on which children are compared:

SEEKS SOCIAL RECOGNITION AND LIKES OFFICES AND LEADERSHIP ROLES
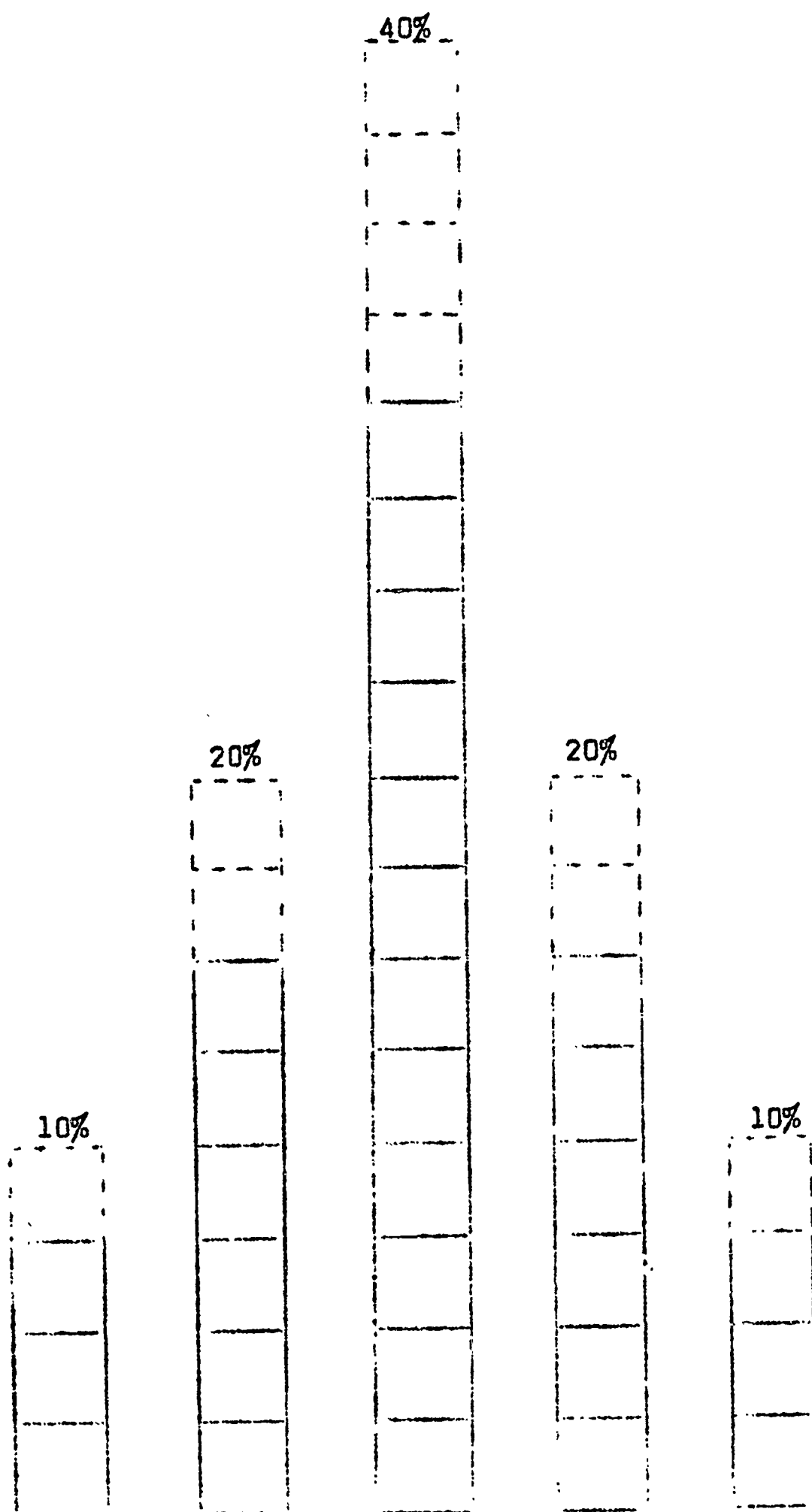
Least like this   Most like this

Quality on which children are compared:

