THE RELATIONSHIP OF ADJUSTMENT AND DELINQUENT BEHAVIOR WITH SCHOOL GRADE, SOCIOECONOMIC STATUS, CATEGORY OF ADJUDICATION, RACE, AND SEX

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CHAPTER I

INTRODUCTION

Currently, there seems to be a crisis throughout the nation in terms of what to do with the juvenile offender. Juvenile penal institutions are so overcrowded that new offenders cannot be incarcerated, even when such action is warranted. In the United States, the latest official statistics indicate that more than half of all serious crimes (murder, rape, aggravated assult, robbery, burglary, larceny, and motor vehicle theft) have been committed by youth aged 10-17 (Warner, 1977). These statistics representing crime rates from 1960 to 1974 show an increase of 146%. All juvenile courts whether urban, semi-urban, or rural have experienced an increase in juvenile delinquency cases (U.S. Department of Justice, 1974). The number of juvenile cases handled by courts numbered 1.25 million in 1974 and 1.70 million in 1975 (U.S. Department of Justice, 1976). Psychologists and social workers, as well as law enforcement personnel and the general public, are gravely concerned about how to cope with, prevent, or ameliorate these crime rates.

One of the currently popular methods of studying the problem is to look for causation factors. A number of theories of causation are presently being tested. Most of these theories of criminal behavior can be subsumed under three general topical headings. One set of

theories of crime causation focuses on society and community as the primary factor (Shaw, 1929; Sellin, 1938; Cohen, 1955; Merton, 1957; Miller, 1958; Cloward and Ohlin, 1960; Sutherland, 1966; Vold, 1968). A second set of theories focuses on the locus of causation as being within the individual (Matza, 1964; Reckless, 1967). A third group, focuses on the interaction between the individual and society (Nye, 1958; Becker, 1963; Reckless, 1967; Sutherland and Cressey, 1974).

This present study focuses on the theory that society is the generating milieu of delinquency. The study will seek to highlight the inherent biases in this approach and to add knowledge which may more accurately reflect the cause and nature of delinquent behavior. A review of the literature on delinquency and delinquent behavior indicates that facts which society intuitively accepts as true may be grossly inaccurate.

An example of such beliefs is the commonly held idea that delinquency is primarily a phenomenon of the lower socioeconomic strata. This belief has been perpetuated by researchers using court records, police files, and other official records of delinquency. These bases are adequate, within certain limitations, for an examination of "official delinquency", but they are unreliable as an index of "delinquent behavior" in the general population. Nye, Short, and Olsen (1958) conducted a study using the delinquency questionnaire devised by Nye and Short (1956) to measure the relationship between socioeconomic status and delinquent behavior. The results of this study showed no relationship between these variables. The critical difference in this study and other delinquency research was the use of

"self-reported" data rather than reliance on "official delinquency" data. The work of Nye, Short, and Olsen (1958) on the relationship of delinquency and socioeconomic status, and self-reported data has been further validated by others using self-report questionnaires (Akers, 1964), and self-reported delinquency behavior by extensive interviews (Gold, 1966). The present study differs little in its focus on socioeconomic status, but does differ considerably in terms of sample population. Most studies in delinquency concentrate on males and low socioeconomic status subjects, omitting women and middle and upper class persons from their data collection. Furthermore, the relationship between socioeconomic status and delinquency in homogeneous racial and ethnic groups which has not been researched with much consistency will be investigated in the present study.

A number of researchers, including Nye, Short, and Olsen (1958), have been concerned with the possible biases inherent in the use of only official statistics. They pose the question of what information is lost by failing to seek information on delinquent behavior among those who have not been caught and therefore are not a part of the official statistics. Among those who have researched this question are Murphy, Shirley, and Witmer (1946), in their study "The Incidence of Hidden Delinquency", and Erickson and Empey (1963), in their "Court Records, Undetected Delinquency and Decision-Making". They found that a great deal more delinquent behavior occurs than that which becomes a matter of official record. The results of such studies have resulted in a more cautious interpretation of official statistics when they found these data accounted for very little of the actual delinquent behavior.

Research using primarily white subjects indicates that the official statistics grossly underrepresent white delinquent behavior (Robinson, 1936; Porterfield, 1943; Murphy, Shirley, and Witmer, 1946; Short and Nye, 1957; Nye, Short, and Olsen, 1958; Gold, 1966, 1970). Since blacks make up a disproportionate segment of the official data (Empey and Erickson, 1966; Sandhu, 1977), the present study is expected to show similar results for this racial group.

It is clear in the review of the literature that only in recent times has much serious attention been paid to the female delinquent. An important issue cited by Datesman et al. (1975), is that most theories of delinquency have only limited applicability to female delinquency. She suggests that there is a tendency for researchers to orient their research instruments toward the male role, which raises questions of validity when these scales are applied to females. Recent observations show an increase in female delinquency and that females are becoming more involved in "serious" crimes (U.S. Department of Justice, 1977).

This study seeks to add to the much needed evaluation of the variables which may contribute to female delinquency, and determine if and how they differ from male "official" and "non-official" delinquents.

The research of the past and present has brought forth a number of variables which are suspected of having a causal relationship to delinquency. The advent of computer technology has done much in the way of making it possible to evaluate multiple variables. It is evident in the review of the literature that no one causal variable

accounts for delinquent behavior. An example of a work which acknowledges the polyvariable nature of delinquency is that of Peterson, Urban, and Vondracek (1975) who used self-reported data to investigate perceptions, ideas, beliefs, values, attitudes, interests, aspirations, and goals held by delinquent youths. Their work resulted in the isolation of six factors which were found to account for significant amounts of delinquent behavior in both adjudicated and non-adjudicated youth. The six factors were school aversion, negative evaluation of the justice system, dissatisfaction with home and family life, egocentrism, negative evaluation of their own school performance, and interpersonal non-affiliation.

The present research project studied four variables to determine their impact on delinquency. These variables are: home adjustment, health adjustment, emotional adjustment, and hostility adjustment. It is hoped that the investigation of these variables singly and in combination will answer some of the questions posed above concerning juvenile delinquent behavior.

The effect of the home environment has probably received more attention than any other single factor regarding delinquent behavior. The aspects of family life most often focused on are: family structure (family intactness or brokeness), family functioning, parent-child relationships, and family size (Sandhu, 1977).

Some researchers suggest that delinquent behavior is produced most often by broken homes (Sutherland and Cressey, 1955; Korn, 1959; Haskell and Yablonski, 1971). A number of other researchers conclude that it is not "structure" but the "functioning" within the family which pushes a youth toward or away from delinquent behavior (McCord

and McCord, 1962). The broken home hypothesis has had special implications for black youth. There have been a number of studies which report that there exists a high correlation between the high number of broken homes among black youth and the disproportionate numbers arrested for delinquent acts (Moynihan, 1965). Another group for which the broken home hypothesis has had strong implications is female youth. Many research reports point to an increase in vulnerability toward delinquent behavior among females who come from broken homes (Haskell and Yablonski, 1971).

The home adjustment variable in this study is designed to discover the impact of home adjustment as measured by the Bell Adjustment Inventory (Appendix D) among the sexes, races, and adjudicated and non-adjudicated subjects. The scale used tends to load on the factors of parent-child relations, family tensions, and intactness-brokenness of the home.

In the present study, the choice of health adjustment among adjudicated and non-adjudicated youth was based on several considerations. The first is that somatic complaints often disguise more deeply rooted adjustment problems. From a continuum of a superficial level to a more deeply intrapsychic level, people complain of headache which may be a metaphor for tension, to conversion reactions like paralysis of the limbs. This latter is a symbolic somatic symptom to which the intrapsychic conflict is converted (Freedman, Kaplan, and Sadock, 1976).

Another consideration, based on the reports of Lewis and Shanok (1977), is that delinquent youth differ in terms of number, quality, and timing of medical problems. If their contentions are accurate, then knowledge about the medical treatment and complaints of adjudicated

and non-adjudicated youth may be helpful in determining which youth are at risk for delinquency. This kind of research may lead to a strategy for preventive measures.

The present study will focus primarily on the number and quality of somatic complaints among the before mentioned groups. This study differs from other studies most significantly by the inclusion of more middle- and upper-middle socioeconomic status youth in the analysis of health adjustment.

The inclusion of emotional adjustment as a variable in the study of delinquency, is grounded in the belief that delinquent behavior has a specific emotional basis. Freudian psychoanalytic theory suggests that delinquency is a result of failed socialization. They contend that the id impulses which are demanding, impulsive, irrational, asocial, selfish, and pleasure seeking (Hall, 1954) go unabated through poor socialization by parents or parent surrogates. The result is an emotional push toward delinquent behavior.

Some other thoughts about the emotional state of delinquent youth involves the source of the youth's conflicts. Mannheim (1965) suggests that if the source of emotional conflict in a youth is within him/herself, then neurosis is likely. However, if the source of emotional conflict is perceived as caused by other people, then delinquent behavior is more likely. This does not mean however, that the delinquent youth will not suffer neurotic symptoms. The delinquent may become neurotic as a defense against his aggressive impulses.

Another emotional factor which has been found to impact on delinquent behavior is self-concept. Dinitz and Reckless (1962) suggest

that the reason most youth in high delinquency areas do not become involved in official delinquency is due to their positive self-concept. On the other hand, youth who see themselves negatively are three times more likely to become official delinquents.

One outstanding feature of the emotional aspect of delinquency is hostility. Hostility noted in rejection of self, family, and social norms. It is this feature of delinquent youth and the study of delinquent youth which led to the inclusion of hostility as a factor.

The focus of the present research on hostility and emotionality among adjudicated and non-adjudicated youth is particularly directed toward upper and middle-socioeconomic status youth about whom there is a paucity of data. In the past this group has received little critical evaluation of their delinquent behavior and the emotional factors which push them away or toward delinquent acts (Miller, 1970). These youth have been viewed as non-delinquent, based upon their non-adjudicated status.

The current study is undertaken in the hope of helping to fill the void through multiple-analysis of factors thought to show differences among adjudicated and non-adjudicated youth. The factors which will be investigated are home adjustment, health adjustment, emotional adjustment, hostility adjustment, and delinquent behavior differences.

It is hypothesized that:

1. Adjudicated subjects will have a higher home adjustment score than non-adjudicated subjects.

2. Adjudicated females will have a higher home adjustment score than other groups.

3. Socioeconomic status (SES) and category of adjudication will interact to reveal a significant effect on home adjustment. Low socioeconomic, adjudicated subjects will have higher health adjustment scores than all other groups.

4. High SES, adjudicated, black subjects will have a higher home adjustment score than other groups.

5. High SES, adjudicated females will have higher home adjustment scores than other groups.

6. Ninth and tenth grade, high SES, adjudicated, black females will have higher adjustment scores than all other groups.

7. Ninth and tenth grade, high SES, adjudicated, black females will have higher home adjustment scores than all other groups.

8. Adjudicated subjects will have higher health adjustment scores than non-adjudicated subjects.

9. Low SES, adjudicated subjects will have a higher health adjustment score than other groups.

10. Ninth and tenth grade, low SES, adjudicated, black females will have higher health adjustment scores than other groups.

11. Adjudicated subjects will have a higher emotional adjustment score than non-adjudicated subjects.

12. Ninth and tenth grade, adjudicated females will have a higher emotional adjustment score than all other groups.

13. Low SES, adjudicated females will have higher emotional adjustment scores than all other groups.

14. Ninth and tenth grade, adjudicated, black females will have higher emotional adjustment scores than all other groups.

15. Adjudicated females will have higher emotional adjustment scores than all other groups.

16. Adjudicated subjects will have a higher hostility score than non-adjudicated subjects.

17. Low SES, adjudicated subjects will have a higher hostility adjustment score than all other groups.

18. Eleventh and twelfth grade, non-adjudicated females will have higher hostility adjustment scores than all other groups.

19. Eleventh and twelfth grade high SES, non-adjudicated, white subjects will have a higher hostility score than all other groups.

20. Non-adjudicated, white females will have a higher hostility adjustment score than all other groups.

21. Adjudicated subjects will have higher DBS than non-adjudicated subjects.

22. Low SES, adjudicated subjects will have a higher DBS than all other groups.

23. Adjudicated males will have higher DBS than any other group.

24. Adjudicated black subjects will have a higher DBS than all other groups.

25. Low SES, adjudicated blacks will have a higher DBS than all other groups.

26. Adjudicated, black males will have a higher DBS than all other groups.

27. Low SES, adjudicated, black males will have a higher DBS than all other groups.

CHAPTER II

REVIEW OF LITERATURE

Introduction

In reviewing the literature for the present study four goals have been set. The first goal is to give a historical review of the theories of juvenile delinquency with special emphasis on those theories which postulate that crime and delinquency are endemic in the lower socio-economic status group and is a product of the existing social structure. The second goal is to present clearly the biases inherent in the methodological approaches used in the support research, i.e. use of "official statistics", limited area surveys, etc. The third goal is to present the methodology of "self-report" and to look at the results of studies of "hidden" (uncaught, non-official) delinquent behavior as well as those involving "official" (caught) delinquent behavior. The fourth goal is a consideration of the home adjustment, emotional adjustment, hostility, and health adjustment variables among official and non-official delinquents.

