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MANIFEST ANXIETY, SEVERITY OF GUILT, AND  
SCHOLASTIC ACHIEVEMENT IN CHILDREN

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## ABSTRACT

### MANIFEST ANXIETY, SEVERITY OF GUILT, AND SCHOLASTIC ACHIEVEMENT IN CHILDREN

by Charlene Adams

The major objective of the research summarized here was to examine the relationship between manifest anxiety and level of guilt in seventh and eighth grade boys. Achievement, confession, and guilt about death wishes were also investigated as they relate to the basic anxiety-guilt association.

Statistical analyses of a correlational nature were primarily performed on data collected from a sample of 68 male, seventh and eighth grade students. A few additional correlations were conducted on the scores of a group of 13 children who were excluded from the major sample because they did not meet control conditions (both parents present at home). The instruments used were: (1) the Children's Manifest Anxiety Scale, (2) three story completion guilt items, (3) a personal data questionnaire, (4) California Total Reading and Arithmetic Fundamentals Tests.

The hypotheses investigated in the study are listed below:

Hypothesis I. There is a significant positive correlation between degree of manifest anxiety and level of severity of guilt.

Hypothesis II. There is a higher positive correlation between manifest anxiety and severity of guilt about death wishes than between anxiety and guilt about violation of maternal commands or theft.

Hypothesis III. There is a curvilinear relationship between achievement and anxiety.

Hypothesis IV. There is a curvilinear relationship between achievement and guilt.

Hypothesis V. There is a positive correlation between degree of manifest anxiety and amount of confession.

Correlational tests revealed that there is a strong relationship between anxiety and guilt but that the association is in a negative rather than positive direction as predicted. The hypothesis that there is a higher positive correlation between manifest anxiety and guilt about death wishes than between anxiety and guilt in the other moral areas was found untenable for the large sample of 68 subjects but confirmed for the small sample of 13 children. Since there is a non-significant, negative correlation between anxiety and confession, the fifth hypothesis was rejected. A curvilinear association, as hypothesized, was found between anxiety and scholastic achievement. However, a positive linear, rather than

curvilinear, relationship was found to exist between guilt and achievement.

The most salient conclusion to be drawn from the research is that there is indeed a strong relationship between the variables of anxiety and guilt in children. The predicted positive association may not have been found because the instruments used measure specific guilt and global anxiety, and because they tap different levels of awareness. A reasonable explanation for the fact that a negative association was found appears to be that some children with highly developed superegos and concomitant anxiety find it necessary to repress feelings of guilt. The fact that the second hypothesis was substantiated only for the group of subjects with a parent absent from the home can be explained by the possibility that awareness of guilt about death wishes is more operative in children who have "lost" a parent. There was confirmation for the contention that anxiety and guilt function as motivators for achievement.

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SCHOLASTIC ACHIEVEMENT IN CHILDREN

By

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## INTRODUCTION

In order to clarify the research problem it is necessary to: (1) establish a basis in theory for the relationship between anxiety and guilt, and (2) consider recent relevant research in both areas.

Any discussion of the theoretical relationship between anxiety and guilt must concern itself first with the concepts singly.

### Anxiety

Psychoanalytic theory denotes the birth trauma, a flooding of the helpless infant with sensory, physiological, and motor stimuli, as the prototype of all later anxiety reactions (Sarason et al., 1960). As the child develops, anxiety comes to function as a signaling device that alerts him to potential threat to his security. Anxiety is perceived subjectively and can be determined, according to Freud, by the presence of three attributes: "(1) a specific unpleasurable quality, (2) efferent or discharge phenomena, and (3) perception of these" (Sarason et al., 1960). Anxiety differs from fear to the extent that it has a subjective rather than basis in fact. Since each person's history of interaction with the environment is unique, potential and chronic anxiety levels are peculiar to the individual.

## Guilt

With the passing of the Oedipus Complex, the processes of identification, internalization of values, and superego formation occur. The operation of conscience involves "both inhibition of impulse, and feelings of guilt when restraints have temporarily broken down" (Bandura, 1959, p. 251). The child internalizes the values that he understands his parents to hold and tries to regulate his behavior in accordance with such standards. "Once the child has completed the process of patterning himself after important adults, the external observer is replaced by a hidden voice. . . . When he resists temptation he experiences a self-approval similar to the approval he once received from his parents. When he violates his internalized standards, he condemns himself in the manner once used by his parents" (Miller and Swanson, 1960, p. 136). Guilt or superego-ego tension, the appearance of which is related to a failure and/or threat of failure of the regulatory process described above, is a form of self-punishment and turning of aggressive drives inward (Kohlberg, 1963). It is "concerned with separate, discrete acts . . . involves transgression of a specific code or violation of a specific taboo" (Lynd, 1958, p. 208).

## Relationship

Anxiety and guilt are associated in a number of ways. They are involved in the individual's (1) fear of

loss of love, (2) aggression and hostility, (3) feelings of self-esteem.

Since the child is dependent upon his parents for gratification of his needs, any sign that he might lose love causes anxiety. Anxiety, then, leads the child to demonstrate behaviors with which his parents will be pleased. The total process, that of internalizing parental values, results in superego formation. When the child has successfully internalized parental values, any violation of the standards will trigger guilt which is superego anxiety.

The child's expression of aggression is perceived by him as one of the most basic threats to his security since it may lose him parental love. When the child shows aggression as a baby, he immediately senses disapproval which induces an anxious reaction. It has been shown that anxiety is negatively related to overt, and positively related to covert aggression (Ruebush, 1963). Anxiety arises from a struggle to prevent overt aggressive impulses. When moral transgressions occur, they can be regarded as "disguised aggression against family authorities" (Kohlberg, 1963, p. 295). Sarason et al. (1960) maintain that anxiety in the child is the primary result of guilt about hostile feelings toward parents. A number of research studies have established a strong anxiety-hostility relationship (Seeman, 1952; Goodstein, 1954; Feldman, 1958; Brenner, 1961).

Anxiety and guilt are both involved in the individual's self-esteem. Kohlberg (1963, p. 296) states, "the neo-Freudians have seen moral emotions of guilt, shame, and anxiety as types of reactions of the social self concerned about maintaining self-esteem in the eyes of significant others. . . ." Lipsitt (1958) found that children who manifest unfavorable self-concepts also score high on anxiety. The self-disparagement element of the self-concept is akin to responses frequently scored as guilt. It is also found that self-acceptance is negatively related to anxiety (Bruce, 1958). Finally, a research study completed in 1955 concluded that highly anxious subjects are more prone to self-blame than low anxious subjects (Doris, 1955).

Because of the association between guilt and anxiety, some researchers tend to confuse the two. Jegard (1960), in a study of determinants of aggression, equated the constructs. A more accurate interpretation would be that guilt and fear of loss of impulse control stimulate an anxious reaction (Miller and Swanson, 1960). Fenichel (1945, p. 134) explains: "Guilt feelings represent a topically defined anxiety, the anxiety of the ego toward the superego. . . . The feeling of annihilation must be characterized as a cessation of the narcissistic supplies which were initially derived from the affection of some external person and later from the superego." The experience of guilt produces anxiety and self-blame;

self-criticism and other indications of guilt are anxiety-reducing (Kohlberg, 1963). Guilt results in a vague anxiety (Reik, 1957) that occurs because the individual has violated his own integrity. McKenzie (1962) points out that the origin of guilt is in the clash of love and aggression causing anxiety of a special quality.