EAGER, ENERGETIC, AND FREQUENTLY VOLUNTEERS

40%

20%　　　　20%

10%　　　　　　　　　　　　10%
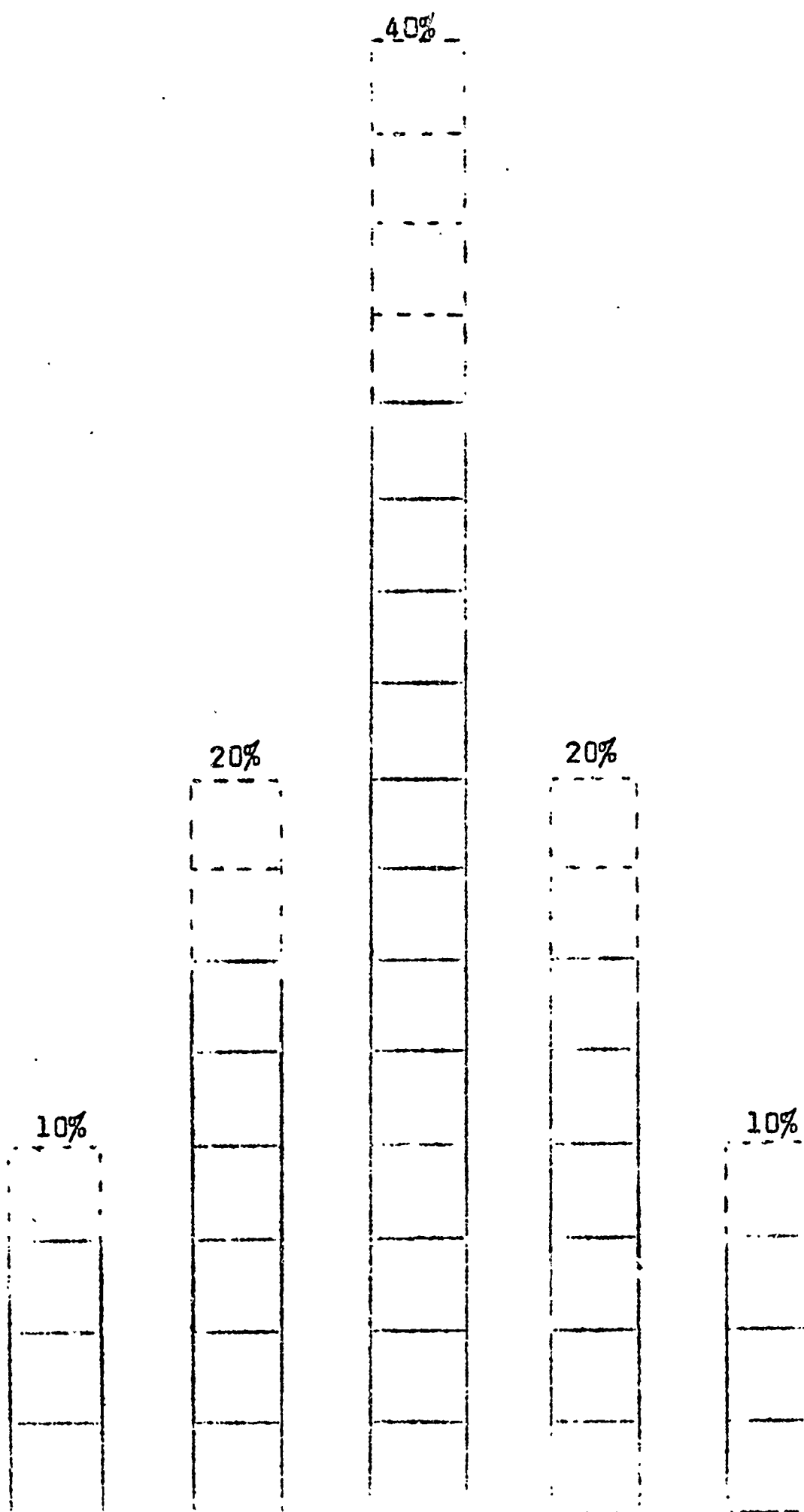
Least like this　　　　　　　　Most like this

Quality on which children are compared:

FREQUENTLY HELPFUL AND SYMPATHETIC TO OTHERS WITH PROBLEMS
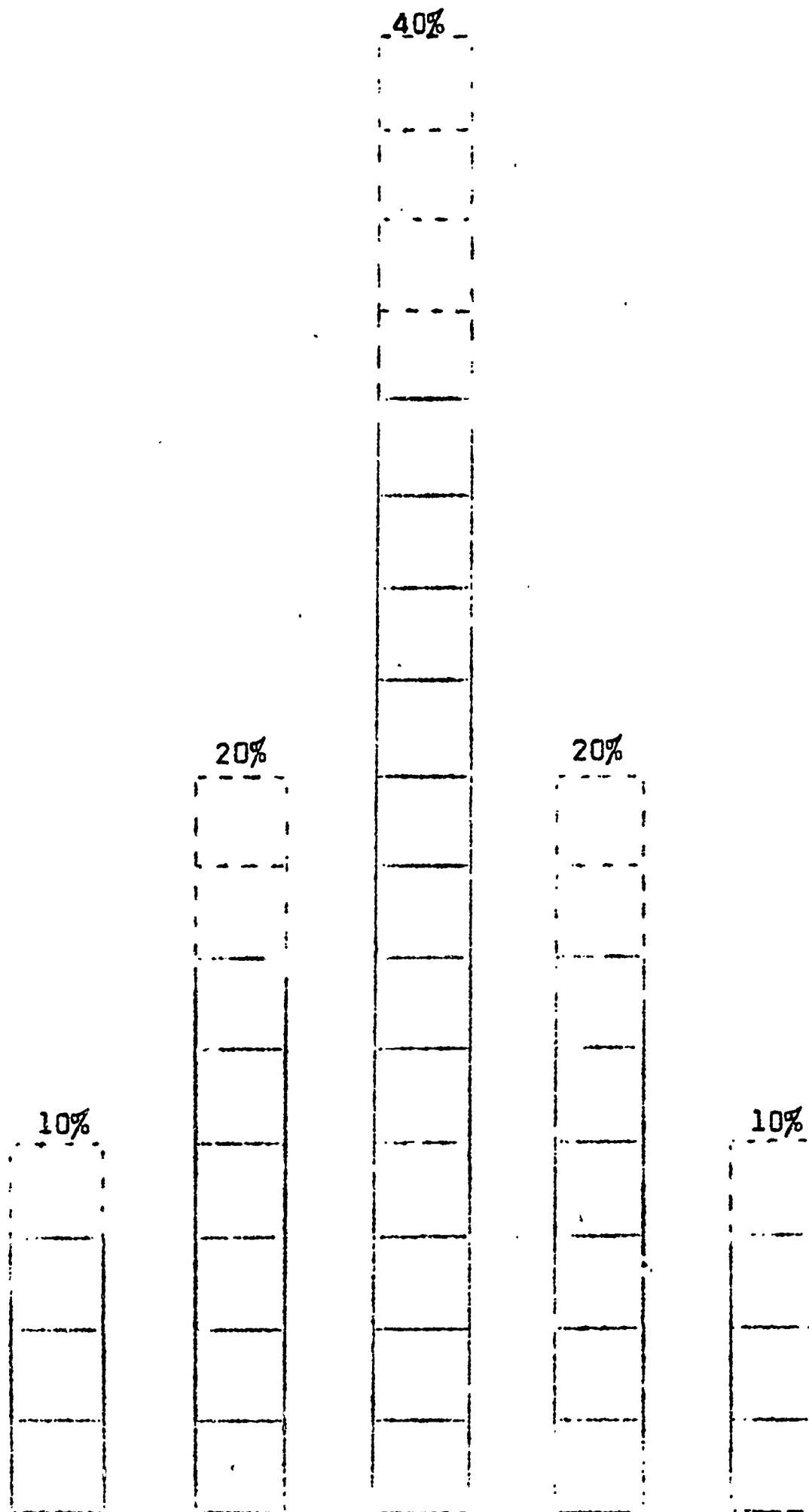
                                    40%