Historical Perspective

Historically, many theorists have pointed out that the amount and types of crime existing in a given society appears to be a produce of that society's structure and an individual's place in that structure. A scholar of criminology, Sandhu (1974) says,

> A peasant society characterized by homogeneity, simple norms, clear-cut roles, group orientation, security, and obedience to authority, produce little crime. A modern industrial society characterized by heterogeneity, complex norms, ambiguous roles, individual orientation insecurity, and disregard of authority generates a high rate of crime (p. 4-5).

Shaw (1929), a pioneer in the sociological study of crime delinquency, would have agreed with Sandhu. Shaw approached the problem of delinquency causation by studying crime in parts of Chicago with high crime rates. Shaw's method was primarily that of studying crime incidence in the city by mapping the place of residence of persons who came in contact with the juvenile courts, probation officers, and/or those entered on jail records. The data collected was plotted on social-research maps which illustrated graphically the patterns of delinquency in Chicago.

Shaw found that juvenile delinquency was not distributed uniformly over the city but tended to cluster in the inner city characterized by the business district and heavy industrial areas where the residents were poor. His study also showed an inverse relationship between the rate of delinquency and distance from the center of the city. Shaw interprets his findings generally from a cultural transmission perspective.

> In short, with the process of growth of the city the invasion of residential communities by business and industry causes a disintegration of the community as a unit of social control. This disorganization is intensified by the influx of foreign nationals and racial groups whose old cultural and social pattern is transmitted. In time these delinquent patterns may become dominant and shape the attitudes and behavior of persons living in the area. Thus the section becomes an area of delinquency (pp. 205-206).

Shaw's (1929) work set the trend for investigation of delinquency based upon area surveys and official records. Most subsequent surveys followed Shaw's lead and focused upon high crime rate areas.

The focus on delinquency and crime as an interaction in the social milicu is illustrated in the work of Sellin (1938). He points out that researchers have long noticed an association between delinquency and intensive culture conflict. Sellin, like Shaw, points to the deleterious effects of two or more cultures being brought together. Sellin demonstrated that "culture conflict" can arise because of the interpenetration of conduct norms. He posits that when the conduct norms of various groups are brought together the inevitable result is conflict. Sellin uses as an example the increase in delinquency rates of later generations of immigrants. He concludes that the reasons are these: (1) a conflict between conduct norms of the old and new cultures, (2) a removal from rural to an urban environment, or (3) a move from a well organized homogeneous society to a disorganized heterogeneous one. Sellin's supposition and research gave support to the delinquency producing ability of class clashing norms.

Sutherland (1961), another of the theorists who posit social implications as cuasative agents of delinquency, takes a somewhat more comprehensive view. Sutherland is aware that the locus of crime and delinquency amy be in the whole of society where conditions are favorable. He states,

> Obviously, it is not the conditions or traits themselves which cause crime, for the conditions are sometimes present when criminality does not occur and they also are sometimes absent when criminality does occur (p. 75).

Sutherland and Cressey (1966) posit that within the organization of the social structure are opportunities for youth to associate with and learn both conventional and delinquent behavior. They suggest that the direction the person will take, delinquent or non-delinquent, is based on the number of definitions the person learns and internalizes which are favorable or unfavorable to delinquency. And too, whether a delinquent act is committed or not is based on the individual's subjective view that the appropriate situation for the act exists at the time.

Sutherland and Cressey outline their theory in more explicit terms as to how an individual (males primarily) become delinquent:

1. Delinquent and criminal behavior is learned.

2. Criminal behavior is learned in interaction with other persons in a process of communication.

3. The principal part of the learning process of criminal behavior occurs within intimate personal groups.

4. When criminal behavior is learned, the learning includes:

    a. techniques of commiting the crime

    b. the specific direction of motives, drives, rationalizations, and attitudes.

5. The specific direction of motives and drives is learned from definitions of the legal codes as favorable or unfavorable.

6. A person becomes delinquent because of an excess of definitions favorable to violation of the law.

7. Differential association may vary in frequency, duration, priority and intensity.

Sutherland (1966) suggests that tenet six (6), is the core of "Differential Association". That is, a person becomes delinquent because of an excess of definitions favorable to violation of the law. In terms of class implications it would seem that Sutherland's theory is much

less lower-class focused that previous empirical and theoretical research.

The hypothesized sentiment that delinquency is attributable to factors in the social structure is again approached by Merton (1957). Merton's hypothesis is stated thus, "aberrant behavior may be regarded sociologically as a symptom of dissociation between culturally prescribed aspirations and socially structured avenues for realizing those aspirations" (p. 132). He is positing that the social system then is "set-up" to precipitate some individuals into resorting to illegitimate means to realize social rewards.

Merton has taken note of the "culture-bearing society", and posit five possible adaptations. The first adaptation which is the most common and widely diffuse is conformity, conformity to both cultural goals and institutionalized means. The second adaptation is innovation, which occurs when the person has assimilated the cultural emphasis upon the goal without equally internalizing the institutional norms governing ways and means for attainment. A third hypothesized adaptation is that of ritualism. This adaptation is defined by Merton as the "abandoning or scaling down of the lofty cultural goals of great pecuniary success and rapid social mobility to the point where one's aspirations can be satisfied" (p. 132). This adaptation may be directed especially to the satisfied or "well adapted" lower-class individual. The fourth adaptation is retreatism. Merton feels that retreatism is the adaptation exhibited least in the society; and those that make this adaptation are the derelicts, psychotics, alcholics, addicts, etc. The fifth and last adaptation is that of rebellion. This adaptation is characterized by the

individual seeking standards outside the existing social structure to bring about a "new" social structure.

These adaptations cited by Merton (1957) are a part of his observations and hypothesis about anomie, or normlessness. To clearly understand this theory, Merton suggests that one must view anomie as "a resultant of ongoing social process and not simply as a condition which happens to obtain" (p. 132). He further states that some individuals are subjected more than others to the strains which arise from the discrepancy between cultural goals and effective access to their realization.

Another theorist who points out the interaction of social variables and delinquency is Cohen (1955). Cohen disagrees with those psychiatrically based theories holding a psychogenic cause of delinquency. Such as the theory that every person is endowed with inborn or instinctual anti-social impulses, commonly called the Id. Cohen asks "who are the carriers of the delinquent subculture?" In answering these questions, he finds that the "delinquency area" statistics drawn from official records report the location of delinquency as being in the lower socioeconomic neighborhoods.

Cohen cites other studies which support his position of delinquency predominating in the lower socioeconomic group (Thrasher, 1936; Porterfield, 1946; Wattenberg and Balistrieri, 1950). He is quick to point out that his theorizing is not to suggest that delinqency is confined to the lower socioeconomic neighborhoods but exists in all cultures and eventually criminological theory must be formulated to encompass this fact.

Miller (1958) presents another theory of a delinquency and criminal class differential. Miller contends that the lower-class is a generating milieu of gang delinquency with a distinctive culture of its own several decades old. He contends that the lower-class segment of society is encumbered by "focal concerns". These concerns are described as "trouble", "toughness", "smartness", "excitement", "fate", and "autonomy". His use of the term "focal concern" is couched in the belief that: (1) it is a term more definable and amenable to field observations, and (2) it is a term believed to be less "value" laden. Miller's definitions of the concerns are as follows: "trouble", the concern over "law-abiding" and "non-law-abiding" behavior; "toughness" physical prowess, bravery, absence of sentimentality; "smartness", the capacity to outsmart, outfox, dupe, or to "take" another without being duped or "taken"; "excitement", the seeking of a break from routine by seeking thrills; "fate", the feeling that ones life is subject to a set of forces over which he has little control; and "autonomy", the concern with independence.

Miller hypothesized that the lower-class is a generating milieu for delinquent behavior because of the above mentioned "focal concerns". He posit that if an individual is to be a part of the lower-class culture, he/she must follow the cultural norms of the lower-class, which automatically violate certain legal norms.

A conjoint effort to focus the locus of delinquency and crime causation in the social structure is that of Cloward and Ohlin (1960). In explaining different forms of delinquent subcultures in an urban slum, they base their theory on the state of the "social organization"

in the slum and the availability of an "opportunity structure". They posit, unlike Miller (1958), that the subculture contains both conventional and deviant roles interwoven, just as it offers legitimate and illegitimate opportunity. They offer as an example that juveniles may come into contact with junk men, fences, burglars, lawyers, and bondsmen who representing both deviate and conventional roles. These theorists posit that a delinquent or criminal subculture is likely to arise in a neighborhood milieu characterized by a close bond between youth and the deviant subculture and a disparity of affiliation with the more conventional models. The affiliation between youth and criminal subculture is seen as being precipitated by societal structure which impedes the attainment of desired goals by legitimate means (Cloward and Ohlin, 1960). Thus the criminal subculture exerts control over the behavior of delinquents by offering illegitimate means in lieu of legitimate means not offered by the social structure. These theorists suggest too that when a neighborhood is in a state of flux with new members coming and going, disorganization results, and that in such disorganized neighborhoods youth may be deprived of legitimate as well as illegitimate means to goals. Thus, "disorganization" leads to a "conflict subculture", were the young are in conflict with both conventional and non-conventional norms. A sort of double "anomie".

Criticisms of the Theories

All of the core theories presented above postulate either directly or indirectly an etiology of delinquent behavior found in the social

structure and have led to the preoccupation with socioeconomic status and/or social class as the primary factor responsible for delinquent behavior. The following are criticisms of these various core theories.

Shaw (1929) and Shaw and McKay (1942) have focused their theorizing and research on "areas" of delinquency. These works are basically criticized by other theorists for their extensive use of official statistics (police, probation, social agencies, etc.) and because of the operational ambiguities regarding "community disorganization" and "institutional disorganization".

Sellin's (1938) work may also be criticized for a lack of clarity in terms of his postulation that delinquency is attributable to a weakening of "conduct norms". His work, too, has been criticized for the lack of research to test his hypothesis of "culture conflict" (clash of norms) as being part of the cause of delinquent behavior.

Sutherland's (1966) theory of "differential association" is viewed as much less class based. Without specific focus on lower-class, Sutherland defines delinquency as over exposure to or assimilation of "definitions favorable to delinquency". The most widely held criticism of this theory is his failure to operationalize such terms as "intensity" and "excess of definitions favorable to violations of the law". In more contemporary times with a shift in criminological thought, a criticism has been leveled regarding the lack of attention to "situational" implications as causative factors (Matza, 1964).

Cohen (1955) takes a means-end approach to theorizing about the cause of delinquency. He sets out to explain the origin of the delinquent subculture and where in the social system it is located. He argues that the answer must come largely from statistics compiled by

police, courts, and social agencies. Reviewers of this theory have focused primarily on Cohen's disregard of the bias of official statistics. Also, critics discuss the inequity of emphasis on class as causative in delinquency and the emphasis on class as labeling agents (police, courts, etc.) (Poveda, 1970).

Miller (1958) has predicted a cultural-conflict theory, grounded in his observations of the "focal concerns" of the lower-class. His theory is roundly criticized for its focus on the lower-class at the exclusion of the middle-class. Miller's interpretation of the responses made by the lower-class individuals concerning their "focal concerns" may also be regarded as experimenter bias.

Cloward and Ohlin (1960) attempted to integrate two streams of thought: Merton's (1957) for the source of pressure that leads to deviance; and Shaw and McKay's (1942) and Sutherland's (1966) for cultural transmission. They suggest that delinquency is a result of anomie caused by the breakdown between goals and legitimate avenues of access to them. Their theorizing is questioned on the basis that their hypotheses are not clearly supported and on their exclusive use of official data.

A review of the criticisms given above indicates that some of the most frequent complaints are: (1) the exclusive (or almost exclusive) use of official data as sources of information, (2) the failure to survey other socioeconomic groups for delinquency incidence, and (3) failure to differentiate between "official" (caught) and "unofficial" (hidden) delinquency existing in various socioeconomic populations. An additional criticism is the complete failure of any of these

theories to include female delinquent behavior and causes. The next two sections will look at these methodological considerations and how various investigators have addressed them.

Official Statistics and Official Delinquency

The theories which take their evidence from official data indicate that delinquency is endemic to the lower-socioeconomic strata (Shaw and McKay, 1942; Cohen, 1955; Miller, 1958). However, for years this contention has been criticized by a number of theorists and researchers who disagree (Robinson, 1936; Porterfield, 1946; Murphy, Shirley and Witmer, 1946; Wallerstein and Wylie, 1947; Clark and Wenniger, 1962). These researchers suggest that juveniles in the lower-socioeconomic strata are overrepresented in delinquency statistics because official agencies are more inclined to record these offenses (Arnold, 1966; Stephenson and Scarpitti, 1968; Thornberry, 1973). This then represents a resource which represents only those individuals "caught" in official action. This action may be based on a stereotypical view of who is delinquent (Cicourel, 1968; Garrett and Short, 1975). The outcome of the official agencies interaction with the suspect may be based on the social skills of the suspect and his/her demeanor (Myerhoff and Myerhoff, 1964). A study by Garrett and Short (1975) points to the disparity between the "streetwise" knowledge an agent uses to assess and predict deviance and the actual deviant behavior.