It should be quite clear for the purposes of this study that manifest anxiety includes ego anxiety plus superego anxiety. Ego anxiety occurs in relation to reality or factors in the environment, while superego anxiety refers to the individual's discomfort due to feelings of guilt. Although superego anxiety (or guilt) is a component of expressed anxiety, guilt feelings are a specific type of anxious experience. Anxiety, then, is a large or global province only a portion of which is the result of guilt.

### Summary

The preceding discussion has traced the development of anxiety and guilt in the child. A theoretical basis for the fundamental relationship between anxiety and guilt has been established. It is deduced that guilt and anxiety are intimately associated in childhood fear of loss of love, aggression and hostility, and self-esteem because guilt becomes superego anxiety.

## REVIEW OF LITERATURE

Since there are no research studies that directly deal with an anxiety-guilt association, it will be necessary to consider relevant research in both areas.

### Anxiety

The consequences of anxiety (and guilt) on performance are important to the discussion. It has been recently shown that the effects of anxiety are not always detrimental--anxiety may inhibit or facilitate performance. Ruebush (1960) chose a problem solving task to investigate the interfering and facilitating effects of anxiety. Using 280 sixth grade boys he found that, since the highly anxious subjects were more cautious, their performance was superior to that of the low-anxious group. Alpert and Haber (1960) found that they could improve academic performance prediction from an anxiety scale when items designed to measure facilitating anxiety were included. Two groups of 20 disturbed children were measured on anxiety by clinical judgments and skin conductance in research by Patterson (1960). The results showed that social reinforcement conditioning in a complex verbal task was not successful for the children who fell at the extremes of the anxiety continuum as measured by skin conductance.



Ruebush (1960) and Patterson (1960) both conclude that there is no simple relationship between anxiety and performance but that defenses against anxiety, type of task, as well as anxiety itself should be considered.

It is the Hullian conception that, because of drive level, high anxious subjects will perform differently than low anxious subjects in various situations. Studies report that highly anxious subjects perform well in simple but poorly in complex situations (Montague, 1953; Castaneda, Palermo, McCandless, 1956b; Pickerl, 1958). Phillips et al. (1959, p. 256) explain the lack of a negative linear relationship between anxiety and performance as follows: "One possible explanation is that the relationship between anxiety and performance is curvilinear. For example, high anxiety may impede performance on complex tasks because there is too much drive, while low anxiety may impede performance because there is too little drive." The level of task difficulty and number of competing responses appears to affect performance of anxious subjects. Ramond (1953) and Palermo (1956) found anxious subjects to be inferior in performance when there are a number of competing response tendencies.

Most of the experimental research using anxiety as an independent variable has been Hullian-type learning studies equating anxiety with drive. The findings could be interpreted equally well using anxiety as an index of motivation. If the concept motivation were to be substituted

for drive, it may be that a moderate amount of motivation is optimal for superior performance.

The effect of anxiety on scholastic achievement, as a special case of performance, has been investigated. It was, at first, assumed that there is a consistent negative, linear relationship between anxiety and achievement (Kerrick, 1955; McCandless, Castaneda, 1956; Broen, 1959; Reese, 1961). Surprisingly, of late, experimental evidence indicating relationships between anxiety and achievement other than simple negative types have been drawn to attention. Reubush (1963) states that "a few studies report either no relationship or that anxiety and achievement are positively related" (p. 498). Keller and Rowley (1961) administered the Children's Manifest Anxiety Scale and the Metropolitan Achievement Test to fourth, fifth, and sixth graders. Only "eight of the 28 correlations between anxiety and achievement were negative and significant, those for sixth-grade girls accounting for five of the eight" (p. 20). Keller and Rowley conclude that anxiety can be used as a predictor of achievement efficiently only for highly anxious groups. Morgan, Sutton-Smith, and Rosenberg (1960) administered the Children's Manifest Anxiety Scale and two tests of achievement to 366 fifth and sixth graders. It was found that the negative correlation between anxiety and achievement is not consistent but varies with grade level.

The confusing array of experimental evidence on the relationship between anxiety and performance (with special reference to achievement) does not seem to be explained adequately by any theoretical position. The evidence would be consistent, however, with the existence of a curvilinear relationship between anxiety and performance. It may be that little or no anxiety is detrimental to good test performance, a moderate amount is facilitating, and extreme anxiety depresses scores.

Level of severity of guilt may be related to achievement in a similar curvilinear manner for two reasons. First, if guilt contributes to anxiety, then level of guilt will follow the anxiety-achievement relationship. Secondly, when there is little or no guilt, motivation and achievement may be low. A moderate amount of guilt, may increase motivation to achieve and result in higher scores, while high guilt level may cripple performance and lower achievement. In cases of extreme anxiety and guilt, the psychoanalytic conception of drainage of energy (Kerrick, 1955) may be applicable.

### Guilt

Clarification of terms. A number of recent investigations of guilt in children analyze responses in terms of temptation and transgression situations. Before proceeding with a discussion of research findings, it would be well to establish a firm distinction between temptation

and transgression through a clarification of the two definitions. According to Grinder (1961, p. 680) "temptation is a predecision-type conflict situation where an individual, free from coercion or danger of detection, must choose between a positive incentive and conformity to learned role behavior." Transgression is yielding to temptation and subsequent violation of the moral standard in question. In general, temptation is concerned with level of conscience development (indexed by yielding or resisting under specific circumstances) and transgression deals with guilt after the violation.

Research on guilt is somewhat confusing since studies deal with conscience development, resistance to temptation and transgression with little regard for distinctions between the concepts. Grinder (1961, p. 804) states, ". . . conscience has been inferred from indices of: (1) internal responses of guilt, e.g., painful feelings of self-blame, self-criticism, or remorse; (2) behavior interpreted as efforts to relieve guilt, e.g., confession, reparation, efforts to incur punishment; (3) defenses against guilt, e.g., projection, reaction formation, etc., and (4) resistance to temptation."

The following discussion of research findings on guilt pertinent to this study is organized according to methods of inquiry. Guilt has been indexed by objective measures, incomplete sentences, interviews, behavioral tests of temptation, and various types of story completions.

Instruments and results. Lowe (1961) devised objective measures of three kinds of guilt. Using a series of items chosen from the MMPI with psychotics and non-psychotics, he reported finding a close relationship between anxiety, guilt, and depression. It should be noted that the relationship between anxiety and guilt obtained is of questionable validity because the guilt scales contained anxiety items, confounding the data.

A sentence completion measure of guilt was used by Rabin (1959). The Rabin study was concerned with possible attitudinal differences between 52 American and 45 Israeli fourth and fifth graders. It was found that, whereas the Israeli children were concerned about guilt feelings resulting from moral transgressions, American children were more concerned with objective anxiety.