                    20%   20%

        10%   10%

Least like this   Most like this

Quality on which children are compared:

STRIKINGLY ATTENTIVE TO TASKS

40%

20%   20%

10%   10%
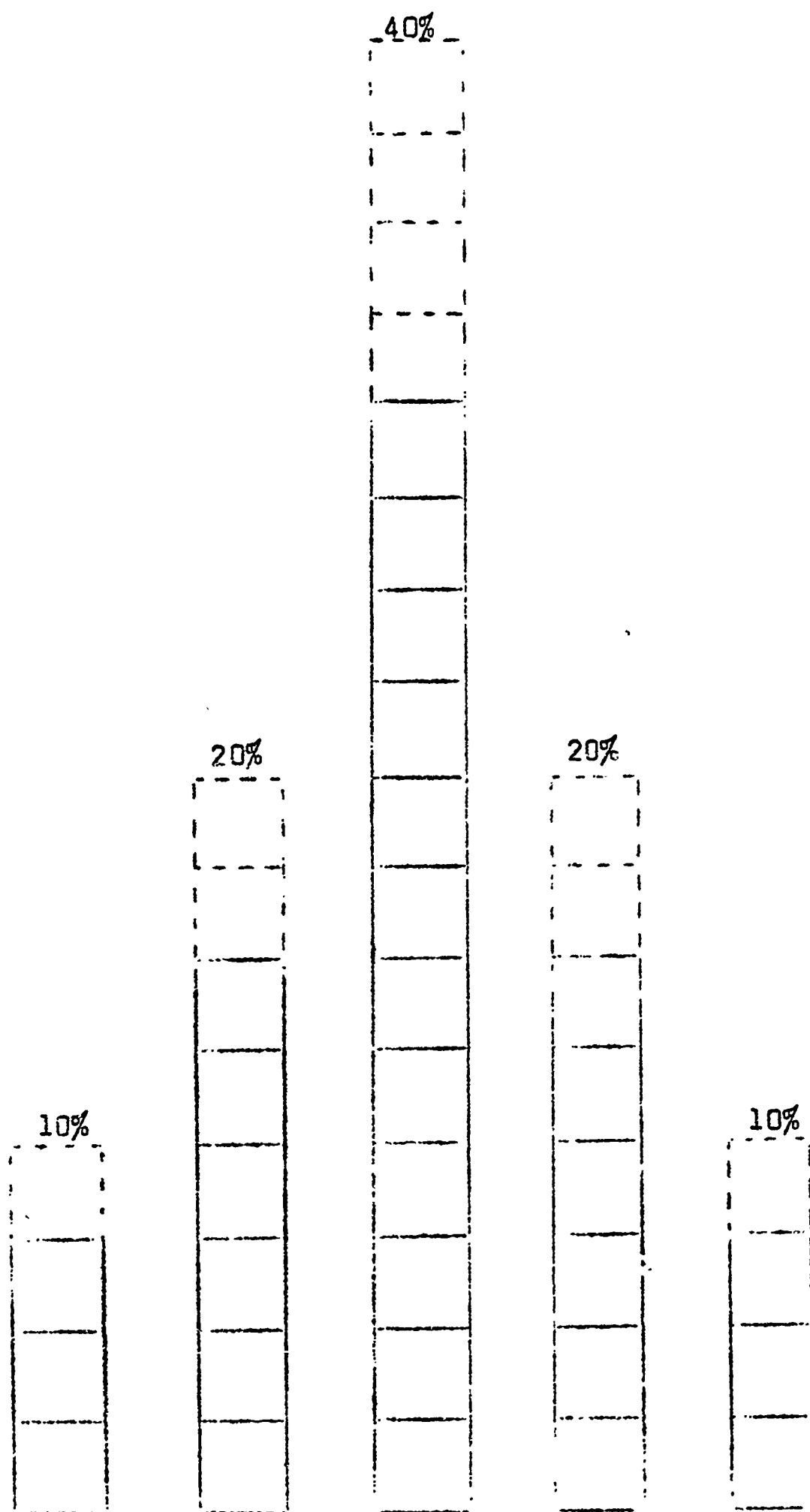
Least like this   Most like this