The focus on the bias of official statistics has led researchers to attempt to illustrate the disproportionate number of lower-socioeconomic individuals included by studies of "actual violations vs apprehension." Empirical studies suggest that there are a large

number of undetected delinquent acts (Porterfield, 1946; Murphy, Shirley and Witmer, 1946; Erickson and Empey, 1963; Gold, 1966). The consensus seems to indicate that perhaps as little as three to five per cent of the actual violaters are apprehended (Empey, 1967). Gold (1966) found that the police were more likely to recognize the offenses of the lower-socioeconomic group. Empey and Erickson (1966) found that low-socio-economic adolescents were over represented in a training school in proportion to the offenses they reported having committed.

One of the crucial questions in this area is the disproportionate representation of the lower-socioeconomic group. Some theorists and researchers suggest it is due to the "criminal image" as evoked in the middle-class populations or police officer (Poveda, 1970). "Some of the cues of danger the policeman uses are: a young man's manner of walking and strutting, certain hairstyles, a youth dressed in black leather jacket and motorcycle boots" (Skolnick, 1966, p. 45-47). It is further suggested by Empey (1967), that police and other juvenile officials are influenced to respond to variables such as poor home and family conditions, neglect, truancy, and other factors which may come to light during an investigation. He suggests these variables are typically associated with the lower-socioeconomic groups and are conditions which weight in the direction of official action being taken.

Some researchers believe that delinquent behavior of the lower-class group is more serious than that of the other social status (Cohen, 1955; Miller, 1958; Ohlin, 1960; Cloward and Ohlin, 1960). Ohlin (1960), maintains that middle-class delinquency is "petty" in comparison to lower-socioeconomic status delinquency. He and others suggest by way

of theories like "differential association" and "cultural transmission", that the inclination to deviance is more deeply ingrained in the lower-socioeconomic group. Therefore, they possess a greater potential to become career criminals. The perceived seriousness of lower-socioeconomic status delinquency may be linked to the well publicized violent gang stories in the media. Also, a great deal of theorizing about delinquency is based on studies of lower-socioeconomic status groups. In opposition to the focus on seriousness of acts of lower-socioeconomic status groups, there are studies which suggest that middle-class groups commit acts of deviance just as serious (Greely and Casey, 1963; Myerhoff and Myerhoff, 1964; Empey and Erickson, 1966). Empey and Erickson (1966) using official statistics found that the more serious forms of delinquency were less common among all class groups, but violations such as grand theft, forgery, breaking and entering, destroying property, and arson were more often committed by middle- rather than lower-socioeconomic status juveniles. This conclusion is supported by self-reported data from boys with no official record and from boys incarcerated in training schools. These and other studies suggest that there may be less differences between groups in terms of seriousness of delinquent acts than previously thought. Empey (1967) suggests that a better understanding of delinquent behavior might be gained by more within class evaluations of delinquency than gross comparisons between classes.

The preoccupation with the lower-socioeconomic groups is made quite apparent when a comparison is made with what research that is done specific to the middle and upper-socioeconomic status groups.

Robinson (1936) and Porterfield (1946), and others have done pioneering studies using self-report and middle-class subjects recalling delinquent behavior. These studies indicated that a great deal of delinquent behavior may be found in this group (middle-class). There have also been a number of studies which indicate the poor relationship between socioeconomic status and delinquency (Nye, Short, and Olsen, 1958; Dentler and Monroe, 1961; Clark and Wenninger, 1962; Akers, 1964; Gold, 1966). Many of these findings have been questioned on grounds that they were obtained in small cities. However, Aker's (1964) and Gold's (1966) studies were conducted in large urban and industrial cities; their results showed only a weak or non-significant relationship between socioeconomic status and delinquency. These data and others seriously question the association of socioeconomic status and delinquency.

An influential study of middle-class delinquency was conducted by Wattenberg and Balistrieri (1952). In this study, 230 white boys charged with automobile theft were compared with 2,544 others in trouble with police in the year 1948. The findings of these researchers was that a higher proportion of middle-class youth were represented in car theft than were lower-class youth. The researchers theorized that these boys shared a personality structure in common with lower-class boys; that is, a "personality structure which responded to the values of their primary groups, but not to those of the larger adult-dominated social entities" (Wattenberg and Balistrieri, 1952, p. 575).

Lane (1963) finds from his research that there may be other generating milieus of delinquency other than that of the lower-socioeconomic status groups. In this study, Lane found that

there were certain characteristics or modes of delinquent behavior which seem to be associated with differing class levels. He found, like Wattenberg and Balistrieri (1952), a high frequency of upper-class auto theft. Also, he found recidivism sharply decreases in the middle status groups. Lane puts forth the opinion from his and others works that a need exists for integration of middle-class delinquency into our understanding of the total problem of juvenile delinquency. Lane proposes that perhaps lower-class delinquency is a "sub-cultural" phenomenon and middle-class delinquency is more a "con-cultural" phenomenon.

Miller and Kvaraceus (1959) originally proposed an explanation of middle-class delinquency as the diffusion of working-class values and behavior patterns into the middle-class couples with a breakdown or weakening of the "deferred gratification" pattern of the middle-class. In a more recent empirical study, Kvaraceus (1964) attempted to determine the distribution of norm violation among social classes and the relationship between class mobility and norm violations. He found that upper-class persons were more likely to be involved in alcohol offenses and to participate more in group delinquencies than the other two classes. He also found that lower-class persons were more involved in serious offenses.

Greely and Casey (1963) and Bohlke (1961) both cite "Nouvean Bourgeoisic" or the new middle-class as having an impact on delinquency. Greely and Casey take a social structure approach suggesting a clash of norms by those who have not yet internalized the stable middle-class norms. Bohlke, like Sutherland (1966), suggests

that delinquency patterns enter the middle-class adolescent population through association with lower-class youth.

England (1960) posit a general theory of middle-class delinquency based on an anti-establishment subculture. He sees the mass media as catering to this group and providing a carrier of lower-class values. England suggests delinquency is the result of the development of "an ethos of irresponsible hedonism" which runs counter to conventional norms. His contentions have some similarity to Matza's and Sykes (1957 and 1961), theory of "Drift", when they suggest that delinquents are "members" of the leisure class. That is, they suggest delinquency may be related to certain underlying latent values within the middle-class value system. These values are viewed as essentially the values of the leisure class as "adventure", "thrills", "kicks", and "conspicuous consumption", etc.

Some recent theories which approach the question of the delinquency of the middle-class are Polk et al. (1974) and Kelly and Pink (1975). These researchers have questioned the assertion that school failure among the lower-class leads to delinquency. Polk et al. found that school failure doesn't produce a greater incidence of delinquency among working-class boys. Kelly and Pink using, several indicators of social status, found none of the social indicators gave clearly significant relationships to delinquency. The indicators used to establish status were: (1) father's occupation, (2) father's educational level, (3) mother's educational level, and (4) a three factor index composed of the three previous indicators. Though

these usual social indicators were not significant they did find that the "track position" assigned to a student (whether the student was taking a college prepatory course or not) had a significant relationship to delinquency. Non-college prepatory students were more inclined to be delinquent than college prepatory students. These findings led these researchers to require more research focused on variables which account better for delinquency.

Conclusion

The theories which focus on lower-class crime and delinquency are only recently being called into question. It is clear that contemporary researchers are finding that lower-class status doesn't appear to account for all delinquent behavior, and are looking more directly at the deviance of other social status groups.

Self-Report and Hidden Delinquency

The foregoing sections have approached the inequities of theories of delinquency based on data obtained from official statistics. This section will focus on the study of delinquency based on self-report.

Robinson (1936) discussing the inadequacies of the official statistics approach raised the logical question, "can delinquency be measured?" She was concerned with such deficiencies as the gross discrepancies between arrest and conviction incidences, and in arrest and conviction procedures. She noted the differing orientation among police departments toward similar behaviors. These differences resulted in a discrepancy in the labeling of actual crimes. She pointed out that criminal behavior comparisons based on such things

as age, race, sex, and socioeconomic status frequently varied in interpretation. The alternative used by Robinson (1936), one of the early self-report studies, was to go directly to individuals and interview them regarding their own deviant behavior. Her findings, germane to this thesis, were: (1) that there is a great deal more deviant behavior than that which comes to the attention of law enforcement officials, and (2) that there are a number of contacts with law enforcement officials that result in no official action.

Following the work of Robinson, Porterfield (1943) questioned the use of official statistics as a means of engendering theories about the causation of delinquency. His study of delinquency and its outcome in court and college is based on a statistical comparison of the delinquencies of college students with the delinquencies of juveniles brought to the juvenile court. The data was secured from the study of 2,049 alleged delinquents ages 13-16 years old at the Fort Worth area and 337 alleged non-delinquent college students from three schools in north Texas. The study included information on the pre-enrollment behavior of 200 college men and 137 college women and on the post-enrollment behaviors of one-half of the men. Porterfield analyzed the court cases that represented fifty-five specific offenses varying from "shooting spitwads at a wrestling match" to murder. He found that the offenses in the official records were matched very closely by the statements of the so-called non-delinquent group. The investigator used a self-report, anonymous questionnaire to obtain this information. The questionnaire contained the fifty-five specific offenses for which adolescents were brought to court. His overall

findings concluded that the offenses of the college students were apparently as serious, though probably not as frequent, as those of the youth in the court cases.

Murphy, Shirley, and Witmer (1946), following up the work of Robinson (1936), approached the problem of the disparity between official statistics and unreported deviant behavior. They began a series of investigations based upon hidden criminal behavior. The Cambridge Sommerville Youth Study led to the discovery that authorities actually took official action in less than 1.5% of infractions. Almost 1400 infractions never became court matters. Of the 4400 minor offenses that were listed, only 6% were prosecuted, and of the 616 serious offenses that were listed, 11% were prosecuted. The differences between official statistics and the number of unreported acts of deviance was reported by social workers who were in intimate contact with youth. This procedure, though fraught with some sticky methodological problems, does illustrate the disparity between official statistics and self-reported data.

Short (1954), continuing to pursue the question of statistical bias in official data, sought to investigate the incidence of various criminal behavior and the official treatment accorded such behavior. He administered a questionnaire to a population of college freshmen and state training school residents. The questionnaires dealt with 43 offenses and were based, primarily, on the self-report technique. Short found that the use of this type of technique required the utmost care in establishing subject-experimenter rapport. He found a sizeable proportion of the college students had committed serious offenses. This was especially true of the male college freshmen. There was little

difference found between the college freshman group and the training school group, in regard to the number of times a serious offense was committed. Short (1954, p. 118) concluded that, "This finding is relevant to the hypothesis of sociologists that delinquents are these who are caught while engaging in behavior relatively common among their age group."

Nye and Short (1956) continuing their quest for the answer to the question posed by Robinson (1936), "Can delinquency be measured?", initiated their 1955 study. Again, this study was aimed at weaknesses of the often used dichotomy of institutionalized vs non-institutionalized subjects in hypothesizing origin of delinquency. They too, were concerned with the effect incarceration has on the individual, and the inadequacies of the official data method.

Nye and Short obtained their data from three sources: (1) a sample of 2350 high school students in three contiguous cities with population ranges from 10,000 to 40,000, (2) a sample of 320 subjects from the state training schools for boys and girls, and (3) a sample of 596 rural boys and girls. The data was collected by the self-report questionnaire method.

The researchers found several factors of importance in the use of the self-report technique. Perhaps the most significant finding was the importance of subject-experimenter rapport. Second, the importance of giving the subject a clear understanding that anonymity will be maintained. The researchers also pointed out that to avoid undue speculation by the participants simultaneous administration of the questionnaire was needed.

Nye and Short (1956), aware of the questionable reliability and validity of official statistics, were quick to point out the reliability and validity of their technique. The reliability of the questionnaire responses was verified by eliminating those who answered "NO" to questions which were usually answered in the opposite manner by the majority of the population. They also eliminated those who answered "YES" to all the delinquency questions. A third group of non-cooperators who responded in a haphazard manner were eliminated. This same technique was also applied to poor readers. The researchers found only a 1%, 4%, and a 10% loss of data by eliminating invalid questionnaires for high school, female training school, and male training school respondents respectively. The researchers reported two kinds of validity: (1) face validity based on the fact that all items were violations of laws or were offenses for which adolescents are adjudicated and (2) the scale scores differentiated between groups "known to be different" on the delinquent behavior dimension.