Burton, Maccoby, and Allinsmith (1961) attempted to discover antecedents of resistance to temptation in 77 four-year-old children. The independent variable was an interview with mothers and the dependent variable, behavior of the child in a temptation situation. Resistance to temptation was found to be related to such child rearing practices as toilet training, severity of weaning, love-oriented techniques as opposed to physical punishments. Guilt was negatively related to the interview measure of conscience.

Unger (1963) measured two types of guilt potentials: (1) transgression-contingent guilt potentials using a

projective test, and (2) guilty apprehensiveness through a questionnaire adaptation of the Children's Manifest Anxiety Scale. It was found that the children's guilt reactions were associated with the mother's nurturant significance, the use of psychological not physical punishment, and the frequency of unclear and enduring negative responses from the mother.

Miller and Swanson (1960) carried out a comprehensive program to explore expressive styles, moral standards and defense mechanisms. The three stories devised by Allinsmith (each dealing with a separate theme of death wishes, theft, or disobedience) with both temptation and transgression endings were employed. The Allinsmith stories were modified, however, to eliminate fear of detection and to give the stories a similar meaning for each subject. Projective pictures were not included with the stories. Ratings of guilt "encompassed any kind of pain, anxiety, disadvantage, punishment or threat of punishment experienced by the hero in the subject's story" (p. 148). Severity, or amount of guilt aroused, was assessed according to three criteria for interpretation:

- "1. direct acknowledgement of self-blame or guilt feelings (such as confession),
2. indirect manifestations of guilt, such as attempts at reparation,
3. defensive distortions" (p. 147).

The particular study with which we are here concerned utilized 112 urban, seventh and eighth grade boys in the completion of stories dealing with temptation and transgression. Miller and Swanson concluded: (1) severity of guilt is related to timing of weaning and toilet training, (2) the intensity of moral response is associated with early experience, (3) discipline procedures affect guilt about anger in middle class children, and (4) obedience requests and social class are not antecedents of level of guilt.

Rabin and Goldman (1963) used a modified Allinsmith story technique to test the hypothesis that Kibbutz children would show less severity of guilt about transgression than non-Kibbutz children. It was predicted that Kibbutz children would show a low level of transgression guilt because of less focused and more diffuse parental identification. The subjects for the study were 110 Kibbutz children (54 males, 56 females) and 100 non-Kibbutz children (52 males and 48 females) with median age of 13 for all groups. The results confirmed the hypothesis. The fact that the results were congruent with previous findings to the effect that Kibbutz children have little neuroticism supports the conjecture that the level of severity of guilt is low in Kibbutz children in reality as well as in projective testing.

Death wishes. It will be remembered that a death wish story is included in those that Miller and Swanson used in the 1960 study. There is virtually no other empirical data on death wishes although theoretical formulations can be found in the literature. Wahl (1958) postulates that the fear of death and the formation of guilt feelings develop at approximately the same time. The child, in his magical thinking treats wishes as though they were actually transgressions. Feifel states, ". . . the characteristic feature of the thought of the child, viz., that his wishes have magical power to influence events, is a double-edged sword. It lends . . . a comforting illusion of credence to our wishes for invincibility for his hating, annihilating, and destructive thoughts, which he also regards as magically fulfillable wishes" (1959, p. 23). By the same reasoning that the child employs in believing he can cause deaths, the Law of Talion ("to do a thing is to ensure an equal and similar punishment to the self"--Feifel, 1959, p. 24) reasoning leads him to fear his own death. Although the child may harbor death wishes toward his parents, death of a parent is interpreted as rejection and abandonment as well as retribution.

The death wish story both elicits a more basic conflict--that of ambivalence toward the parents--and is more counter to societal taboos than the other two stories. In addition, while the hero in the theft and disobedience stories can take positive steps to lessen his discomfort,



in the death wish story the situation is largely outside the hero's control. It will be remembered that the prototype of anxiety is the helpless sensation of the infant at birth. The fact that the death wish story is particularly disturbing to the child is illustrated by Allinsmith's report (Miller and Swanson, 1960) that extreme guilt responses are found in story endings, such as: long prison terms, suicidal tendencies, and injury to the hero. It follows, then, that death wishes may be accompanied by considerable anxiety. Since the conflict incited by death wishes is probably more basic to the personality than those concerning theft and disobedience, it may be that the death wish story is more directly related to level of the child's anxiety than are the other two stories.

Confession. Recently researchers have become interested in confession as an indication of guilt and index of conscience development. Horowitz (1956) maintains that feelings of guilt are a prerequisite for confession. The motivation for confession is not entirely clear. Horowitz asserts that self-hostility leads to confession, while Kohlberg (1963) states that the apology-confession-restitution complex of responses are not internally initiated but aid in gaining parental approval.

Ten projective story completions and a behavioral test of temptation were used by Rebelsky, Allinsmith, and Grinder (1961) to study confessional behavior in 138 sixth

graders. Confession "was defined as the revelation in words by the hero that he had committed the transgression. The operational definition thus excludes situations in which the hero never confessed but behaved so oddly that others were able to infer that he had transgressed. It included what others have termed 'admission,' i.e., acknowledgement after being suspected, interrogated, or accused" (p. 4). It was found that: (1) confession is used often by the age group studied, (2) girls confess more often than boys, (3) noncheaters in the test of temptation use confession more than cheaters. Inasmuch as confession is positively related to resistance to temptation, it may be considered an index of conscience development.

It has been hypothesized that confession occurs in an attempt to reduce tension and fear of punishment (Hulicka and Hulicka, 1960; Rebelsky, in press). Perhaps high tension or anxiety is necessary for confessional behavior. Logic would dictate that if anxiety and guilt are highly associated and if confessional behavior indicates advanced conscience development, then high anxiety level will be present in "frequent confessors."

#### Evaluation

The most startling fact that emerges from a review of literature concerning anxiety and guilt is that there is no empirical evidence for an association between them. It is mandatory that the relationship be explored empirically so that inferences about guilt and anxiety are not built upon unstable foundations of assumed associations.

## THE PROBLEM AND HYPOTHESES

The primary purpose of the study is to investigate the relationship between anxiety and guilt in children. Special attention is given to clarifying guilt and anxiety with respect to: (1) death wishes, (2) achievement, (3) confession.

### Statement of Hypotheses

Hypothesis I. There is a significant positive correlation between degree of manifest anxiety and severity of guilt.

Hypothesis II. There is a higher positive correlation between manifest anxiety and severity of guilt about death wishes than between anxiety and guilt about violation of maternal commands or theft.

Hypothesis III. There is a curvilinear relationship between achievement and anxiety.

Hypothesis IV. There is a curvilinear relationship between achievement and guilt.

Hypothesis V. There is a positive correlation between degree of manifest anxiety and amount of confession.