Quality on which children are compared:

TRIES HARD TO MAKE FRIENDS AND TO BE ACCEPTED

School_____   Grade_____

Teacher_____   Date_____

Following are several thumbnail sketches of hypothetical
children. After reading each one, you are asked whether
the sketch reminds you of any children in your class, boys or
girls. It is not expected that every statement in a sketch
will fit a particular child. Rather, the statements are intend-
ed to give a general impression of a kind of child. If this
general impression reminds you of a child in your class, you
are asked to write this child's name in one of the three cate-
gories below the sketch. If all of the statements fit the
child, list his name under "This is exactly like." If the
majority of the statements fit the child, list his name under
"This description is quite a bit like." If a few of the state-
ments fit the child list his name under "There is a slight
resemblance to." In some cases you may have several children
to list; in others none will occur to you.

1. This child seems to be antagonistic to adults in general,
although there isn't any open rebellion to the teachers.
It seems that the greater the stress on success in reading,
the more he seems to resist learning to read.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

2. This child is sensitive to criticism. He is unable to
react constructively to criticism; and he devotes much effort
to prove his solutions to problems are the correct ones.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

3. This child seems easily distracted, unusually sensitive to
noises, intrusions, and competing activities. His attention
span is unusually short, especially when engaged in a task of
moderate or great difficulty. When required to "stay put"
for a period of time he is likely to manifest some kind of
compulsive body activity (foot-tapping, continual shifting in
his seat, standing beside his seat, scratching, pencil-tapping,
etc).

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

4. This child is seclusive. He hesitates to join informal groups in the classroom and on the playground; and he crosses the street, etc., to avoid meeting his teachers, adults, and other children.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

5. This child has a reputation for treating animals unkindly. At school he is known as something of a bully, and playground supervisors have learned to be on the alert so that he doesn't mistreat younger, smaller children. He is likely to laugh when he sees someone hurt himself, or when another child is scolded by the teacher.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

6. This child over-responds to flattery. He is easily led by those who praise him; and because he feels a great need to prove his adequacy, anyone who supports it gets a warm reception.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

7. This child is sometimes observed engaging in bizarre behavior; he is known to respond to a question or class discussion with strange statements that cause the other children to laugh, but which have little logical connection with the topic.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

8. This child has a spotty performance record, in that while achievement in most areas is average or better, achievement in one or more specific areas is unaccountably low. It almost seems that he "blanks out", or has a "mental block" for some things.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

9. This child has ideas of reference. He applies all criticism to himself; he thinks his teacher is always watching him; and he often overhears comments which he thinks are about him.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

10. This child seems to be of average or above average intelligence, but has had trouble learning to read, hence does less well on any test involving reading. There is a report that this child experienced some kind of unpleasant and painful, experience during the early efforts to learn to read, and may have developed a negative attitude toward reading.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

11. This child has a poor reaction to competition. He enters competitive activities only to win, avoids competition in many instances, and is not a good loser.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

12. This child tends to have strong reactions to school situations. He seems to derive great pleasure from humorous situations in the classroom, and may participate actively in some activities. However, his reaction to rebuke or correction may be equally strong, even violent. Possibly he needs acceptance and approval so desperately that apparent disapproval sparks a hopeless, frustrated rage.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

13. This child is derogatory of others. He frequently points up the faults of others, and minimizes his own shortcomings and inadequacies.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

14. This child generally seems sad. Even when he does laugh and seems to be having a good time, his mood quickly changes and he becomes serious. He gives the impression of being basically unhappy.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

15. This child has unrealistically high expectations for himself, more than could be expected from past performance or scores on aptitude tests. He responds to test scores and report card grades with remarks similar to "I can do better."

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

16. This child, despite above average intelligence, seems to have little curiosity about life. He understands what he hears and reads, and can explain what he has learned; however, there is little motivation to seek out information for himself. He tends to accept at face value what he is told in class. He shows little promise for independent study.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

17. This child generally does not get along very well with children his own age or in his own class. He usually plays with children who are younger and in lower grades, and the games he plays are those appropriate for younger children.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

18. This child is the kind whose behavior runs in cycles. For certain periods his behavior is relatively normal. Then follow several days when he seems to go out of his way to misbehave, or to try to push the teacher to the limit of tolerance, seemingly in an effort to gain attention, both the teacher's and the class'.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

19.   There is a general fearfulness in this child. He is overly
concerned about knowing what material will be covered on a test;
he asks endless questions about details of after-school field trips.
There is a marked apprehensiveness about anything in the near or
remote future.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

20.   This child is noticeably absentminded, and has been observed
to forget not only distasteful responsibilities, but also pleasant
activities. He is frequently in need of pencil or note-paper,
lunch money, books left at home. His friends put up with him in
spite of his habitual tardiness. He often is indecisive, unable
to choose among several possibilities, can't decide which assign-
ment to start first.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

21.   This child is exceptionally sensitive to evaluation and
criticism. His teachers have learned to treat this child very
carefully to avoid tears, and to phrase criticisms of themes and
classroom projects in terms of improving an already good product.
He seems to need an abundance of support and approval.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

22.   This child frequently comes to the teacher to tell news from
home, relate incidents occurring during recess, ask superficial
questions about schoolwork, tattle on other students. Apparently
he enjoys thinking he has a special relationship with the teacher,
and is more comfortable with the teacher than with the other
pupils.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

23.   This child gives the impression of always having his guard up,
so that it's difficult to know how he feels and what he's thinking.
He is unlikely to share secrets with anyone, especially an adult.
He rarely expresses either pleasure or displeasure about what
happens to him.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

24. This child is often observed day dreaming, especially when he should be engaged in some possibly disagreeable task, such as writing a theme, taking an examination, doing assignments. Reports from other teachers and from parents indicate this is typical of his behavior in other situations. Perhaps he even has been observed to have fantasies, in which he imagines ha has human or animal playmates, or that he is someone else in another circumstance (adventurer, space traveler, star athlete, oriental ruler, etc).