Short and Nye (1957) in a report of their 1955 study, approached the definitional problem of delinquency and crime. Again, they suggested that all the confusion relating to the measurement of crime could be handled through the self-report technique. They approached the problem of studying processes such as emotional instability, strained family relations, and social maladjustment as being a result of delinquency or of institutionalization. They measured the relationship of delinquency to socioeconomic status by utilizing institutionalization as one criterion of delinquency and reported behavior as the second. Short and Nye encountered a number of methodological problems, one of which was response bias, due to the fact that they

relied heavily on volunteers. They reviewed Wollin (1949) and Locke (1954) and pointed out that in their studies they also found that there was minimal response bias, though some variation was noted. The minimal differences between using institutional criteria and self-report criteria led Short and Nye to conclude that "categories of deviate behavior can be studied in a general population provided proper attention is given to public relations and provided the anonymity of the individual is protected" (p. 213).

Dentler and Monroe (1961), following the works of Nye and Short in using the self-report method, attempted to find a social correlation of adolescent theft as Porterfield (1946) had done earlier. Their article fosters the idea that one must study deviate acts and not official delinquency because one never knows whether the behavior will be acted upon by authorities and, therefore, become delinquent by definition. Dentler and Monroe devised a questionnaire to test eighth grade subjects in three Kansas junior high schools; one location in a middle-class suburb, the second located in a rural farm town, and the third was a rural non-farm community. The findings of these researchers provided only three significant categories from the demographic data taken. They were age, sex, and birth order. Dentler and Monroe also found that socioeconomic status did not contain a positive relationship to delinquency. What they did find was that among students reporting a high theft incidence, was a lack of family structure and a feeling of not being handled equitably by the parent(s). The same students displayed a tendency to live outside the home, which they described as being unloving. There was little confiding in mothers or fathers and the students tended to define themselves as disobedient.

Erickson and Empey (1963), aware of the problems of self-reported delinquency, chose to approach the question of the bias of official statistics using the interview technique of self-report. These researchers cite two problems which affected the reliability of the questionnaire type, self-report, as reasons for their choice of the interview technique. These problems were (1) the lack of literacy skills among the persistent delinquents, and (2) indications from pilot studies showing that high school subjects had trouble understanding specific questions and supplying the data wanted.

Erickson and Empey sought to focus on several of the questions that were raised by previous researchers using the questionnaire type self-report method. Their focus was on these questions:

1. What is revealed about the total volume of delinquency when undetected offenses are enumerated? What offenses are most common?

2. To what degree do violations go undetected? To what extent do they go unacted upon in the courts?

3. Do non-official delinquents--young people that have never been convicted--commit delinquencies equal in number and seriousness to those committed by officially designated offenders?

4. How useful are traditional dichotomies--delinquent or non-delinquent, institutionalized or non-institutionalized--in distinguishing groups of offenders one from another?

5. How valid are court records as an index of the total volume and types of offenses in which individuals are most commonly involved?

The sample used by these researchers was made up of males ages 15-17 years and four subsamples of 50 subjects. The subjects came from four categories: (1) high school boys who had never been to court, (2) boys who had been to court once, (3) repeat offenders on probation in the community, and (4) incarcerated offenders.

The findings of Erickson and Empey (1963) in regard to the self-report method as a viable alternative to official data are given below. These findings indicate response validity was quite good. All respondents were checked with official data and all respondents had been quite truthful regarding court appearances and type and frequency of offenses. Their overall view of official data vs self-report was that official data is quite accurate in detailing the most serious offense of an individual. But official data lacks a considerable amount of detail in terms of patterns of behavior which would give considerable aid to those wishing to determine etiology of delinquency and intervene in a preventive manner.

Gold (1966) also conducted research on undetected criminal behavior. Some of those quoted by Gold were Clark and Wenninger (1962) who, in line with Nye, Short, and Olson (1958) and Dentler and Monroe (1961), failed to detect any real differences among social classes with regard to criminal behavior. Gold attempted to test all boys and girls, ages 13 through 16, living in Flint, Michigan. He eventually interviewed 87% of his original list, 6% refusing to participate, 7% moving from the area before the research was concluded. College students were trained to interview the subjects on their behaviors. The subjects were driven from their homes to a localized testing center where they were appraised of the nature of the research, given an opportunity to leave, and told about the confidential nature of their responses. The method used by Gold was the interview method as opposed to the questionnaire method. Items related to delinquent behavior were placed on cards, and using a card sort technique, behaviors admitted to were used as the basis of an interview.

Each individual was interviewed about offenses he had committed within the last three years. One of the methodological problems encountered by Gold was concealment of information by the subjects. In order to combat this, an additional study was utilized in which the exact amount of delinquency was known before the interview. An individual was considered to be a truth teller if he in fact told what had been going on, elaborated on it, or admitted to things not previously known. A second problem which Gold considered was that of exaggeration. He counterd this by utilizing a detailed format in the interview questioning.

Gold (1966, p. 45) stated that from his results, "It seems that studies of undetected delinquency by interview methods consistently find a relationship with socioeconomic status among delinquent boys, while those which use self-administered checklists do not." In his view, the findings were in line and support other researchers like Reiss and Rhodes (1961) and Erickson and Empey (1963), regarding the above mentioned status-delinquency relationship.

Clark and Tiff (1966) suggested as others have that data obtained about deviant behavior, via interviews and questionnaires, are particularly vulnerable to challenge on the grounds of validity. These researchers designed a study that experimented with the accuracy of anonymous questionnaire responses by utilizing data obtained via a polygraph examination to be used as the external validity criteria. In the first of two preliminary studies, university students were asked to suggest behaviors which other students might tend to under- or over-report. In the second study, the students were asked to

estimate the amount of "normative pressure" placed on persons of their age and sex to respond in a particular direction on items from research on undetected delinquency. A final questionnaire was then constructed consisting of five, seven-item groups reflecting consensus of their potential under- or over-reportability. The subjects were all male students (N=45) enrolled in the discussion sections of an introductory sociology course at a major Midwestern university. The respondents were asked to admit to the number of times they committed delinquent behavior since entering high school. After completion of the questionnaire (in pencil), respondents were told of the second phase of the study for which they would receive eight dollars and would require approximately one hour for completion. While maintaining anonymity, personal interviews were scheduled during the ensuing two weeks. During the interview, the respondent was informed that the researchers' primary interest was in the accuracy of his questionnaire. The respondent was then asked to select his questionnaire and to make whatever modifications that were necessary to bring it to 100% accuracy, Before he proceeded, the respondent was advised that in order for the researchers to have maximum confidence in his responses they would like to give him a polygraph examination on his final responses. The researchers using a polygraph to determine the truth of a response to the scaled items made some interesting findings. All respondents had made corrections to their questionnaire responses. About 58% of the total number of changes between the initial questionnaire responses and the final responses were during the personal interview and 42% of the changes were made during the polygraph examination.

It was concluded that when responding to the questionnaire and the interview evaluations, delinquent behavior is underreported by all subjects. Researchers concede, however, that even with reporting inaccuracies self-report questionnaires and interviews are adequate tools to differentiate and order the frequency of delinquent behavior.

Clark and Tiff (1966) found that self-reporting of delinquency is rather accurate when a wide range of behavior is considered simultaneously, but there is differential validity on specific questionnaire items. Those items most frequently used on delinquency scales were found to be rather inaccurate.

Again, Erickson (1972) questioned the arguments regarding the efficacy of self-reports vs official data. His view of the inadequacies of statistical data taken from official sources are these:

> First, there is a lack of consensus regarding the definition for criminality. Second, there is a lack of uniform methods of reporting and recording crime data. Third, there is a differential in law enforcement with respect to different racial and class groups and geographic regions. Fourth, perhaps the most serious limitation of all is the fact that present statistics deal exclusively with those offenders who become involved in some way in the legal-reactive process (p. 388).

Erickson suggests that the crucial point is that there is a real need for further research concerning the relationship between official and unofficial criteria of delinquency and crime. He poses that there is a need to examine "official" and "unofficial" measures of delinquency for the same samples or populations of adolescents over time.

Erickson, using a sample of 282 high school males in the tenth and eleventh grades attempted to answer the question of how well

self-report and official data held up as predictors of delinquency over a period of time. Erickson first devised a self-report scale to order the respondents in terms of severity of delinquency. This scale was found to have a high reproductibility coefficient (93), and each subject was assigned to the pattern that he fit. A second scale was produced to estimate the likelihood of future violations and obtained a .93 coefficient or reproductibility on the Guttman scale. The third step involved the gathering of "official" delinquency data for the sample. This was carried out by a review of the court records. This data made it possible to examine the statistical interrelationships between three variables: (1) reported delinquent behavior; (2) estimates of future delinquent behavior; (3) and the number of past official court appearances.

Erickson (1972) in a follow-up study taken a year later found that self-report was more accurate in predicting past court appearances (Gamma .72), and "past court appearances" were found to be the best predictor of future court appearances, but these results do not address the question of age, sex, race or socioeconomic status. The Gamma coefficient for "past court appearances" was .85. The third finding was that all court appearances, past and future, are best predicted by self-reported delinquency (Gamma .95). Erickson concluded that with these results, particularly the correlation between self-report and court appearances, as far as the predictability of future court appearances, official court records do have some utility for scientific purposes.

Peterson, Urban and Vondracek (1975) have attempted to develop a self-report instrument designed to measure "delinquent orientation"

as revealed by the attitudes, values, beliefs, and goals of youth which are presumed to be of significance in governing their behavior. A questionnaire was administered to a sample of 299 institutionalized delinquents and a sample of 431 high school students in both urban and rural public secondary schools. The samples were matched on age, family socioeconomic and educational level, and urban or non-urban residency. The researchers suggest that the direction of their study was guided by several factors. They believed that a distinction must be drawn between situational and behavioral conditions. Therefore, it is crucial to discover how situational factors are reflected in the psychological perspective of the individual. They also believe that information concerning situational or behavioral conditions may be collected from parents, school personnel, juvenile officers, interviewers, and research investigators themselves. It is their contention that when it comes to determining what a youth thinks, feels, believes, values, and seeks, there is only one source--the youth. The study by Peterson et al. (1975) were guided by the knowledge that there is a tendency on the part of the youths who are "at odds" with others in their society may misrepresent themselves in a variety of ways. Too, they were aware of the youths' slanting of answers to those determined by their reference group. This then guided their desire to make an instrument which considered these factors. Some of the more typical concerns were reading difficulties, short attention span, low motivational level, lack of cooperation, failure to comprehend middle-class cultural content and language, and lack of test-taking skills.

Peterson et al. in a review of the literature stated that interviews with professional workers in the field and successive

interviews with delinquent youths themselves led to the development of a pool of 322 questions. These questions were designed to elicit accurate self-reports from youths concerning their perceptions, ideas, beliefs, values, attitudes, interests, aspirations, and goals. The questionnaire after administration to the non-delinquent high school group, the institutionalized group, and the combined group submitted to a principal components factor analysis. Seven factors were extracted for all three of the groups because only minor additional variance could be accounted for by the extraction of additional factors. The total amount of variance which was accounted for by the seven factors was 45.93% in the institutionalized delinquent sample and 39.89% in the high school sample. The seven factors isolated were as follows:

1. School aversion
2. Negative evaluation of the justice system
3. Dissatisfaction with home and family life
4. Egocentrism
5. Negative evaluation of own school performance
6. Interpersonal non-affiliation
7. Unnamed

From the seven factors, only six were found to be useful and scale items were developed for factors 1-6. The Alpha coefficients ranged from a high of .90 to .68. The researchers found significant differences at the .001 level between mean scores of the institutionalized delinquent and high school student samples for Scale 1, School Aversion; Scale 2, Negative Evaluation of the Justice System; and Scale 4, Egocentrism. No significant differences between group mean scores were found for the remaining three scales.

The findings of Peterson et al. (1975) in regard to the issues of self-report were as follows:

1. It is feasible to devise self-report question formats specifically for youths;

2. These formats can be designed to elucidate the ideational aspects of youths, which are presumed to be of significance in governing their actions, and for which self-report represents the principal mode of access;

3. The self-report of youths prove to be intelligibly to one another as demonstrated by the finding that they fall into clusters which can be identified through factor-analytic methods;

4. The factors which repeatedly emerge appear to deal with several major facets of their lives, namely, home and family, school and school accomplishment, administration of the justice system, interpersonal relationships, and intrapersonal relationships;

5. The recurrence of these factors over successive samples suggest a relatively stable factor structure which cuts across the youth population at large and is not limited to delinquent youths or other subgroups.

These researchers conclude that evaluative judgments may represent the most important proximal determinants of prosocial, conforming behavior on the one hand and delinquent, antisocial behavior on the other; and the development of reliable instruments for their assessment is of critical importance.

Conclusion

From the studies mentioned it is clear that much delinquent behavior goes unreported and/or is not acted on by criminal justice officials. This being the case, it is also clear that official reports of crime fail to reflect accurately the picture of crime and delinquency. The picture should reflect the criminal and delinquent behavior of all classes and races. The utilization of self-reports by researchers is

a major step in dealing with the biased and inaccurate picture of crime and delinquency. The use of self-reported delinquent behavior is also important in developing a theory of delinquency which is not biased by class and race.