## METHOD

### Subjects

Subjects were 81 seventh and eighth grade boys from the Bath, Michigan, school system. The only requirement for inclusion in the main group of subjects for the study was that neither parent (through death, separation, or divorce) is missing from the home. It was planned to eliminate a subject if his age varied more than one year from the median and if his lie score on the Children's Manifest Anxiety Scale was nine or higher. The original rationale for exclusion on the basis of age was the assumption that quality of verbal expression would vary with age regardless of grade. When it was found that the guilt stories of the subjects not meeting the age restrictions were scorable, the age requirement was omitted. Since none of the subjects received a lie score as high as nine, none had to be excluded on the basis of the original lie criterion.

### Instruments

1. The Children's Manifest Anxiety Scale (CMAS), a 1956 adaptation of the Taylor Manifest Anxiety Scale, was used to measure anxiety. The scale, consisting of 42 anxiety items plus an 11 item lie scale (included in

Appendix A), was developed by Castraneda, McCandless, and Palermo (1956). The "CMAS is a measure of the child's tendency to experience a general and chronic state of anxiety, rather than of a tendency to experience anxiety only in specific situations or as a process of transitory phenomenon" (Ruebush, 1963, p. 475).

The original 1956 normative study dealing with fourth, fifth, and sixth grade children places the mean score for boys at 15.87.\* Test-retest reliability after one week for a combined sample of boys and girls was .90 on the total scale and .70 on the lie scale. Palermo (1959) reports one month reliability on a sample of Negro and white children to be slightly lower than that obtained in the original study. In an attempt to establish area norms for the CMAS, Levitt (1957) found reliability to be from .85 to .95 for the A scale and from .60 to .70 for the L scale. Pryor and Cassel (1962) find test-retest reliabilities adequate for the use of the scale with retarded children. Ruebush (1963, p. 475) states, "The CMAS has been found to be internally consistent and reliable."

The fact that a series of workers have used the CMAS in research with junior high pupils is mentioned by Keller

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\*The fact that the mean attained in the present study is slightly lower than those previously reported may be explained by the fact that a typographical omission on the administration of the scale to seventh grade subjects made it necessary to omit scoring one anxiety item for both grades.

(1962). He conducted a normative study employing the CMAS with junior high school students and found: (a) junior high means do not differ from those of elementary school children, (b) junior high school subjects score lower on the L scale than elementary children.

2. The Story Completion items used to measure severity of guilt were those employed by Miller and Swanson which were, in turn, fashioned after the stories of Allinsmith. The original Allinsmith pictures were omitted and only transgression endings included. The three stories administered plus the system developed to score them are listed in Appendix B and C, respectively.

3. A brief questionnaire (Appendix D) was administered after the anxiety and guilt measures. Since it might have been necessary to consider the influence of certain variables in the data analysis, the questionnaire included such items as: age, race, religion, father's occupation and education, marital status of parents, and parents--living or deceased. Representative investigators who have been concerned with such additional variables were: race--Hafner (1959), and Palermo (1959); religion--Boehm (1962c); social class--Aronfreed (1961), Boehm (1962 articles a and b), and Miller and Swanson (1960). Analysis of data was not carried out upon the information concerning additional variables included in the questionnaire. Questionnaire responses were inadequate for statistical comparisons because of the variety of interpretations made and incomplete answers received.

## Procedure

The group administration of the tests to the subjects required approximately one hour. Seventh and eighth graders were examined on different days. Each subject was given a booklet containing the guilt stories arranged in random order, anxiety scale, and questionnaire. The anxiety scale was placed alternately with the guilt stories treated as a block to eliminate the possibility that the first might influence scores on the second. The testing procedure appeared to be anonymous since the subjects were told not to proceed to a later section until the preliminary material was completed and they were not required to give their names until the final questionnaire page. The illusion of anonymity was not preserved for all subjects, however, since many of the pupils failed to complete the booklets in the proper order. Scores from a recently administered achievement test were impossible to obtain and it was, therefore, necessary to administer (at a later date) the California Achievement Tests Arithmetic Fundamentals and Total Reading batteries to all subjects (Tiegs and Clark, 1957).

Each subject received: (a) CMAS anxiety and lie scores, (b) guilt scores for each of the stories plus a total guilt score composed of the sum of scores on individual stories, (c) confession total for all stories, and (d) an achievement score. The Story Completion items

were scored on a three point scale of severity of guilt (high, medium, and low), using the scoring system outlined in Appendix C which is based upon the Miller and Swanson criteria for recognizing guilt. Interrater reliability (Pearson  $r$ ) was established on a representative sampling of the stories and is reported in "Results"--Table 1.\* Confession was scored for each story on a three point scale according to the operational definition of confessional behavior proposed by Rebelsky, Allinsmith, and Grinder (1961) and quoted in the introductory section. Each subject's achievement score was derived by averaging his percentile rank levels on the Arithmetic Fundamentals and Total Reading batteries.

The first, second, and fifth hypotheses were tested by means of correlation coefficients (Walker and Lev, 1953). The third and fourth hypotheses were evaluated through the use of correlation ratios (Guilford, 1956). To facilitate statistical manipulations, a linear transformation was performed on raw lie and confession scores (Guilford, 1956).

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\*Reliability was tested on a random sampling of story completions from male and female subjects, evenly divided in number. Judgments of level of severity of guilt were made by Mr. Harold Sommerschild and the writer.



## RESULTS

Preliminary to a presentation of the results, general statements regarding scores, groups of subjects upon which analyses were conducted, and the reliability of guilt judgments, are necessary.

### General Statements

The statistical analyses were performed on the basis of a series of scores achieved by each of the subjects. There were four major types of measures--guilt, anxiety, lie, and achievement. As previously mentioned, each subject received a guilt score for separate stories, the sum of which was labeled Total Guilt. Confession was given one of three scores: 0 = none, 1 = forced, and 2 = voluntary. Confession points were accrued for each guilt story and totaled to yield one confession score per subject. Anxiety and lie scores were the total points accumulated on the two scales of the CMAS. To arrive at an achievement percentile for each subject, the percentile ranks assigned for Arithmetic Fundamentals and Total Reading were averaged. It was reasonable to average the percentile ranks for subjects on the two achievement batteries since a Pearson correlation of .684 (significant well beyond the .01 level) was obtained by the present

investigator between scores on the Arithmetic Fundamentals and Total Reading subtests.

It will be remembered that the subjects were seventh and eighth grade students. In Appendix E are listed the means and standard deviations by grade for anxiety, guilt level, achievement, and confession. When the means of the variables by grades are compared, there are no significant differences between them.

While the major group of subjects included in the study consisted of 68 pupils who meet the control condition of both parents in the home, a few analyses were conducted on an additional group of 13 subjects with at least one parent no longer in the home. In the following material, statistical comparisons are based on the findings from the large sample of 68 subjects unless supplementary findings from the smaller sample are specifically mentioned.

On the basis of an original rating scale which includes guilt judgments on stories designed for males and females, interrater reliabilities were established; these are listed in Table 1. Reliabilities ranged from .74 on disobedience to .93 for death wishes.

Anxiety Versus: Total Guilt,  
Guilt by Story, Confession

Reference to Table 2 will indicate that significant results utilizing Pearson coefficients of correlation, opposite to the predicted direction, were obtained concerning Hypothesis I, but not for Hypotheses II and V.

Table 1. Interrater reliability of guilt by story.