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

25. This child seems to go out of his way to rationalize poor performance by such devices as stating, prior to a test, that he didn't have time to study; by saying afterwards that he had a headache during the test; by saying that spelling bees are silly, and deliberately missing the first word; etc.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

26. FOR BOYS ONLY
This boy is considered a sissy by many of the children. He tends to appear effeminate in his mannerisms and interests. On the playground he is inclined to avoid sports involving bodily contact, and is observed teasing or talking to the girls. In an argument he would rarely stoop to fighting even when severely provoked, preferring to talk his way out of it or venting his feelings through verbal aggression. He seems to consider school work a bore or excessively difficult, and seems to shrink from any situation involving competition.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

27. FOR GIRLS ONLY
This girl is ultra-feminine; non-aggressive, delicate, inclined to imitate the manners and behavior of adult women, although not rebellious over her role as a child. She appears to consider school activities and academic learning as competitive activities more suitable for boys.

This sounds exactly like:	This description is quite a bit like:	There is a slight resemblance to:

Form 1

School _____

Teacher _____

Grade _____

Date _____

On each page of the accompanying booklet there is a single word or phrase which might describe, or remind you of, one or more of the children in your class. Read them one at a time, then write on the same page the name of the FIRST ONE OR TWO CHILDREN you think of (children presently in your class). Do not worry

Cheating

if, on second thought, the connection seems inappropriate; i is your first impression that is of interest. Try not to look ahead to anticipate what words will occur, and do not take much time thinking of a child. If no name occurs to you, go on to the next page. It is expected that some names will occur two or more times, and that some of your school

Cruelty, Bullying

children will not be named at all. REMEMBER, IT IS YOUR IMMEDIATE IMPRESSION THAT COUNTS.

Daydreaming   Carelessness In Work

Easily Discouraged

Destroying School Materials

Fearfulness

Disobedience

Impertinence, Defiance

Disorderliness In Class

Domineering

Impudence, Rudeness

Inattention   Laziness

Inquisitiveness   Nervousness

Interrupting   Overcritical Of Others

Lack Of Interest In Work   Physical Coward

Sensitiveness   Quarrelsomeness

Shyness   Resentfulness

Steeling   Restlessness

Stubbornness
                                                 Selfishness

Suggestible   Sullenness

Suspiciousness   Tardiness

Tattling   Temper Tantrums

Thoughtlessness   Truancy

Unhappy, Depressed   Unreliableness

Unsocial, Withdrawing   Untruthfulness

Form 2

School _____

Teacher_____

Grade _____

Date _____

On each page of the ac-
ccmpanying booklet there are one
or more phrases which might de-
scribe, or remind you of, child-
ren in your class. Read them one
at a time, then write on the same
page the name of the FIRST ONE OR
TWO CHILDREN you think of (child-
ren presently in your class).
Do not worry if, on second thought

the connection seems inappro-
priate; it is your first impress-
ion that is of interest. Try not
to look ahead to anticipate what
words will occur, and do not take
much time thinking of a child.
If no name occurs to you, go on
to the next page. It is expected
that some names will occur two or
more times, and that some of your
children will not be named at all.
REMEMBER, IT IS YOUR IMMEDIATE
IMPRESSION THAT COUNTS.

Engages in noisy behavior,
aggressive play, fighting,
and teasing

Is overly good and
unselfish

Relations with the teacher
dominated by the desire for
revenge

Makes excuses for failures,
and justifies his behavior

Uses charm to attract
attention

Clings to teacher and seeks
to be near her and hold her
hand

Has frequent stomach upsets,
headaches, and other physical
disorders

Uses real or imagined in-
feriorities as an excuse for
not really trying

Exhibits facial and body
mannerisms, consistent gulping
and hissing

Seeks to attract attention
through success

Always obeys instructions
completely, is scrupulously
methodical in every activity

Is a compulsive talker

Acts as if the teacher does no
exist, is sometimes oblivious
what happens in class

Habitually pulls his hair,
picks at his nose, pulls his
ears, bites his nails

Dreads going t school

Engages in frequent vocal
defiance

Is excessively orderly and con-
scientious, uses a new sheet of
paper every time an error is
made (rather than have erasures)

Fights with little provocation

Stubbornly resists the will an
authority of the teacher

Lies at slightest opportunity

Exhibits righteousness,
snobbishness

Uses laziness as a means
of attracting attention

Shows jealousy, hatred

Is sad and apathetic

Is overly serious-minded
unresponsive to fun-provoking
situations

Attracts attention by being
a nuisance

Lacks spontaneity, answers
questions in dull-voiced mono-
syllables

Is accident prone

Provokes hostility from
peers and teacher

Constantly challenges and
opposes the leadership of
the teacher

Always manages to get caught
for his misbehavior

Exhibits constant movement of
fingers or hands, persistent
perspiring of parts of body

FORM B

Name_____

Teacher_____

School_____

Grade_____

If you could select a boy in this class to sit by, whom would you pick?