Female Delinquency

The early researchers into female delinquent behavior have suggested several reasons for delinquent behavior. One position was that of a genetic difference between males and females (Kanopka, 1966). This posture asserts that women lack a genetic aggressiveness found in males. Perhaps the more popular position and tenable belief is that females become delinquent as a result of their reaction to a broken home (Monahan, 1957; Nye, 1958; Adamek, 1968; Cavan, 1969). This position is buttressed by the fact that a significant number of officially delinquent females come from broken homes. It should be mentioned that this position does not account for those non-official delinquents, and the responses of females in intact yet dysfunctional home situations. Another factor related to the broken home studies is the great impact of a negative father-daughter relationship as a force propelling the female toward delinquent behavior (Graff, 1968; Biller and Meridith, 1975; Lang et al., 1976). These studies have shown that females with poor interpersonal father relations are more apt to become delinquent.

There has been a good deal of discussion by early researchers of female delinquency in terms of "social emancipation" (Schur, 1969; Sutherland and Cressey, 1970). The thinking involved in this position is that if females had less supervision or as much freedom as males,

one would see an increase in female delinquency. This position finds support in the findings nationally and internationally, that there is an inverse relationship between the amount of emancipation and the rate of official delinquency.

This last thought by earlier researchers has critical implication for the thinking of the contemporary researcher. The present era is now characterized by more emancipation and egalitarianism for females. This era is also characterized by an increased rate in the non-stereotypical types of female delinquencies and a decrease in those held to be stereotypically feminine (U. S. Department of Justice, 1977; U. S. Department of Justice, 1978). These factors make the proposition of social emancipation of females and its implications for delinquency causation much more credible. A few contemporary researchers are now involved in studies which focus on this issue of emancipation and its relationship to female delinquency, in light of the recent women's rights movement (Mason et al., 1976; Bush et al., 1978).

Another view of delinquency is suggested by Hirschi (1969), who argues that delinquent acts result when an individual's bond to society is weak or broken and the "attachment", "commitment", "involvement", and "belief" are aspects of the social bond which acts to inhibit delinquent behavior. He suggests that compared to boys, girls are typically more closely bound to conventional persons, values, and institutions. Such sex differences in attachment, commitment, involvement, and beliefs should, according to control theory, lead to a sex difference in delinquent behavior. Hirschi's view is in line with other criminologists who tend to account for sex differences by

reference to the variable degree of "social emancipation" or characteristics of learned "sex roles". The investigation of the implications of social bond among delinquent youth has been further studied by Jensen and Eve (1976). They examined the ordinal association between sex and delinquency among adolescents similarly "bound" to conventional person, institutions, or values. The bonds were introduced first singularly, then simultaneously with sex, delinquent friends, and then bond variables by delinquent friends and sex. These researchers found that consistent with previous self-reports studies, females, as a group, appear to commit fewer delinquent acts than males. However, there are some subcategories of females with rates of delinquency greater than males. Finally, these researchers found that no single variable could totally account for the sex-delinquency relationship.

The sex difference for delinquent behavior is further illustrated by the study by Kratcoski and Kratcoski (1975). They found that males as in all previous studies were more delinquent than females. They also found that males are more aggressive based on the type of offense like breaking and entering, fist fights, destroying property, larceny of all types, and joyriding. They found that there is a very slight difference in the offenses of "runaway" and "defying parental authority" between males and females for these offenses. They also found little difference in the pattern of delinquency for those offenses which may be described as typically adolescent (drinking, driving without a license or permit, drug use, and skipping school). They

also found that lower-socioeconomic status girls reported more delinquent acts than middle-socioeconomic status girls reported. They also found that for "unruly behavior" low-socioeconomic status girls reported less unruly behavior than middle-socioeconomic status girls reported.

The notion that there is less of a difference between sex delinquency ratios from official sources and self-reports is further substantiated by the work of Wise (1967) and Hindelang (1971). These researchers challenged the accuracy of the sex-delinquency ratio given in the 1970 Juvenile Court Statistics which recorded a ratio of three to one, boy to girl delinquency cases disposed of by the juvenile courts. In their self-reported delinquency studies, Hindelang reported a 2.56 to one, boy-girl ratio while Wise found a 1.7 to one ratio. The findings of these researchers suggest, as does others, that even these differences may be the result of differential law enforcement and not a reflection of actual behavior patterns for males and females.

Conclusion

In review of the literature of female delinquency, several issues become evident. It is clear the number of studies specific to female delinquency are very few. It is also apparent, that the atmosphere of the times plays a crucial role in the results and interpretation of delinquency data on females. It is also evident that because things change with time, there is a continuing need to study the difference in delinquent behavior between sexes. In this endeavor it will be important to utilize as accurate a research tool as possible and self-reported techniques are likely to find their utility tested in this role.

Black-White Comparisons in Delinquency

It has long been an observation made by observers and researchers in criminology, that blacks and poor persons make up a disproportionate segment of the incarcerated statistics (Sutherland and Cressey, 1955; Korn, 1959; Pettigrew, 1964; Haskell and Yablonski, 1971; Sandhu, 1977). The reasons suggested by researchers for this disparity run the gamut from simple acceptance of genetic inclination to criminal and delinquent behavior, to theories which suggest that blacks and poor persons are reacting to the class-bias of the American social system.

Sutherland and Cressey (1955), acknowledge the 3:1 difference between the numbers of blacks and whites incarcerated. However, they are quick to issue a caution to those who might take these statistics as prima facia evidence of more criminality among blacks. These authors offer a number of reasons for their admonition of caution. Chief among their concerns is the reliability and/or validity of arrest reports in Uniform Crime Reports, which are received from selected areas which may over-represent or under-represent black and white arrests. To make comparisons between races on this kind of data has little chance of real accuracy. Sutherland and Cressey also mention that arrest reports do not reflect Federal arrest of Native Americans, who have a special client relationship to federal agents.

Another important comment by these researchers has to do with the discrimination of the law enforcement apparatus. They suggest that blacks are arrested and incarcerated more frequently than whites, sentenced to longer sentences for the same crimes as whites, and less frequently given probation and parole than whites (Sutherland and

Cressey, 1955; Korn, 1959; Pettigrew, 1964). These are contentions found in the 1950's which still are supported by contemporary research. Pettigrew (1964) cites the discriminatory practice of police mass round ups of blacks and their arrest which results in a record though none may actually come to trial on the charge. Others have noted the criminal image held by police that blacks are lawless and dangerous, which results in a quicker arrest (Pilavin and Brian, 1964; Haskell and Yablonski, 1971). Haskell and Yablonski (1971) also note a reciprocity of hostile feelings by blacks increases the potential for arrest.

Another factor offered as reason for the disproportionate number of blacks and poor incarcerated, is the seriousness of the crimes committed. This research question has implications not only for blacks, but for middle-class delinquents and females who have been omitted from many studies because their delinquent behavior was viewed by labeling agencies as petty and not of the serious type perpetrated by blacks. Researchers for many years now have maintained that blacks commit more serious crimes (homicide, assult, rape, and robbery) which is supported by statistics (Sutherland and Cressey, 1955; Korn, 1959; Pettigrew, 1964; Stepehnson and Scarpetti, 1968; Haskell and Yahlowski, 1971; Sandhu, 1974; Sandhu, 1977; Griffin and Griffin, 1978). These same researchers also found that whites commit more property offenses (burglary, larcency, theft, and motor vehicle theft).

The apparent fact of higher rates of crime and delinquency is reflected in the arrest and incarceration statistics. However, these data do not yield answers to the why of this situation, unless viewed and interpreted in a rather naive way. A number of

researchers have looked at variables suspected as causal in the high delinquency rates among black and poor persons.

Korn (1959) states that many contemporary students of black crime believe that the trends indicated in the crime statistics reflect the actual crime distribution, though in an exaggerated form. He, like others, suggests two types of explanations to account for the purportedly higher rates of black crime and delinquency. These explanations are genetic cause theories and various environmental hypotheses. The genetic theorists suggest that there is an inherited predisposition to crime among blacks. This theory finds little support, especially when one takes the view that in America there are few unmixed blacks. Herskovits (1930) in his study, The Anthropometry of the American Negro, estimated that of all persons classified as black, only as few as 22% may be classes as unmixed. From this perspective, it is clear that a genetic cause for a high delinquency and crime rate among blacks is grossly untenable.

Pettigrew (1964), seems to be a proponent of the view that the high rates of delinquency and crime found among black and poor persons is a reflection of all environmental conditions which may precipitate delinquency and crime, irrespective of class or color. Pettigrew puts it this way,

> Blacks when compared with other Americans, are more often lower-class and poor, slum residents of the largest cities, victims of family disorganization, Southern in origin, young and unemployed, and the object of extensive discrimination...each an important social correlate of crime apart from race (p. 144).

Conclusion

The bias of official statistics limits those statistics as a resource of accurate data on the relationship of race to delinquent behavior. This has historically been the resource used by many research projects which have concluded that blacks are more delinquent than whites. Though significantly fewer, there have been some studies using self-reported data which make racial comparisons. These studies also have generally found that neither the social, economic status, or differential application of law enforcement, is sufficiently associated with delinquency by race to account for differences. That is, when factors thought to be significant are held constant the black subjects continue to be evaluated as more delinquent than whites.

Home Adjustment

From some early observations regarding delinquency to the present, the importance of family adjustment has been noted. Sutherland and Cressey (1955) put it this way,

> Since the family has almost exclusive contact with the child during the period of greatest dependency and greatest plasticity, and continued intimate contact over a subsequent period of several years, it plays an exceptionally important role in determining the behavior patterns which the child will exhibit. No child is so rigidly fixed at birth that it must inevitably become delinquent or that it must inevitably become lawabiding, and the family is the first agency to affect the direction which a particular child will take (p. 171).

The parent-child relationship is critical in determining in what direction the child will be pushed and pulled into delinquency or

non-delinquency. Sutherland contends that parent-child relations characterized by lax supervision and control whether due to ignorance or sensory defects, i.e. deafness or blindness, etc., may be contributory to delinquency. He also finds that an uncomfortable parental relationship characterized by domination by one parent, favoritism, oversolicitousness, oversensitivity (enmeshed relationship), neglect, and jealousy may push a child toward delinquency. These early findings are given more contemporary support from McCord and McCord (1964). They too, found that parent-child relations are quite important in creating an atmosphere conducive to delinquency or law-abiding behavior. These researchers point to the importance of effective discipline which includes consistency, and fairness. They also note the importance of effective affectional patterns. They contend that an affectionate parent-child relationship promotes the internalization of conventional values and thus insulates a child against delinquent behavior.

The push a youth receives toward or away from delinquency may be influenced by his/her parental models. A number of research studies have noted that a large number of delinquents come from homes in which one or both parents are or have been deviant (Burt, 1944; Glueck and Glueck, 1950). Sutherland and Cressey (1955) suggest that a child learns delinquent or anti-delinquent patterns of behavior and attitude from parents. These authors are also quick to point out that in adolescence, it is likely that peers are the more influential in molding attitudes and behavior. These writers also note that the modeling of parents whether deviant or law-abiding may determine

the prestige values of their children and the types of persons with whom these children may later develop intimacy. The importance of modeling is repeated by a number of other researchers (Haskell and Yablonski, 1971; Sandhu, 1977; Griffin and Griffin, 1978).

A great deal has been discussed and researched regarding the impact of family structure (broken vs. intact homes). Most researchers agree that the absence of one parent has an effect on delinquent behavior (Sutherland and Cressey, 1955; Korn, 1959; Pettigrew, 1964; Haskell and Yablonski, 1971; Sandhu, 1974, 1977). Many researchers and authors do however disagree on the differential effect between sexes, and if the data is an artifact of the court reaction to juvenile delinquency. Another frequently approached problem in terms of family structure and delinquency, is whether the high amount of broken homes among blacks contributes significantly to their rates of delinquency.

The view that the effect of home structure has no greater impact on girls than on boys is supported by Shaw and McKay (1937). This position is also supported by Weeks (1940) who found when the type of crime is held constant, there is a nearly equal proportion of males and females from broken homes. More contemporary studies tend to support the hypothesis that family structure has a definite and more deep psychosocial impact on female delinquents and non-delinquents (Haskell and Yablonski, 1971; Sandhu, 1974). Monahan (1957) found that more often than males, female delinquents come from broken homes. He found that 22% of the white males and 49% of black male first offenders were from incomplete homes. Among female first offenders the percentages from incomplete famililes were higher than males from

incomplete families, 42% for white females and 68% for black females. This and other studies show quite clearly the impact of family structure on female delinquents.

It has been shown that a great number of black delinquents especially, and others too come from broken homes. A caution should be given that this situation may reflect a court reaction to single parents. That is, the court in evaluating what is best for the child is quicker to incarcerate a child who has only one parent. In terms of black family structure, it is possible that for legal reasons (mother receiving welfare) the intactness of the family, i.e. mother and father in the home, may not be divulged to the court.