Story	r	n	(male and female)
Disobedience	.74	32	
Theft	.84	31	
Death Wishes	.93	30	

Table 2. Pearson coefficients of correlation, guilt vs. anxiety, guilt by story vs. anxiety, confession vs. anxiety.

Hypothesis x	y	r	n	p
I. Guilt vs. Anxiety		-.421	68	$p < .0005$
-----				
II.				
Disobedience vs. Anxiety		-.242	68	$p < .025 > .01$
Theft vs. Anxiety		-.299	68	$p < .01 > .005$
Death Wishes vs. Anxiety		-.302	68	$p < .005$
-----				
V. Confession vs. Anxiety		-.169	68	ns

It was predicted that there would be a positive correlation between anxiety and total guilt. A negative correlation of .421 was found, however, for the two variables and was significant beyond the .0005 level. There was a correlation of -.255 (not significant) between anxiety and total guilt for the small subject sample. Since results were in a negative, rather than positive direction, Hypothesis I is untenable.

Hypothesis II deals with the prediction that there is a higher positive correlation between anxiety and guilt about death wishes than between anxiety and guilt level about disobedience or theft. Correlations between anxiety and guilt level per story were all negative and significant at the .025 level or beyond. The relationship between anxiety and guilt about death wishes was the largest of the three anxiety-guilt correlations. There are no significant differences between the anxiety-guilt correlations by stories for the large sample of subjects. Hypothesis II is not confirmed.

The reader is referred to Table 3 which deals with an analysis of the association between guilt levels and anxiety by story for the 13 subjects lacking at least one parent from the home.

Table 3. Guilt by story vs. anxiety for small sample.

x	y	r	n	p
Disobedience	vs. Anxiety	-.332	13	ns
Theft	vs. Anxiety	.238	13	ns
Death Wishes	vs. Anxiety	.460	13	$p < .05 > .025$
(Hypothesis II)				

Support for the original hypothesis is furnished by the fact that the only significant correlation was that between anxiety and guilt about death wishes. The significant anxiety-death wishes correlation for the small

sample differs in direction from that of the large sample and is congruent with the original hypothesis since it is positive.

The fifth hypothesis predicting a positive correlation between anxiety and confession was not confirmed for either group of subjects.

#### Achievement Versus: Anxiety, Guilt

Table 4 presents the statistical data when correlation ratios were performed in accordance with the curvilinear predictions of the third and fourth hypotheses. Scattergrams for the two hypotheses are found in Appendix F.

Table 4. Correlation rations (Eta): achievement vs. anxiety, achievement vs. guilt.

Hypothesis	x	y	$f_1$	$f_2$	$\sigma f_1$	$\sigma f_2$	$p_1$	$p_2$
III. Achievement vs. Anxiety			.437	.548	.099	.072	both p	$< .01$
IV. Achievement vs. Guilt			.110	.320	.121	.120	ns	p $< .01$

The third hypothesis concerning a curvilinear relationship between achievement and anxiety was confirmed. Decellerating curves were found for regression of achievement on anxiety and for regression of anxiety on achievement. The correlations were both significant beyond the .01 level.

Confirmation of the fourth hypothesis was, at first, thought to have been obtained for regression of achievement on guilt. Since the predicted curvilinear regression of guilt on achievement was not present, and the scattergram indicated that a linear relationship might fit the data, a Pearson coefficient of correlation was computed for the guilt and achievement variables. For both the large ( $r = .310$ ,  $p < .005 > .0005$ ) and small sample ( $r = .644$ ,  $p < .005 > .0005$ ) of subjects, a positive linear relationship was obtained. The hypothesized function was, then, not confirmed and the achievement-guilt association is linear rather than curvilinear.

#### Additional Data

Although no theoretical hypothesis was made regarding correlations between guilt levels obtained on the Story Completion items by subjects, an analysis of intercorrelations was conducted to facilitate comparisons of such correlations with those obtained by previous workers. Table 5 presents story intercorrelations and indicates that all correlations are in a positive direction. The only significant relationship is between guilt about theft and guilt about death wishes.

A series of statistical tests were carried out to determine whether scores on the lie dimension were related to other variables. The Pearson  $r$  indicates that there is no association between lie and anxiety scores ( $r = -.166$ ). There was found, in addition, to be

no significant correlational relationship between lie and guilt ( $r = -.043$ ) or lie and confession ( $r = .034$ ) scores. A correlation ratio for the regression of lie on anxiety was significant at less than the .01 level and appears to indicate merely that the two characteristics are distributed normally in the sample tested. Finally, data show that there are as many high scoring lie subjects above as below the median on anxiety and that, conversely, there are as many low scoring subjects below as above the median on anxiety.

Table 5. Story intercorrelations.

x	y	r	n	p
Disobedience	vs. Death Wishes	.187	68	ns
Theft	vs. Death Wishes	.276	68	$p < .01 > .005$
Disobedience	vs. Theft	.183	68	ns

## DISCUSSION

Preceding a discussion of results relative to the predictions and before interpretations of the findings are offered, it would be well to compare the variables as measured here with the conclusions of previous researchers. The section on general considerations to follow draws a series of comparisons between guilt, anxiety, and lie variables, as they emerged in the present study, with earlier findings.

### General Considerations

The validity of the study is reflected by the degree with which results attained here parallel those reported for previous investigations dealing with comparable variables.

Guilt. Support for the validity of the original scoring system utilized is derived from the fact that the stories could be scored with highly reliable judgments. As mentioned previously the interrater reliabilities on a random sample of the stories, for males and females, ranged from .74 to .93.

In general, low correlations were found between guilt in different moral areas. Of the three correlations between stories, the only significant relationship was



that between theft and death wishes. Miller and Swanson (1960) speak of a series of guilts rather than "one guilt" and reported low correlations between scores in one moral area and another.

Anxiety. The mean of anxiety scores for the seventh and eighth grade boys combined was 15.15. Castaneda, McCandless, and Palermo (1956) found that the CMAS mean for fourth, fifth, and sixth grade boys to be 15.87. The mean of seventh, eighth, and ninth grade boys on the CMAS was 15.5 in the 1962 investigation conducted by Keller.

Lie. The finding of no significant correlation between the CMAS lie and anxiety scales is in accordance with the report of Castaneda, McCandless, and Palermo (1956), and Keller and Rowley (1961).

It was originally thought that it might be necessary to establish a cut-off point and eliminate subjects on the basis of extremely high lie scores. The basic assumption made is that individuals who "lie" often will receive invalid anxiety scores. Sarason's General Anxiety Scale for Children contains 11 lie items as does the CMAS. Children answering "no" to nine or more lie items are considered by Sarason (1960) to be unusually defensive. Interestingly, in the use of the CMAS lie scale here, the highest absolute lie score of the 68 subjects was six. Since the statistical tests are described in the "Results" section indicated no systematic influence of lie on anxiety scores, none of the subjects was eliminated on the basis of his lie points.