_____

Page 3

Suppose that the teacher picked the boy to sit by you, if there is any boy you hope she would not select to sit by you, write his name here.

_____

Page 4

If you could select a boy in this class to play with, whom would you pick?

_____

Page 5

Suppose that the teacher picked the boy to play with you, if there is any boy you hope she would not select to play with you, write his name here.

_____

Page 6

If you could select a boy in this class to work with you on a school project, whom would you pick?

_____

Page 7

Suppose that the teacher picked the boy to work with you on the project, if there is any boy you hope she would not select to work with you, write his name here.

_____

Page 8

If you could select a boy in this class to be the leader, whom would you pick?

_____

Page 9

Suppose that the teacher picked the boy to be the class leader, if there is any boy you hope she would not select to be the class leader, write his name here.

_____

Page 10

If you could select a boy in this class to take with you to the movie on your birthday, whom would you pick?

_____

Page 11

Suppose that your mother picked the boy for you to take to the movie on your birthday, if there is any boy you hope she would not select to go with you, write his name here.

_____

Name_____

Teacher_____

School_____

Grade_____

Page 2

If you could select a girl in
this class to sit by, whom would
you pick?

_____

Page 3

Suppose that the teacher picked the girl
to sit by you, if there is any girl you
hope she would not select to sit by you,
write her name here.

— _____

Page 4

If you could select a girl in this
class to play with, whom would you
pick?

_____

Page 5

Suppose that the teacher picked the girl
to play with you, if there is any girl
you hope she would not select to play
with you write her name here.

_____

Page 6

If you could select a girl in this
class to work with you on a school
project, whom would you pick?

_____

Page 7

Suppose that the teacher picked the girl
to work with you on the project, if there
is any girl you hope she would not select
to work with you, write her name here.

_____

Page 8

If you could select a girl in this
class to be the leader, whom would
you pick?

_____

Page 9

Suppose that the teacher picked the girl
to be the class leader, if there is any
girl you hope she would not select to be
the class leader, write her name here.

_____

Page 10

If you could select a girl in
this class to take with you to the
movie on your birthday, whom
would you pick?

_____

Page 11

Suppose that your mother picked the girl
for you to take to the movie on your
birthday, if there is any girl you hope
she would not select to go with you, write
her name here.

_____

Pupil Perception Test

Sample: The teacher shows the child how to draw the cowboy.
     Do you think the child is a girl or a boy?
     Do you think the teacher is a man or a woman?

Sample: The teacher is cranky when the child wiggles in the chair.
     Do you think the child is a boy or a girl?
     Do you think the teacher is a woman or a man?

Sample: The teacher likes to read a story to the child.
     Do you think the child is a girl or a boy?
     Do you think the teacher is a man or a woman?

1. The teacher is sorry that the child has not minded.
     Do you think the child is a girl or a boy?
     Do you think the teacher is a man or a woman?

2. The teacher is scolding the child for misbehaving on the school grounds.
     Do you think the child is a boy or a girl?
     Do you think the teacher is a woman or a man?

3. The teacher is helping the child to find a place to sit down.
     Do you think the child is a girl or a boy?
     Do you think the teacher is a man or a woman?

4. The child is telling the teacher about being unhappy in school.
     Do you think the child is a boy or a girl?
     Do you think the teacher is a woman or a man?

5. The child is whispering to the teacher about something that someone has done.
     Do you think the child is a girl or a boy?
     Do you think the teacher is a man or a woman?

6. The child is asking the teacher how to hold the baseball bat.
     Do you think the child is a boy or a girl?
     Do you think the teacher is a woman or a man?

7. The child is promising the teacher to behave so the teacher will not send a
    bad report home.
     Do you think the child is a girl or a boy?
     Do you think the teacher is a man or a woman?

8. The child is inviting the teacher to attend a birthday party.
     Do you think the child is a boy or a girl?
     Do you think the teacher is a woman or a man?

9. The child is asking the teacher for help with a school problem.
     Do you think the child is a girl or a boy?
     Do you think the teacher is a man or a woman?

10. The teacher is questioning the child about someone who was hurt on the way
    to school.
     Do you think the child is a boy or a girl?
     Do you think the teacher is a woman or a man?

11. The teacher is telling the child to stop sassing back.
    Do you think the child is a girl or a boy?
    Do you think the teacher is a man or a woman?

12. The teacher is breaking up a fight between the child and someone else.
    Do you think the child is a boy or a girl?
    Do you think the teacher is a woman or a man?

13. The teacher grabs the child who passed something in class.
    Do you think the child is a girl or a boy?
    Do you think the teacher is a man or a woman?

14. The teacher yells excitedly at the child who is looking at someone else's test answers.
    Do you think the child is a boy or a girl?
    Do you think the teacher is a woman or a man?

15. The teacher praises the child for doing a nice job.
    Do you think the child is a girl or a boy?
    Do you think the teacher is a man or a woman?

16. The teacher shouts at the child who is pushing.
    Do you think the child is a boy or a girl?
    Do you think the teacher is a woman or a man?

17. The teacher frowns at the child who has not finished the assigned work.
    Do you think the child is a girl or a boy?
    Do you think the teacher is a man or a woman?

18. The teacher paddles the child who said something naughty.
    Do you think the child is a boy or a girl?
    Do you think the teacher is a woman or a man?

19. The teacher laughs when the child tells a funny story.
    Do you think the child is a girl or a boy?
    Do you think the teacher is a man or a woman?