The more external conditions which have been suggested as factors in delinquency versus non-delinquency has to do with the economic and social milieu in which a child is reared. Griffin and Griffin (1978, p. 244) have put it this way, "family membership determines a child's economic position, social class, neighborhood, school, social acceptability, and access to medical care." They then note that the economically deprived make up the bulk of official delinquents, and the homes from which they come are typically characterized by multiple problems. Pettigrew (1964) makes a similar statement with regard to the black family and delinquency,

> Not only does desperate poverty disturb health, family life through dilapidated housing, crowded living conditions, restricted recreational facilities, and direct contact with the most corrupting elements of urban disorganization, but it makes the ideal American pattern of household economics practically impossible (p. 15).

The urbanization of America in response to diverse technological advancements have changed the agrarian fact of this nation. The urbanization of the nation has far reaching implication in the understanding of crime and delinquency. Haskell and Yablonski (1971) note that the family which was once rural and a consuming and producing unit was the expert of socialization for the child. The family had defined roles for the present and future and by the time a child reached adolescence he knew his role and the role of others. These authors note that currently the family is a consuming agency and the contemporary family is ill equipped to train a child for the future. Many parents have little or no idea what is important for a child to know to make it in an advanced technological society.

The two studies to follow are illustrative of research which is interested in delinquency and their results point to the critical importance of a good home adjustment.

Grusendorf (1969), administered a questionnaire for the purpose of eliciting expressions of beliefs concerning the cause of delinquency from teenagers.

The subjects for this study were 24,400 girls and 22,087 boys, making a total of 46,487 subjects. The subjects were all high school students, representing 88 high schools which were both rural and urban. Each student was asked to indicate his/her age, sex, school grade, and to state his/her belief concerning the most important cause of or reason for delinquency among boys and girls today (1959-1962). The results after categorization in order of their importance to teenagers was:

1. Factors relating to family and home: lack of love, concern for, interst in, and understanding of the child by parents; family discipline, too strict, too lax, little parental guidance, encouragement toward acceptable behavior; broken or disorganized home, divorce, separation, presence of severe intra-familial conflicts.

2. Too much leisure: lack of recreational facilities and/or part-time jobs; lack of jobs in poor and minority areas.

3. Peer influences.

4. Specific cultural influence: liquor, drugs, television shows and movies with crime and violence.

5. Compensatory behavior: patterns of behavior chosen to enhance a persons self and peer esteem.

Berger and Simon (1974) have oriented their study to verify or discredit the findings of the Moynihan report (1965). The Moynihan report of 1965, posited that the black family socializes its children very differently from the way white children are socialized by their families. This unique socialization is hypothesized as producing more antisocial behavior, ineffective education, and lower levels of occupational attainment.

The Moynihan study has been criticed for its data collection design and the interpretations made from this data. However, the report is in no real way dissimilar to a number of early and contemporary studies that suggests that either on genetic or environmental grounds that black families are dysfunctional, based on white middle-class standards. Also another criticism of the Moynihan report is on political rather than scientific grounds. Berger and Simon point out the impact of the Moynihan report on decisions of public policy because it was a report to the Department of Labor.

Berger and Simon (1974), sought in their study to quantify the qualitative evaluation of the black family reported by Moynihan. The conclusions of Moynihan (1965) were derived from a variety of social indicators; rates of unemployment, illegitimate births, and female-headed households. This mode of data collection is not amenable to analysis of the joint effects of race, class, family organization and measures of pathology. Berger and Simon's study was designed to quantify those variables in the black family which Moynihan describes as "the tangle of pathology", leading to delinquency and other deviances.

The subjects of the study were 3100, black and white, 14-18-year-old youth and their parent(s). The youth were administered a self-report questionnaire and the parent(s) were interviewed by trained interviewers. The focus of the study was to examine the joint effects of race, gender, social class, and family organization, on a number of indicators of family interaction, antisocial behavior patterns, educational aspirations, and gender role conceptions.

The findings of Berger and Simon were as follows. They found in an examination of crimes against persons that major racial differences were seen, though no class differences were found. The major effect of the family structure (broken-unbroken) is that black females from intact homes are more likely than those from broken homes to be seriously involved in theft or violence. In all socio-economic status levels, the broken home is more common among black than white females. The one subpopulation in which it appears that

the traditional hypothesis of a broken home being productive of elevated rates of delinquency is verified is among middle socioeconomic status white males.

These researchers also found that black males were more violent than their white counterparts, were equally violent among themselves irrespective of class, though in upper levels of socioeconomic statuses this may have been defensive. Blacks with good mother relationships were found to be less violent. This is not true of white youth (male). The researchers suggest that it appears that some of the internal dynamics, though not the structural characteristics, of the black family can serve as barriers to violence to a degree not seen in white families.

The parent-child interactions in the black family were evaluated to discover if as Moynihan has suggested, that black youth are taught a deviant behavior pattern as compared to white youth. The researchers believed that if black families are transmitters of delinquent attitudes and beliefs the family should be high on these variables: low affection, low supervision, inconsistent discipline, overly strict, non-supportive physically and psychologically in contacts with law agencies or school. Of the 32 interaction variables presumed to enhance delinquency, only 13 showed a difference between races; but within gender and socioeconomic status, only 13 show a difference between races of 10% or more.

Berger and Simon (1974) also viewed the impact of race on an adolescent's self-concept, regarding it as similar to the impact race has on family interactions. Looking only within gender and socioeconomic status at racial differences in self-concept, in only one out of 15

comparisons was there a 10% difference. Lower socioeconomic status white males viewed themselves in a higher degree of competence than lower socioeconomic status blacks. This may be a reflection of the real world orientation of blacks to a racially discriminating society. When family is added to the evaluation of self-concept, there are 36 comparisons and only 14 have differences greater than 10%. The data does reflect a better self-concept for youth from intact families.

In conclusion Berger and Simon (1974), state that given their results, there is simply not enough of a consistent pattern of differences to support the notion that the black family presents a radically different image to its children than the white family does to its children.

Conclusion

With respect to conclusions, it remains apparent that the family is a critical factor in whether a youth will persue a law-abiding lifestyle or one of delinquency. The parent-child relation is of course the foundation for fostering prohibitions against delinquent behavior. Also it is clear that those who are fortunate enough to be a part of the middle-class, stand a significantly better chance to avoid official delinquency, if not delinquent behavior.

Health Adjustment

The variable of health has not in recent times received a lot of attention, especially in terms of differences in health adjustment among delinquent and non-delinquent youth. Sutherland and Cressey (1955), have noted that physical defects such as blindness, deafness, and lameness are often regarded as important in relation to criminality

and delinquency. These researchers report that though there is no statistical evidence that physical defects are more prevalent in delinquent (adjudicated) youth than non-delinquent (non-adjudicated) youth, it does appear to be true that in some situations physical defects do have a critical bearing on delinquency. Sutherland and Cressey's position is that many illnesses and defects may be attributed to parental neglect and it is this neglect in health as well as other parent-child relationships which has the most bearing on a delinquent response. Conger and Miller (1966), also suggest that physical defects such as blemishes, acne, a large nose, poor eyesight, obesity, and others have been listed as possible indirect causes of delinquent behavior. They suggest that these are likely to lead to emotional problems which may produce delinquency.

In the last few years, there has been increasing interest in the effects of minimal brain dysfunction on the behavior of pre-adolescents. Griffin and Griffin (1978) describe these children as having a variety of symptoms, including extreme activity, irritableness, poor impulse control, learning problems, extreme verbosity, etc. They point out that these symptoms, and the problems they bring, may lead to delinquent behavior.

Sutherland and Cressey (1955) cite the finding among some research that among delinquents and criminals, a significant number are undernourished, have more diseases, and are generally in poorer health. They also note that there are other research works which find absolutely no differences in the health adjustment of delinquents and criminals than that found in the general population. Sutherland and Cressey

(1955) suggest that even if a difference should be shown, that delinquency would not be demonstrated to be a direct product of the poor health, but rather the conditions which produced poor health.

In more recent times a group of researchers have approached the implications of the medical history of youth on delinquent behavior. Lewis, Shelley, and Shanok (1977), observed that many of the children referred to a juvenile court clinic had experienced multiple accidents, injuries, and illnesses. They also noted that from a clinical standpoint, some of these injuries and illnesses seemed to have contributed to the children's inability to form appropriate judgements, assess reality and control of their behavior. This led them to study systematically whether there was indeed a significant difference in the number, quality, and timing of medical problems between adjudicated and non-adjudicated children.

These researchers chose two randomly sampled groups, 109 adjudicated children and 109 non-adjudicated children from the New Haven area. The groups were similar on all demographic factors, that is by age, sex, race, and socioeconomic status which was lower class as determined by the Hollingshead and Redlich scale.

An evaluation of the medical history of each child in the study was made on the basis of an extensive review of the child's hospital records. This modality was chosen because of the poor reliability of self-reported medical histories.

The medical records were assessed in terms of the numbers of visits to the hospital, timing of visits, use made of different hospital services (e.g., emergency room, clinics, and wards), and reasons for visits

(e.g., accidents, head and face trauma, respiratory illness, child abuse, and psychiatric problems).

The results of this study suggested that delinquent children have significantly more hospital contacts and significantly more accidents and injuries throughout childhood than do non-adjudicated children. A surprising finding noted by these researchers was that adjudicated children were no more likely than non-adjudicated children to have experienced perinatal trauma (between age 0-4 years). Their conclusion from this finding was that medical problems throughout childhood rather than during the perinatal period are associated with delinquent behavior.

The researchers also found two distinct times of medical problems in a child's life which may be predictive of delinquent behavior. They found that there was a clustering of medical problems during the early years (0-4 years) and at the onset of puberty (14-16 years), suggesting that a particular developmental factor may be operative. They noted that in both periods there is increased physical (motor) capacities and an imbalance between inner behavioral controls and heightened impulses. To account for how these factors may lead to delinquent behavior they note the impact of parenting styles. They suggest that in well adapted families very young children are usually provided appropriate external controls, protecting and supporting the child until his/her own internal controls are developed. In contrast the parents of delinquent children are often unable to provide adequate support and protection because of their own psychopathology and adverse social situation.

The authors also attempt to account for why medical problems are diminished between the ages of four and fourteen. They suggest that better internal controls may have developed, and the school setting may be responsible for better supervision.

With the onset of adolescence the school becomes less effective as a supervisory agent. Consequently, the delinquent adolescent may drop out of school and again the burden of supervision comes to rest on the parents who are unequal to this task.

This study points up the important implications of health factors in predicting and preventing delinquent behavior. In this study Lewis et al. (1977) compared the medical histories of adjudicated and non-adjudicated youth and found adjudicated youth have more medical contacts. This initial study has led them and others to persue further the question of differences in the medical histories of adjudicated and non-adjudicated youth.

Lewis and Shanok (1979), using the design of their 1977 study have sought to evaluate if there is a difference between adjudicated youth who were delinquent and referred for psychiatric evaluation and non-referred adjudicated youth. The findings were that there was no difference in the number of hospital contacts between the groups. The significant finding was that the referred adjudicated children had experienced perinatal difficulties, child abuse and injuries specifically head and face injuries, through age 16. It was also noted that psychiatrically referred children had significantly more parent(s) with a known psychiatric history.

Lewis, Shanok, and Balla (1979) have studied medical histories of adjudicated children of psychiatrically and/or criminally deviant

parents. These children were again compared with adjudicated children with non-deviant parents. The status of the parents was determined through police records and state hospital records.

The findings of this study were that delinquent children of criminal parents in this study had more adverse medical histories than did the delinquent children of non-criminal parents. It was also found that among the delinquent children of criminal parents that those who suffered most from a medical point of view were the children of criminal fathers. The differences in medical histories between the children of criminal fathers and those of non-criminal fathers were most striking before the age of four. This finding is especially important because it indicates that physical trauma and medical illness occurred in the lives of these children at a critical developmental stage.

Another work by Lewis, Shanok, and Balla (1979), focused on the medical histories of seriously delinquent children (e.g., assaultive, threatening, arson, and robbery). These children were compared with non-incarcerated adjudicated children. The question to be answered was whether more seriously delinquent acts were associated with more numerous and serious medical problems.

The findings of this study were that the two groups were not dissimilar in terms of number of medical contacts. However, the more seriously delinquent children varied significantly in terms of the reasons for hospital visits. The incarcerated children were significantly more likely to have sustained a head or face injury. Also, the severity of this injury was greater among incarcerated youth, as determined by frequency of skull x-rays. Of speical note was the

finding of a significant difference in the number of head injuries before age two. The overall conclusion of these researchers were that perinatal difficulties and head and face injuries most clearly distinguished incarcerated from non-incarcerated delinquents, a pattern of findings evidenced throughout early childhood and adolescence.

Conclusion

It can be concluded that the question of what the impact of poor health adjustment has on delinquent behavior has not yet been answered. The works of early researchers have noted that often there appears to be an association between health and delinquent behavior. However, it has only been in recent times that more systematic research has been carried out to evaluate this potential relationship. That work which has been done still remains conflicted but moving in the right direction.