## Results Relative to Predictions

Anxiety versus: total guilt, guilt by story, confession. Three hypotheses dealt with the postulated positive correlation between anxiety and guilt, or in the case of the fifth hypothesis, anxiety and confession. The results, in general, point to strong anxiety-guilt relationships in a negative, rather than positive direction. Interpretation of the negative results will be undertaken first, whereupon specific references to findings regarding anxiety and guilt in particular stories and anxiety and confession can be made in perspective. Two related but distinct questions arise: (1) Why are the anxiety-guilt correlations not positive, and (2) why are the relationships negative?

It should, first of all, be noted that a 1:1 positive correlation between guilt and anxiety could not be expected. The CMAS, as a measure of expressed anxiety, taps superego and ego anxiety. Further, the three story completion items used do not represent all the subject's feelings of guilt but rather guilt in only three of many moral areas. The only positive correlation to be anticipated, then, would be that between guilt about three specific moral areas, which contributes to superego anxiety, and total anxiety score. It should also be remembered that there is no expected correspondence between ego anxiety, also a component of the total anxiety score, and feelings

of guilt in the three areas.

Possibly, a positive association was not found because the manifest anxiety scale and the story completion measures reach different levels of awareness. The story completion items are projective and are designed to elicit unconscious content, while the anxiety scale taps conscious symptoms. There may be a positive correlation between manifest anxiety and manifest guilt (where the anxiety and guilt feelings are relatively conscious and admitted) but evidence is for the conclusion that this study did actually measure overt anxiety and covert guilt. According to L'Abate (1960), the CMAS measures such qualities as rebelliousness and "nuisance value" in boys as opposed to the more introspective characteristics and daydreaming and feelings of inferiority in girls. Piers and Singer (1953) maintain that anxiety is largely conscious while guilt is unconscious: ". . . the dynamically important sense of guilt remains as such unconscious, although the concomitant anxiety becomes conscious" (p. 5). If projective or manifest measures of both variables were administered, a strong positive correlation might be found. The results of the study clearly illustrate the caution that needs to be exercised in tapping different levels of awareness.

The second major question to be answered is why there was found to be a negative relationship between anxiety and guilt. The writer would contend that the most reasonable explanation is that some of the subjects

repress feelings of guilt and express such discomfort in the form of anxiety symptoms.

In order to explore an explanation for the findings on the basis of repression, the major assumption that guilt always parallels level of conscience development must be questioned. In the "Introduction" the Burton, Maccoby, Allinsmith (1961) conclusion of a negative relationship between the measure of conscience development and guilt was mentioned. There is, further, an additional case in the literature which points to the fact that where there should be a highly developed conscience, high guilt is not present. Miller and Swanson (1960) found that, on the death wish story, boys with childrearing antecedents that would foster highly developed consciences do not show commensurately high levels of guilt. They state, ". . . among boys who have experienced the greatest number of conditions likely to lead to high guilt, fewer subjects express high guilt than among subjects who have been subjected to an intermediate amount of pressure. This finding seems consistent with the formulation that the most guilt-ridden boys were more inclined to inhibit their feelings than were boys with an intermediate amount of guilt" (pp. 156-157).

The phenomenon of repression may relate to guilt as follows: if an individual has a highly developed conscience, guilt feelings are so threatening that he avoids situations which are likely to make him feel guilty

and represses such feelings when they occur. Sarason (1960) advances the formulation that anxiety functions to keep "the unconscious unconscious" (p. 13). The anxiety level, then, may rise as the individual struggles to repress awareness of guilt. Mowrer (1950) maintains that anxiety is present only when there has been prior repression. It is "conscience, which, when forced by a hostile, immature, impulse-dominated ego, proves unequal to the struggle and loses its place in the court of consciousness. Guilt is the form in which conscience is normally represented . . . and anxiety is experienced when there is 'unconscious guilt,' i.e., repressed, dissociated guilt, which is pressing forward for recognition but which is not recognized as such" (Mowrer, 1950, p. 622).

It is possible, then, that anxiety level may be more commensurate with level of conscience development than it is with guilt because guilt content is repressed in some individuals. It is quite possible that repression operated in enough subjects to yield the negative results. The entire repression explanation is, of course, hypothetical since the present study did not pretend to measure level of conscience development per se.

A possible alternate explanation for the finding of a negative relationship between anxiety and guilt is that children who attain high severity of guilt scores have strong internalizations. Children with such well-developed consciences are likely to give responses scored

high on a severity of guilt dimension because they are very much aware of what behavior constitutes a moral violation. It may be that subjects with high guilt scores do not feel anxious because they are accustomed to meeting societal expectations regarding approved behavior and are, consequently, less likely to be censured than children with weak internalizations.

The second hypothesis contended that there would be a higher positive correlation between anxiety and guilt about death wishes than between anxiety and guilt about theft or disobedience because (1) death wishes deal with basic ambivalence toward parents; (2) death wishes are strongly counter to societal taboos; and (3) the death wish story, as opposed to the other two, is constructed so that the hero can take few positive steps to dilute his feelings of guilt. The hypothesis was not confirmed since all correlations were negative and there were no significant differences between the coefficients.

It is interesting, and Table 3 clearly points to the fact that the second hypothesis was completely confirmed for the smaller sample of 13 subjects. The only significant correlation between anxiety and guilt level was for the death wish story and there is a positive association. The most salient question is, of course, why the direction of the smaller sample is positive, as predicted, rather than negative as is that of the larger sample. It would appear that children who have lost one parent repress

feelings of guilt about death wishes less often than their counterparts with the family intact. Possibly the children in the smaller group find awareness of guilt more tolerable than those in the large sample. With one parent absent, for example, basic internalization of standards may not be as strong, and consequently, feelings of guilt may not be as uncomfortable. On the other hand, it may be that when one of the child's parents disappears, the child is less likely to be successful in repressing guilt about death wishes than is his peer with both parents at home.

The fifth hypothesis of a positive correlation between confession and anxiety was not confirmed. In fact, confession was related negatively ( $r = -.169$ ), but not significantly, to anxiety. The positive correlation was predicted on the basis of the supposition that confession and guilt are highly associated and that confession may indicate level of conscience development. The explanations for negative association between anxiety and guilt are applicable here since confession is behavior indicative of guilt awareness. The negative correlation between anxiety and confession would tend to contradict the proposition that the purpose of confession is tension-reduction. It is not the most, but the least, anxious children who confess frequently.

Achievement versus: anxiety, guilt. The third and fourth hypotheses concerned prediction of curvilinear relationships between anxiety and achievement and guilt and achievement.

The prediction of a curvilinear relationship between anxiety and achievement was completely confirmed when it was found that both Eta regressions were significant. It would appear, then, that moderate anxiety may function as a motivating agent and that achievement is low when anxiety is either extremely high or low.

The findings of this study are in disagreement with many of those investigations, heretofore mentioned, which isolated a negative linear association between the two variables. It is very difficult to ascertain whether correlation ratios were conducted on the data in the previous research projects. Reese (1961) does specifically state that the Eta which he computed showed a negative, linear relationship between the CMAS and a timed arithmetic achievement test with fourth and sixth grade subjects.