20. The teacher grabs and shakes the child who told the lie.
    Do you think the child is a boy or a girl?
    Do you think the teacher is a woman or a man?

21. The parent is sorry that the child has not minded.
    Do you think the child is a girl or a boy?
    Do you think the parent is a father or a mother?

22. The parent is scolding the child for misbehaving on the school grounds.
    Do you think the child is a boy or a girl?
    Do you think the parent is a mother or a father?

23. The parent is helping the child to find a place to sit down.
    Do you think the child is a girl or a boy?
    Do you think the parent is a father or a mother?

24. The child is telling the parent about being unhappy in school.
   Do you think the child is a boy or a girl?
   Do you think the parent is a mother or a father?

25. The child is whispering to the parent about something that someone has done.
   Do you think the child is a girl or a boy?
   Do you think the parent is a father or a mother?

26. The child is asking the parent how to hold the baseball bat.
   Do you think the child is a boy or a girl?
   Do you think the parent is a mother or a father?

27. The child is promising the parent to behave so the teacher will not send a
   bad report home.
   Do you think the child is a girl or a boy?
   Do you think the parent is a father or a mother?

28. The child is inviting the parent to attend a birthday party.
   Do you think the child is a boy or a girl?
   Do you think the parent is a mother or a father?

29. The child is asking the parent for help with a school problem.
   Do you think the child is a girl or a boy?
   Do you think the parent is a father or a mother?

30. The parent is questioning the child about someone who was hurt on the way
   to school.
   Do you think the child is a boy or a girl?
   Do you think the parent is a mother or a father?

31. The parent is telling the child to stop sassing back.
   Do you think the child is a girl or a boy?
   Do you think the parent is a father or a mother?

32. The parent is breaking up a fight between the child and someone else.
   Do you think the child is a boy or a girl?
   Do you think the parent is a mother or a father?

33. The parent grabs the child after hearing that the child passed something in
   class.
   Do you think the child is a girl or a boy?
   Do you think the parent is a father or a mother?

34. The parent yells excitedly at the child after hearing that the child was
   looking at someone else's test answers.
   Do you think the child is a boy or a girl?
   Do you think the parent is a mother or a father?

35. The parent praises the child for doing a nice job.
   Do you think the child is a girl or a boy?
   Do you think the parent is a father or a mother?

36. The parent shouts at the child who is pushing.
       Do you think the child is a boy or a girl?
       Do you think the parent is a mother or a father?

37. The parent frowns at the child who has not finished the assigned work.
       Do you think the child is a girl or a boy?
       Do you think the parent is a father or a mother?

38. The parent paddles the child who said something naughty.
       Do you think the child is a boy or a girl?
       Do you think the parent is a mother or a father?

39. The parent laughs when the child tells a funny story.
       Do you think the child is a girl or a boy?
       Do you think the parent is a father or a mother?

40. The parent grabs and shakes the child who told the lie.
       Do you think the child is a boy or a girl?
       Do you think the parent is a mother or a father?

SURVEY: PUPIL PERCEPTION OF
ADULT ROLES (SCHOOL)

Name_____
Room_____ Sex_____

1- BOY   Or   GIRL
   WOMAN Or   MAN

11- BOY   Or   GIRL
    WOMAN Or   MAN

2- GIRL   Or   BOY
   MAN   Or   WOMAN

12- GIRL Or   BOY
    MAN   Or   WOMAN

3- BOY   Or   GIRL
   WOMAN Or   MAN

13- BOY   Or   GIRL
    WOMAN Or   MAN

4- GIRL   Or   BOY
   MAN   Or   WOMAN

14- GIRL Or   BOY
    MAN   Or   WOMAN

5- BOY   Or   GIRL
   WOMAN Or   MAN

15- BOY   Or   GIRL
    WOMAN Or   MAN

6- GIRL   Or   BOY
   MAN   Or   WOMAN

16- GIRL Or   BOY
    MAN   Or   WOMAN

7- BOY   Or   GIRL
   WOMAN Or   MAN

17- BOY   Or   GIRL
    WOMAN Or   MAN

8- GIRL   Or   BOY
   MAN   Or   WOMAN

18- GIRL Or   BOY
    MAN   Or   WOMAN

9- BOY   Or   GIRL
   WOMAN Or   MAN

19- BOY   Or   GIRL
    WOMAN Or   MAN

10- GIRL Or   BOY
    MAN   Or   WOMAN

20- GIRL Or   BOY
    MAN   Or   WOMAN

SURVEY: PUPIL PERCEPTION OF
ADULT ROLES (HOME)

21-
BOY   Or   GIRL
MOTHER Or   FATHER

31-
BOY   Or   GIRL
MOTHER Or   FATHER

22-
GIRL   Or   BOY
FATHER Or   MOTHER

32-
GIRL   Or   BOY
FATHER Or   MOTHER

23-
BOY   Or   GIRL
MOTHER Or   FATHER

33-
BOY   Or   GIRL
MOTHER Or   FATHER

24-
GIRL   Or   BOY
FATHER Or   MOTHER

34-
GIRL   Or   BOY
FATHER Or   MOTHER

25-
BOY   Or   GIRL
MOTHER Or   FATHER

35-
BOY   Or   GIRL
MOTHER Or   FATHER

26-
GIRL   Or   BOY
FATHER Or   MOTHER

36-
GIRL   Or   BOY
FATHER Or   MOTHER

27-
BOY   Or   GIRL
MOTHER Or   FATHER

37-
BOY   Or   GIRL
MOTHER Or   FATHER

28-
GIRL   Or   BOY
FATHER Or   MOTHER

38-
GIRL   Or   BOY
FATHER Or   MOTHER

29-
BOY   Or   GIRL
MOTHER Or   FATHER

39-
BOY   Or   GIRL
MOTHER Or   FATHER

30-
GIRL   Or   BOY
FATHER Or   MOTHER

40-
GIRL   Or   BOY
FATHER Or   MOTHER

Table B

CSD Scale: Question Form

Devised by Virginia Crandall, Vaughn J. Crandall and Walter Katkovsky

Fels Research Institute for the Study of Human Development

Yellow Springs, Ohio

Y <u>N</u> 1. Do you ever get angry if you have to stop in the middle of something you're doing to eat dinner or go to school?