The proponderance of research data tends to suggest that delinquent children are more likely to have poor health adjustment histories. Those youth who are more seriously delinquent having the poorest health adjustment. Also, noted are the data that psychiatric and criminal problems of the parents of children increases the likelihood of a poor health adjustment, particularly if that parent is the father.

An understanding of the health adjustment of children has important prevention and treatment implications. It has been shown that many medical contacts during the perinatal period may be a consistent predictor of delinquency or at a minimum, puts the child at risk. The early observation of this medical pattern and appropriate intervention may do much in preventing delinquency. All of these possibilities

lend credence to the importance of persuing the question of health adjustment in relation to juvenile delinquency.

Emotion

The emotional and personality characteristics of the juvenile delinquent and non-delinquent juveniles have often been brought into question. Zakolski (1949) is one of the early researchers who sought to answer these questions: What is the personality structure of delinquent boys? What is the personality structure of non-delinquent boys? From differences, can a method be found for prediction of delinquency in boys?

The subjects for his study were 50 boys in an industrial training school and 50 boys from a public school, equated for age and national origin. The mean age for the subjects was 15.5 years. All the subjects were white boys.

All the subjects were administered these tests: Army Beta examination; Bell Adjustment Inventory; Adolescent Adjustment Inventory; California Test of Personality, Intermediate Series; Personality Inventory; Developmental Age Test; Personality Quotient Test; MacQuarrie Test of Mechanical Avility; Mental Health Analysis; Otis Self-Administered Test of Mental Ability, Intermediate; Mechanical Aptitude Test; Behavior Cards; Scotts Inventory (Every-day-life); Personality Schedule; Social Adjustment Inventory.

Zakolski found that his results indicated that delinquents (official) are not distinguished from non-delinquents (non-official)

delinquents) in the following traits or aspects of personality: Dominance-submission; Self-confidence; Sociability; Independence in personal matters; Resourcefulness; Habits of usefulness; Social initiatives; Self-determination; Economic self-determination; Adjustment to opposite sex; Happiness; Sympathy; Impulse judgement; Self-control; Behavioral immaturities; Mental health assets; Interpersonal skills; Outlook and goals; Self-reliance; Sense of personal worth; Sense of personal freedom; Feeling of belonging; and Social skills.

Zakolski (1949) did find these differences between delinquent and non-delinquent youth (males): Intelligence, Verbal and non-verbal; Mechanical ability; Neurotic tendency; Health Adjustment; Developmental age; Mental health; Mental health liabilities; Emotional stability; Feelings of inadequacy; Reported phsyical defects; Nervous manifestations; General social adjustment; Self-adjustment; Withdrawing tendency; Antisocial tendencies; Problem behavior; Problem attitudes; Emotional adjustment; Satisfying work and recreation; Family relations; and community relations.

Zakolski, concludes that delinquent boys are less intelligent, has less of a certain type of mechanical ability, have poorer health adjustment, are less social, less well socially adjusted, have poorer school abilities, family relations, and community relations.

The quest to determine if there are personality differences between delinquent and non-delinquent persons was continued by Riggs et al., 1964). He and his colleagues are responsible for the derivation of a personality typology of delinquent youth while working at the California Youth Authority. This group described the delinquent youth in terms of maturity levels. These are described as follows:

Level 1 is not pertinent to this discussion in that Level 1 is so infantile that the individual of such maturity deficiency would require institutionalization.

Maturity Level 2: The individual whose interpersonal understanding and behavior are integrated at this level demands that the world take care of him. He behaves impulsively, unaware of the effects of his behavior on others.

Maturity Level 3: This category describes the individual who is attempting to manipulate his environment in order to get what he wants. He has some behavioral insight, though vague. He views people in terms of how they may be manipulated to his own ends. He tends to deny having any disturbing feelings or strong emotional involvement in his relationships with others.

Maturity Level 4: This individual has integrated his understanding and behavior in such a way that standards of evaluation by himself and others may be applied. He is aware of the influence of others on him and their expectations of him. He wants to be like people he admires. He feels guilty about not measuring up to his internalized standards. If so, conflict produced by feelings of inadequacy and guilt may be internalized with consequent neurotic symptoms, or acted out in antisocial behavior. If he feels no such guilt, he may feel conflict over values.

Hewitt and Jenkins (1957) also have posited a personality typology with inclusive emotional states for delinquent youth. Hewitt and Jenkins studies the case records of 500 children referred to Michigan Child Guidance Institute. Of the 500 cases, 305 or 61%

were not classified as maladjusted. The remaining 195 or 59% of the total were divided into three categories: overinhibited, unsocialized aggressive, and socialized delinquent.

The overinhibited child - The children exhibiting this syndrome were seclusive, shy, apathetic, worried, sensitive, and submissive. These children also felt inferior, frequently had physical complaints, and were prone to neurotic illnesses.

The unsocialized aggressive child - These children showed assaultive tendencies, defiance of authority, malicious mischief, and inadequate guilt feelings. These children were characterized by gross failure of conscience or inhibition and low frustration tolerance. Their family history indicated parental rejection, which is suspected as the predisposing factor for this syndrome.

The socialized delinquent - The socialized delinquent is described as associating with delinquent companions and engaging in the behavior attributed to this group. This child participated in gang activities of stealing, truancy, running away from home, and curfew violations. Parental negligence and exposure to delinquent behavior patterns are posited by these authors as predisposing factors.

Conger and Miller (1966) reportedly found a relationship between personality and delinquency. Their studies of third grade teachers' evaluations and psychological test results suggested that these findings may be important in predicting delinquent or deviant behavior in youth. Research based on the Jesness Inventory has also been used and cited as evidence of a link between personality and delinquency. According to this research, delinquents exhibit more hostility toward authority figures than do so-called non-delinquents. They also found

that delinquents and non-delinquents do not differ significantly on neuroticism scales. Orientation to family, or value orientation. Their study indicated that institutionalized delinquents are more likely to feel isolated, deny existence of problems, be less mature, and exhibit more concern about whether they are normal.

The concept one has of him/herself, has a great deal to do with the emotions this person may experience. It has been noted that there may be differences in self-concept between delinquent and non-delinquent youth (Reckless, Dinitz and Murray, 1956). These researchers suggest that one of the preconditions of law-abiding or delinquent behavior is to be found in the concept of self, and other acquired in primary group relationships. The non-delinquent has apparently internalized a self-image of law-abiding behavior, which insulates him from delinquent behavior. The maintenance of this non-delinquent self-image will be determined by the result of the situational pressures encountered by the youth.

Aichorn (1963) suggests that delinquent behavior may be a psycho-dynamic reaction to solving a life situation. He suggests that depen-dent on a persons state of personality health and the interaction of id, ego, and superego, a solution may be normal, neurotic, psychotic or delinquent. The nature of the solution one finds depends both on the situation one is facing and the dynamics of his/her personality.

In light of this review of the literature on emotional adjustment, several comments may be made. The first of which is that the formation of typologies may be quite useful in conceptualizing the potential features of a delinquent youth. However, the research is still quite conflictual in terms of whether it is possible to differentiate

delinquents from non-delinquents by means of a typology. It also seems clear that psychological testing is not yet at a level of predictive sophistication. The personality data and self-concept data all suggest a need for a psychosocial approach to the study of the emotional adjustment of delinquents and non-delinquents.

Conclusion

The understanding and prediction of delinquent behavior is essentially unfulfilled by typologies derived from individual mental tests. The understanding and prediction of delinquent behavior is a task which must include not only individual measures, but also the contemporary social milieu.

Hostility

It has been noted in research and is intuitively feasible to relate the variable of hostility to delinquent behavior. It seems clear that many delinquent acts are aggressive with obvious hostile motives, yet it is difficult to capture all facets of hostility and their relationship to delinquent behavior.

Sutherland and Cressey (1955) note that one concept which is frequently used in connection with deviations in personality, regardless of whether these are labeled psychopathy or not is frustration. It is assumed that a person is frustrated, that frustration results in emotional disturbance which produces aggression, and that delinquency is the consequence. These researchers believe that aggression is not a necessary consequence of frustration, and the belief that aggression has some necessary connection with delinquency is equally incorrect.

Sutherland and Cressey state that if one were to select the tenth of the population which is most aggressive, it is not at all certain that this aggressive population would contain an unusual proportion of criminal or delinquent persons.

Korn (1959) also notes that lawbreaking resulting from frustration and aggression is difficult to substantiate on a general plane. This difficulty can be demonstrated by even a very generalized listing of all the possible activities engaged in by aggressive and frustrated individuals. He states that taking the concept of aggression alone, we can list the following three general ways in which people express hostility. First, aggression can be exhibited by overt physical action i.e., fighting, refusal to cooperate and many others. Second, verbal aggression in terms of slander, insult, condescension, etc. And third, physiological reactions may be aggressive, i.e., increased heart rate, suspension of digestion, vomiting, etc. Consequently, the highly general explanation "aggression" does not differentiate the myriad forms of non-criminal aggressive behavior from the specific criminal or delinquent example in which criminologists have interest.

Another view of the relationship between hostility and delinquency is the developmental process of hostility and aggression in children. In Redl's (1957) study with eight to eleven year old children who had received little or no love from their parents or significant others in the family, he found that they displayed a pathological backlog of hostility and aggression, they impulsively attacked anything that came their way. They had no control of their impulsivity and hate. Their egos and superegos had failed in the job of behavioral control. Redl

lists 22 functions of the ego which mediate between the world and internal impulse. They include frustration tolerance, coping with insecurity, anxiety and fear; resistance to temptation; assessing social reality; learning from experience; and drawing inferences from what happens to others. The delinquent, according to Redl, has ego failure in such functions and substitutes evasive excuses. The super-ego fails to forewarn hyperaggressive children when they are about to commit an offense; and it fails to punish them after an offense is committed.

Violence is another word associated with hostile and aggressive acts. It would seem that an act of violence is a clear representation of hostility by the person committing the act. However, things are not so clear, in that the person who commits the act may not be the initiator of hostilities, but reacting violently in a defensive way. Such a defensive response may not be hostile but a defense against physical injury and/or psychological injury to the ego.

Wolfgang and Ferracuti (1967) have noted that violent offenders are the products of a subculture of violence, which is found in many societies. They note that these subcultures place a high premium on physical aggression. And too, the members of this subculture of violence respond violently to acts perceived by them as derogotory to their honor. The subculture of violence in America is typically viewed as the black, hispanic, and poor of all groups. This conclusion is fostered primarily by the disproportionate number of crimes against the person among these groups. Pettigrew (1964) notes that black crimes in comparison to whites are particularly high for personal offenses,

i.e., aggravated assult, homicide, and for escapist crimes such as gambling, drug addiction and drunkenness.

The study by Luchterhand and Weller (1976), is illustrative of a contemporary study addressing the question of aggressive differences between social class, race, educational status, and sex. The study was based on the responses of a random sample of 1844 youth, aged 13-19, to open- and closed-ended questions, concerning patterns of aggression of inner city youth. It was hypothesized that more aggression would be shown (1) by youth from the lowest social class than by those from the higher social classes, (2) by blacks than whites, (3) by boys than girls.

To obtain an aggression score all subjects were administered a completion type sentence questionnaire. An example of which is:

If someone tries to push me around, I usually _____.

a. Fight him.
b. Tell him off, but fight if pushed enough.
c. Tell him off or argue with him.
d. Leave or do nothing about it.
e. Just tell others what kind of guy he is.

The findings were that race is the single most important factor for both boys and girls. In all cases, white respondents answered more aggressively than blacks. Boys were compared with girls for each class and race combination. In each comparison, the boys were found to be more aggressive than the girls. The only exception was found in item one (If anyone should stand in Ann's way, she would _____), where class IV (upper-lower class) white girls were more aggressive than class IV white boys.

Luchterhand and Weller sought to ascertain the differences in type of aggressive response according to race. This was achieved by a cross-classification of five kinds of aggressive responses: non-specific aggression, indirect aggression, verbal aggression (direct), attack on a valued object, and assult. The data yielded suggested that whites were more verbally aggressive than blacks, while blacks were more apt to physically assult persons than were the white youth.

The researchers also sought to measure non-aggressive responses, withdrawal or avoidance, evidence of emotions, polite intervention, by race for each question. They found that blacks and whites utilize different kinds of aggression. A consistent finding was that white youth responded more emotionally than black youth. They also found in terms of emotional control, that blacks are more controlled than whites; black boys and girls blow-up less than whites over little things; and black boys control their tempers more often than white boys.

In summary, this and other research seems to indicate that (1) an operational definition for hostility is only tangentially approached, (2) there is no good evidence that frustration and aggression are intrinsically linked to delinquency, (3) whites are viewed as less physically aggressive and more verbally hostile than blacks, (4) research seems biased in its failure to adequately explore hostility and aggression among the upper-classes of the social milieu.