The Keller and Rowley (1961) study found 8 out of 23 correlations between anxiety and achievement to be negative in their work with fourth, fifth, and sixth graders. They could predict achievement reliably on the basis of anxiety and intelligence, for only the highly anxious group. The fact that prediction was possible for only the most anxious of their sample could be explained by the curvilinear results obtained in the present study.

A curvilinear relationship between guilt and achievement was predicted because it was reasoned:

(1) that guilt would be related to achievement in the same fashion as is anxiety, and (2) guilt might function



as an achievement-motivator. The hypothesis was not entirely confirmed. A straight linear positive relationship was found between the variables guilt and achievement. There are two theoretical explanations for the results. First, it is possible that guilt does, in fact, function to motivate achievement but that high guilt is not incapacitating. Second, the guilt variable as measured by the story completion instrument used here may not have a high enough "ceiling" and if it were possible to accrue more guilt points a curvilinear association might emerge.

An additional factor that deserves consideration regarding the association between guilt and achievement is that of productivity. Total number of words produced was analyzed for association with guilt score for 20 subjects (10 scoring highest and 10 scoring lowest on guilt). A Chi square corrected for continuity (Walker and Lev, 1953) of 5.0, significant between the .02 and .05 levels, indicates that there is a strong association between guilt level and total number of words produced on the story completion items. Subjects who score high on guilt also write a large total number of words for their stories. It is possible that the factor of productivity is basic to determining level of guilt and achievement, which might account for the linear guilt-achievement correlation.

## SUMMARY AND CONCLUSIONS

The major objective of the research summarized here was to examine the relationship between manifest anxiety and level of guilt in seventh and eighth grade boys. Achievement, confession, and guilt about death wishes were also investigated as they relate to the basic anxiety-guilt association.

Statistical analyses of a correlational nature were primarily performed on data collected from a sample of 68 male, seventh and eighth grade students. A few additional correlations were conducted on the scores of a group of 13 children who were excluded from the major sample because they did not meet control conditions (both parents present at home). The instruments used were: (1) the Children's Manifest Anxiety Scale, (2) three story completion guilt items, (3) a personal data questionnaire, (4) California Total Reading and Arithmetic Fundamentals tests.

The hypotheses investigated in the study are listed below:

Hypothesis I. There is a significant positive correlation between degree of manifest anxiety and level of severity of guilt.

Hypothesis II. There is a higher positive correlation between manifest anxiety and severity of guilt about death wishes than between anxiety and guilt about violation of maternal commands or theft.

Hypothesis III. There is a curvilinear relationship between achievement and anxiety.

Hypothesis IV. There is a curvilinear relationship between achievement and guilt.

Hypothesis V. There is a positive correlation between degree of manifest anxiety and amount of confession.

Correlational tests revealed that there is a strong relationship between anxiety and guilt but that the association is in a negative rather than positive direction as predicted. The hypothesis that there is a higher positive correlation between manifest anxiety and guilt about death wishes than between anxiety and guilt in the other moral areas was found untenable for the large sample of 68 subjects but confirmed for the small sample of 13 children. Since there is a non-significant, negative correlation between anxiety and confession, the fifth hypothesis was rejected. A curvilinear association, as hypothesized, was found between anxiety and scholastic achievement. However, a positive linear, rather than curvilinear, relationship was found to exist between guilt and achievement.

The most salient conclusion to be drawn from the research is that there is indeed a strong relationship between the variables of anxiety and guilt in children.

The predicted positive association may not have been found because the instruments used measure specific guilt and global anxiety, and because they tap different levels of awareness. A reasonable explanation for the fact that a negative association was found appears to be that some children with highly developed superegos and concomitant anxiety find it necessary to repress feelings of guilt. The fact that the second hypothesis was substantiated only for the group of subjects with a parent absent from the home can be explained by the possibility that awareness of guilt about death wishes is more operative in children who have "lost" a parent. There was confirmation for the contention that anxiety and guilt function as motivators for achievement.

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## APPENDICES

## APPENDIX A

Children's Manifest Anxiety Scale

Read each question carefully. Put a circle around the word YES if you think it is true about you. Put a circle around the word NO if you think it is not true about you.

- |     |    |   |
|-----|----|---|
| Yes | No | It is hard for me to keep my mind on anything.            |
| Yes | No | I get nervous when someone watches me work.               |
| Yes | No | I feel I have to be best in everything.                   |
| Yes | No | I blush easily.   |
| Yes | No | I like everyone I know.                                   |
| Yes | No | I notice my heart beats very fast sometimes.              |
| Yes | No | At times I feel like shouting.                            |
| Yes | No | I wish I could be very far from here.                     |
| Yes | No | Others seem to do things easier than I can.               |
| Yes | No | I would rather win than lose in a game.                   |
| Yes | No | I am secretly afraid of a lot of things.                  |
| Yes | No | I feel that others do not like the way I do things.       |
| Yes | No | I feel alone even when there are people around me.        |
| Yes | No | I have trouble making up my mind.                         |
| Yes | No | I get nervous when things do not go the right way for me. |
| Yes | No | I worry most of the time.                                 |
| Yes | No | I am always kind.   |
| Yes | No | I worry about what my parents will say to me.             |
| Yes | No | I often have trouble getting my breath.                   |
| Yes | No | I get angry easily.                                       |
| Yes | No | I always have good manners.                               |
| Yes | No | My hands feel sweaty.                                     |

Yes	No	I have to go to the toilet more than most people.
Yes	No	Other children are happier than I.
Yes	No	I worry about what other people think about me.
Yes	No	I have trouble swallowing.
Yes	No	I have worried about things that did not really make any difference later.
Yes	No	My feelings get easily hurt.
Yes	No	I worry about doing the right things.
Yes	No	I am always good.
Yes	No	I worry about what is going to happen.
Yes	No	It is hard for me to go to sleep at night.
Yes	No	I worry about how well I am doing in school.
Yes	No	I am always nice to everyone.
Yes	No	My feelings are hurt easily when I am scolded.
Yes	No	I tell the truth every single time.
Yes	No	I often get lonesome when I am with people.
Yes	No	I <b>feel</b> someone will tell me I do things the <b>wrong</b> way.
Yes	No	I am afraid of the dark.
Yes	No	It is hard for me to keep my mind on my school work.
Yes	No	I never get angry.
Yes	No	I often feel sick in my stomach.
Yes	No	I worry when I go to bed at night.
Yes	No	I often do things I wish I had never done.
Yes	No	I get headaches.
Yes	No	I often worry about what could happen to my parents.

Yes	No	I never say things I shouldn't.
Yes	No	I get tired easily.
Yes	No	It is good to get high grades in school.
Yes	No	I have bad dreams.
Yes	No	I am nervous.
Yes	No	I never lie.
Yes	No	I often worry about something bad happening to me.

## APPENDIX B

### Instructions and Guilt Stories

1. Instructions: We're interested in finding out what boys your age are like. In each of the booklets that you have are some questions to answer yes or no, three stories, and a form to fill out at the end. Do not turn any page and go on until you are through with it. The three stories you are to finish where they leave off. This is not an English class. Don't worry about spelling. There are no right or wrong answers: you can say anything you want in the stories and use any language you want. Just finish the stories, telling what happens and how it turns out, and what the people in your story are thinking and feeling. No one here at school will see your stories--I'll take them back to the University with me. It is very important that you answer every question completely. Do not leave any out. Raise your hand if you have a question.