Y <u>N</u> 2. Does it sometimes bother you to share your things with your friends?

<u>Y</u> N 3. Do you always enjoy yourself at a party?

<u>Y</u> N 4. Are you always polite to older people?

Y <u>N</u> 5. Do you sometimes tell a little lie?

Y <u>N</u> 6. Do you ever hit a boy or girl who is smaller than you?

Y <u>N</u> 7. Sometimes do you feel like doing other things instead of what your teacher wants you to do?

Y <u>N</u> 8. Do you ever act "fresh" or "talk back" to your mother or father?

<u>Y</u> N 9. When you make a mistake, do you always admit you are wrong?

<u>Y</u> N 10. Do you feel that your parents always show good judgment; that is, do they always make good choices?

Y <u>N</u> 11. Have you ever felt like saying unkind things to a person?

Y <u>N</u> 12. Have you sometimes felt like throwing or breaking things?

Y <u>N</u> 13. Do you ever let someone else get blamed for what you do wrong?

Y <u>N</u> 14. Do you sometimes brag to your friends about what you can do?

<u>Y</u> N 15. Are you always careful about keeping your clothing neat and your room picked up?

Y <u>N</u> 16. Do you ever shout when you feel angry?

Y <u>N</u> 17. Do you sometimes feel like staying home from school even if you're not sick?

Y <u>N</u> 18. Sometimes, do you wish your parents didn't check up on you so closely?

<u>Y</u> N 19. Do you always help people who need help?

Y <u>N</u> 20. Do you sometimes argue with your mother to let you do something she doesn't want you to do?

Y <u>N</u> 21. Do you ever say anything that makes somebody else feel bad?

<u>Y</u> N 22. Do you think your teachers know more about everything than you do?

<u>Y</u> N 23. Are you always polite, even to people who are not very nice?

Y <u>N</u> 24. Sometimes, do you do things you've been told not to do?

Y <u>N</u> 25. Do you ever get angry?

Y <u>N</u> 26. Do you sometimes want to own things just because your friends have them?

<u>Y</u> N 27. Do you always listen to your parents?

Y <u>N</u> 28. Do you ever forget to say "please" and "thank you"?

Y <u>N</u> 29. Do you sometimes wish you could just play around instead of having to go to school?

<u>Y</u> N 30. Do you always wash your hands before every meal?

<u>Y</u> <u>N</u> 31. Do you sometimes dislike helping your parents even though you know they need your help around the house?

Y <u>N</u> 32. Do you ever find it hard to make friends?

Y <u>N</u> 33. Have you ever broken a rule?

Y <u>N</u> 34. Sometimes, do you try to get even when someone does something to you that you don't like?

CSD Scale: Question Form (continued)

Y N 35. Do you sometimes feel angry when you don't get your way?
Y N 36. Do you always help a hurt animal?
Y N 37. Do you sometimes want to do thing your parents think you are too young to do?
Y N 38   Do you sometimes feel like making fun of other people?
Y N 39. Have you ever borrowed anything without asking permission first?
Y N 40. Do you sometimes get mad when someone disturbs something you've been working on?
Y N 41. Are you always glad to cooperate with others?
Y N 42. Do you ever get angry when your best friend wants to do something you don't want to do?
Y N 43. Do you sometimes wish that the other kids would pay more attention to what you say?
Y N 44. Do you always do the right things?
Y N 45. Are there some times when you don't like to do what your parents tell you? (Mind your parents?)
Y N 46. Are there times that you don't like it if somebody asks you to do something for him?
Y N 47. Do you sometimes get mad when people don't do what you want them to do?

Table B
CSD Scale: Answer Sheet

Devised by Virginia Crandall, Vaughn J. Crandall and Walter Katkovsky .

NAME: _____

School _____   B   G   Date: _____

Teacher _____

1. Yes	No		21.. Yes	No		41. Yes	No
2. Yes	No		22. Yes	No		42. Yes	No
3. Yes	No		23. Yes	No		43. Yes	No
4. Yes	No		24. Yes	No		44. Yes	No
5. Yes	No		25. Yes	No		45. Yes	No
6. Yes	No		26. Yes	No		46. Yes	No
7. Yes	No		27. Yes	No		47. Yes	No
8. Yes	No		28. Yes	No		
9. Yes	No		29. Yes	No		
10. Yes	No		30. Yes	No		
11. Yes	No		31. Yes	No		
12. Yes	No		32. Yes	No		
13. Yes	No		33. Yes	No		
14. Yes	No		34. Yes	No		
15. Yes	No		35. Yes	No		
16. Yes	No		36. Yes	No		
17. Yes	No		37. Yes	No		
18. Yes	No		38. Yes	No		
19. Yes	No		39. Yes	No		
20. Yes	No		40. Yes	No		