## 2. Stories

### a. Disobedience

One day Ted's mother goes visiting a friend of hers in another town. At noon just after his lunch Ted phones his mother and talks with her. She tells him to be a good boy and says that she will be home at suppertime. Now Ted is all alone with nothing to do. He thinks of the boxes in the top of his mother's closet. She has told him never to take down the boxes. He knows that his mother won't be home till suppertime. Ted climbs up and takes down the boxes.



b. Theft

Bill's friends have formed a baseball team. They promised Bill he could be their catcher if he could get a catcher's mitt. His father told him he could not buy him a catcher's mitt. Bill saved all the money he could. At last he had \$10.00 saved up to get a really good glove. When he arrives at the sports store, he sees the clerk going down to the cellar of the store. The clerk does not see Bill. Bill decides to look at the catcher's gloves himself before calling the clerk. He finds just the one he wants. Then he reaches for his money. It is gone. He realizes that he has lost it on the way downtown. Bill feels awful. He looks around. There is nobody in the store or near it outside. The clerk is still in the cellar. It occurs to Bill that the mitt would just fit under the bulge in his jacket. He hides the mitt under his jacket and walks out of the store. No one sees him leave.

c. Death Wishes

Dave likes his baseball coach. The other day the coach promised him privately that Dave could pitch in the big game on Saturday. When the team meets for final practice, the coach doesn't say anything to Dave about pitching. Dave is afraid he has forgotten or changed his mind. He keeps thinking to himself over and over again: "The coach isn't going to keep his promise. I hope he doesn't even make the game, I wish he'd drop dead!" When Dave arrives at the

game on Saturday afternoon, he hears that the coach has just been in an accident and has been taken to the hospital. Everyone is worried. The game is about to begin. Dave sees from the scoreboard that he is scheduled to pitch.

## APPENDIX C

### Story Completion Scoring

Story 1. - Disobedience

Story 2. - Theft

Story 3. - Death Wishes

#### Level I

A. No doubt and/or unimpaired performance

Story 3 - no mention of worrying about the coach  
and no difficulty in pitching

B. Blatant missing the point

Story 3 - statements as "don't judge a guy by the  
way he acts"

C. Verbalizations of discomfort (sorry, worried,  
feeling bad)

Story 1 - sorry opened boxes and saw presents

Story 2 - afraid of being seen

Story 3 - worried about the coach and accident

#### Level II

A. Distortion - moderate

1. Situational (as doubts and/or performance  
decrement)

Story 3 - pitching poorly

2. Behavioral (as, going to hospital after game)

B. Involuntary confession

Story 2 - parents ask child how he bought glove  
when he left his money at home

C. Externalization - mild

1. Moderate punishment

Story 1 - spanked and sent to bed

Story 2 - having to work after school to pay for  
glove

2. Getting caught

Story 1 - mother returns early

D. Special cases

1. Story 1

Good deed - as, child catches robbers after opening boxes

Gift for someone other than hero in boxes

Forgetting to replace boxes

2. Story 2

Finding money and returning glove without either type confession

3. Story 3

Intent to do well for coach's sake

Verbalizations of discomfort involving cause and effect (feelings of blame)

Level III

A. Distortion - severe

1. Situational (as doubts and/or performance decrement)

Story 3 - inability to pitch

2. Behavioral

Story 1 - does not take boxes down

Story 2 - does not steal glove

Story 3 - goes to hospital before game

B. Voluntary confessions (special cases in story 2 below)

1. Returns glove and confesses

2. Finds money, returns glove, and confesses

C. Externalization - severe

1. Severe punishment by others - as, sent to jail

2. Injury to hero or others

Story 1 - falling down well or TNT in boxes  
blows up

3. Courting punishment

Story 2 - returning to continue to steal until  
caught

D. Moralizing - statements about what hero should or  
should not do, what is right and wrong

E. Special case in story 3 - upset and intends to do  
well for coach's sake.

If there is a question:

1. A series of Level II responses with one questionable  
Level III response, score Level III

2. When responses of two levels are present, score  
highest.

APPENDIX D

Questionnaire

Fill out the following list of questions Completely.  
Check one answer where there are blanks. Raise your hand  
if you have a question.

1. Name \_\_\_\_\_
2. Male ( ) Female ( )
3. Age \_\_\_\_\_
4. Birthdate \_\_\_\_\_  
Month Day Year
5. Race: White ( ) Negro ( )
6. Are both your parents living? Yes ( ) No ( )
7. Your parents are:  
( ) Married and together ( ) Divorced  
( ) Separated ( ) Other \_\_\_\_\_
8. Religion  
( ) Protestant ( ) Jewish  
( ) Catholic ( ) No preference
9. How often do you attend church?  
( ) Every week ( ) Once a month or less  
( ) Twice a month ( ) Never
10. Where does your father work?  
\_\_\_\_\_
11. What does he do there?  
\_\_\_\_\_
12. What was the highest grade in school that your father  
reached or degree he received? \_\_\_\_\_



## APPENDIX E

Means and Standard Deviations:

Anxiety, Guilt, Achievement

Variable	Mean	Standard Deviation	n
1. Anxiety			
Grades combined	15.15	6.41	68
7th	14.12	7.06	32
8th	16.06	5.61	36
2. Guilt			
Grades combined	6.34	2.50	68
7th	6.78	1.49	32
8th	5.94	1.74	36
3. Stories			
a. Disobedience			
Combined	2.10	.07	68
7th	2.25	.08	32
8th	1.97	.07	36
b. Theft			
Combined	2.24	.08	68
7th	2.34	.07	32
8th	2.14	.09	36
c. Death Wishes			
Combined	2.00	.09	68
7th	2.21	.09	32
8th	1.83	.08	36
4. Achievement (percentile ranks)			
7th	42.38	23.45	32
8th	41.06	29.15	36
5. Confession			
Combined	4.22	1.35	68
7th	4.72	1.32	32
8th	3.78	1.24	36

## APPENDIX F

### Scattergrams for Curvilinear Hypotheses

## ACHIEVEMENT

Guilt

	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	$f_y$
9		.		.			..	.	.		6
8	.	..		..	.	.	.	.	..	.	12
7	.	.	...	..	...	.	..	.	.		15
6	..	.	...	...	...	..		.	.	.	17
5	..	.		.		..	.		.		8
4	.	.		.			.				4
3	.	...		.			.				6
$f_x$	8	10	6	11	7	6	8	4	6	2	68

## ACHIEVEMENT

Anxiety

	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	$f_y$
25-30	.	.	.	.							4
20-24	..	..	.	.....	...		.	.			15
15-19	..	....	.	.	..	..	.	.		.	15
10-14	.	...	..	.	..	..	...	.	...	.	19
5-9	..		.	...		..	..	.	..		13
0-4							.		.		2
$f_x$	8	10	6	11	7	6	8	4	6	2	68

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