Conclusion

The problem of determining whether an officially delinquent youth is more hostile than other youth is a difficult one. One of the primary

problems for the issue of hostility is definitional. Some typical measures of hostility are aggression and violence, both of which have complex causes and modes of exhibition.

The implications of this for research lies in the cautious appraisal of hostility measures. This includes the evaluation of the social milieu, context in which measures were collected, cultural and racial differences in the exhibition of hostile actions and/or reactions.

CHAPTER III

METHODOLOGY

Subjects

The total number of subjects used in this study was 240 (see Figure 1). The subject population was broken down into 60 subjects in each of the categories of white non-adjudicated youth, white adjudicated, black non-adjudicated, and black adjudicated. The term adjudicated refers to youth who have gone through arrest, prosecution, and sentencing. The adjudicated subjects in this study were youth serving probation. The experimental subjects were randomly sampled from the pool of volunteers who were administered the questionnaire. The volunteer pool was stratified in terms of sex (male and female), grade/age (9 through 12, and ages 14 to 17 years), socioeconomic status (high, middle, and low), delinquency category (adjudicated and non-adjudicated), and race (white and black). The experimental subjects were randomly drawn from this volunteer pool for analysis.

In this study all subjects were from a rural background. They were all residents of towns with a population no greater than 25,000 and the predominant occupation of the area was directly or indirectly related to agriculture. All subjects were volunteers from Southeastern Texas communities.

	White Non-Adjudicated			Black Non-Adjudicated			
*SES	High	Middle	Low	High	Middle	Low	Totals
Male	n=5	n=5	n=5	n=5	n=5	n=5	30
	n=5	n=5	n=5	n=5	n=5	n=5	Grades 9 and 10 30
Female	n=5	n=5	n=5	n=5	n=5	n=5	30
	n=5	n=5	n=5	n=5	n=5	n=5	Grades 11 and 12 30
Male	n=5	n=5	n=5	n=5	n=5	n=5	30
	n=5	n=5	n=5	n=5	n=5	n=5	Grades 9 and 10 30
Female	n=5	n=5	n=5	n=5	n=5	n=5	30
	n=5	n=5	n=5	n=5	n=5	n=5	Grades 11 and 12 30
Totals	40	40	40	40	40	40	240
	White Adjudicated			Black Adjudicated			

*Socioeconomic Status

Figure 1. A Diagram to Depict the Study Subjects

Design

The experimental design for this study is a 2x3x2x2x2 factorial. The factors analyzed are sex, socioeconomic status, grade/age, delinquency category, and race. The dependent variables in the study are scores on the adjustment variables and delinquency score. The adjustment variables are: home adjustment, health adjustment, emotional adjustment, and hostility adjustment. The fifth dependent variable is delinquent behavior. The analysis performed on this data was a five-way analysis of variance, (2x3x2x2x2 ANOVA), and Scheffé's Multiple Comparison procedure.

Materials

The Nye-Short Delinquency Scale (1958), a seven item scale, was used to determine the amount of self-reported delinquent behavior among adjudicated and non-adjudicated youth. The original normative data for the NYE-Short Delinquency Scale was collected in 1955. The non-adjudicated subjects were 2350 urban youth and 596 rural youth. The adjudicated subjects were a total of 320 male and female subjects from state training schools in a Western state. Though the original data was normed in 1955, a number of more contemporary studies have used the Nye-Short Delinquency Scale (Akers, 1964; Empey and Erickson, 1966; Erickson, 1972; Kratcoski and Kratcoski, 1975; Kelley, 1975). These and other researchers have found this scale to reliably order and differentiate adjudicated and non-adjudicated youth. The validity of the Nye-Short scale is based on two essential factors. First, all

items are violations of laws or offenses on the basis of which adolescents are adjudicated. Again, the scale scores differentiate between groups known to be different, on the delinquent behavior dimension. The scoring for the Nye-Short Delinquency Scale is found in Appendix F.

The Bell Adjustment Inventory 1962 Revised was used to determine the home, health, emotional, and hostility adjustment of all subjects. The items for the four variables of adjustment were written by Hugh M. Bell (1962). The reliability of the Inventory was determined by a split-halves presentation of the scale with a correction using the Spearman-Brown correlation coefficient. The subjects were college freshmen, sophomores, and juniors. The coefficients were: home adjustment, .89; health adjustment, .80; emotionality, .85; and hostility, .83.

The validity of the Bell Inventory was evaluated using two strategies. Validation studies were made on each scale by having high school counselors nominate students who they considered would exemplify the opposite extremes of each variable, i.e., good-poor adjustment. The Inventory was able to clearly distringuish between the respective extreme groups selected by the counselors (Bell, 1962).

The validity of the emotional and hostility scales were further tested for criterion validity. The scale used for correlating emotion was the Thurstone Personality Schedule (r-.93); and hostility correlated with the Guilford-Zimmerman Temperament Survey (men, r-.80; women, r-.73). The scoring procedure for the Bell Adjustment Scale is found in Appendix D.

The socioeconomic status of the subjects was determined by using a combination of the North-Hatt and Mapheus Smith scales with a

socioeconomic conversion scale by Duncan (Reiss, 1961). The combined occupational prestige scale contains ten categories of occupations, each representing a range of occupations within the total scale. In the present study these ten categories were combined into three status groupings which include the following types of occupations: low status, which includes unskilled and semi-skilled labor (i.e., migratory workers to restaurant cook). Middle status occupations included skilled labor, craftsmen, white colar, and small business operatives. The high socioeconomic status occupations included professionals and large business owner/managers (i.e., interior decorators to United States Supreme Court justices). See Appendix E.

Occupation was chosen as the primary, though not the only measure of socioeconomic status, because occupation correlates quite highly with social economic status (Smith, 1943; Hatt, 1950; Reiss, 1961). The use of occupation as a measure has the following advantages: (1) occupation correlates highly with other criteria of class and status position, such as subjective class affiliation, income, educational level, subjective class ratings and others; (2) occupation is related not only to income but values, attitudes, and goals; (3) a youth's delinquent behavior may be correlated with the socioeconomic status of his immediate family, rather than with the demographic area in which he lives; (4) in addition, data on the occupation of a parent is generally obtained more accurately from adolescents than income, years of education, vlaue of home, and other items which the adolescent may not be familiar (Nye, Short, and Olson, 1958).

The actual Duncan conversation scores to categorize each level of socioeconomic status are as follows: High (80-100); Middle (21-79); and Low (0-20).

Procedure

The Non-Adjudicated Group

The subjects involved in this study were volunteers. The subjects were given a consent form (See Appendix A) which includes a written explanation of the study. The consent form must be signed by the parent(s) and child. The high school administration collected the permission forms from the subjects. All subjects who returned consent forms took part in the experiment.

The subjects (males and females in the ninth throught twelfth grades) were tested in two groups, ninth and tenth grade subjects and eleventh and twelfth grade subjects. Careful attention was given to separating the respondents to insure independent responses to the questionnaire items.

The instructions given the groups were as follows:

> The youth of a community are, in many respects, the most important element of the community. There is a great deal written and said about your age group, but much of it is not based on facts. This study is intended to supply many important facts about what young people of your age feel, think, and do. You will not place your name on this questionnaire, and no attempt will be made to identify you through your answers. Please give the facts or your honest opinion on every question.

The administration of the questionnaire took approximately 45 minutes, after which each subject deposited his/her form in a box

prepared for this purpose. This is thought to enhance the subject's feeling of anonymity. A student was asked to assist the researcher in taking the box from the school premises, again to foster certainty that the school administration did not have access to the data.

To facilitate debriefing, the respondents and parents of the respondents were made aware through the school administration and the researcher that the researcher will be available immediately after the experiment to deal with questions and any adverse effects of the experiment. Also the researcher's project chairman was available on a consulting basis to deal with any adverse situations. Arrangements were also made to give written feedback regarding the findings of the experiment to the subjects, parents and school faculty.

Adjudicated Group

The adjudicated subjects in this study were male and female youth aged 14 to 17 years. These subjects had official delinquency records and were currently on official probation. The participation by these youth was voluntary and required the sanction of the Chief Juvenile Judge, Chief Probation Officer, and the youth's parent(s).

Due to the difference in school grade between the non-adjudicated and adjudicated youth (youth on probation were more likely to have failed grades), age rather than grade was used to stratify the adjudicated subjects with the non-adjudicated group. Also, because of the potential for poor reading ability among the probationers, the items on the questionnaire were audio-recorded and played back to the subjects. Administration of the questionnaire took an hour and fifteen

minutes. At the end of the test the questionnaire was placed in an envelope and sealed in the presence of the subject.

There was one other significant procedural change between the data collected from the non-adjudicated and adjudicated subjects. The difference is that the adjudicated subjects answered their questionnaires individually rather than in groups. The reason this occurred was that probationers are not encouraged to congregate together, and as a matter of confidentiality. Debriefing of the adjudicated subjects was carried out in the same manner as non-adjudicated subjects.

CHAPTER IV

RESULTS

The results described here are explained from main effects to the highest order interaction resulting from the data analysis. A concluding summary will be given at the end of this section to clarify and amplify the results.

Home Adjustment

The analysis for home adjustment was carried out by first using a 2x3x2x2x2 factorial design. This design was chosen to test all combinations of the factors, grade (A), socioeconomic status (B, SES), category of adjudication (C), race (D), and sex (E), with home adjustment (see Appendix G).

It should be made clear to the reader at this time that a number of significant findings can be pursued as a result of the findings of this study. However, the focus here is on the effect of category of adjudication on the before named factors.

It was hypothesized that category of adjudication would have a statistically significant effect on home adjustment. This hypothesis can be supported at this level having reached statistical significance beyond the .01 level of significance ($F = 12.041$, $p<.001$). The .01 level of significance was chosen so that a conservative interpretation of the data could be made.

It was further predicted that there would be a first order interaction of home adjustment between the following factors: category by sex and category by socioeconomic status (SES). The results supported the hypothesis that SES and category (BC) have a statistically significant effect on home adjustment ($F = 4.997$, $p<.008$), Figure 2. The hypothesis that category of adjudication and sex (CE) were significant statistically could not be supported ($F = .437$, $p<.509$).

Two hypotheses about second order interactions were made. It was hypothesized that (1) socioeconomic status category of adjudication, and race (BCD); (2) socioeconomic status, category and sex (BCE) interacted in a way which affected home adjustment. The results were that neither hypothesis could be supported having failed to reach the .01 level of significance (Appendix H). The only second order interaction to reach statistical significance was socioeconomic status by race, by sex ($F = 6.635$, $p<.002$). These findings indicate that category of adjudication does not have a significant effect on home adjustment at this level of interaction.

The hypothesis made at the third order level of interaction was that SES, category of adjudication, race, and sex (BCDE) have an effect on home adjustment. These factors were not statistically significant ($F = .246$, $p<.782$). Therefore, the hypothesis was rejected. It was found, however, that one third order interaction involving category of adjudication was significant. The grade by SES by category by sex (ABCE) interaction was statistically significant ($F = 4.287$, $p<.01$). Figure 3 depicts in graph form the pattern of the AxBxCxE interaction on home adjustment

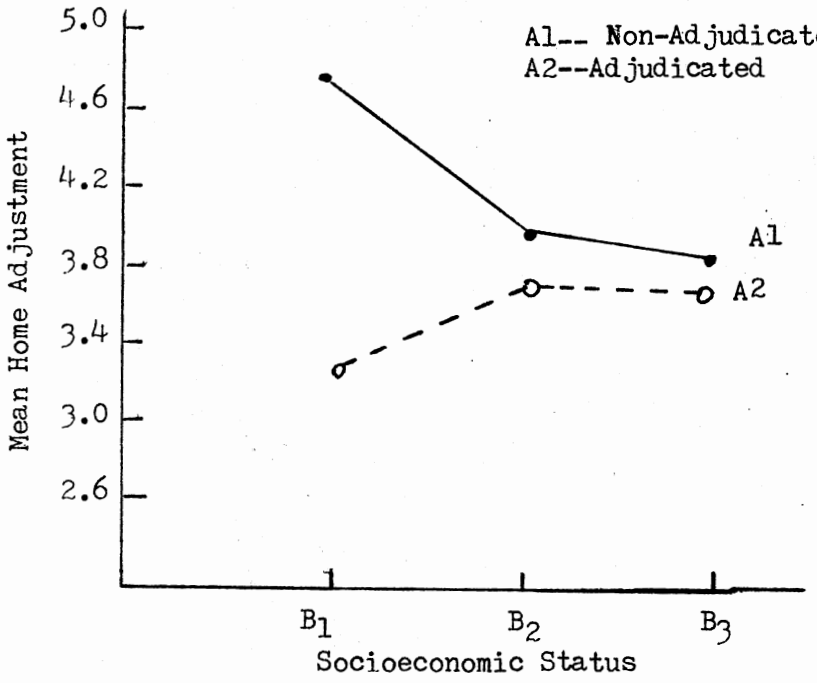


Figure 2. Socioeconomic Status by Category of Adjudication Interaction for Home Adjustment

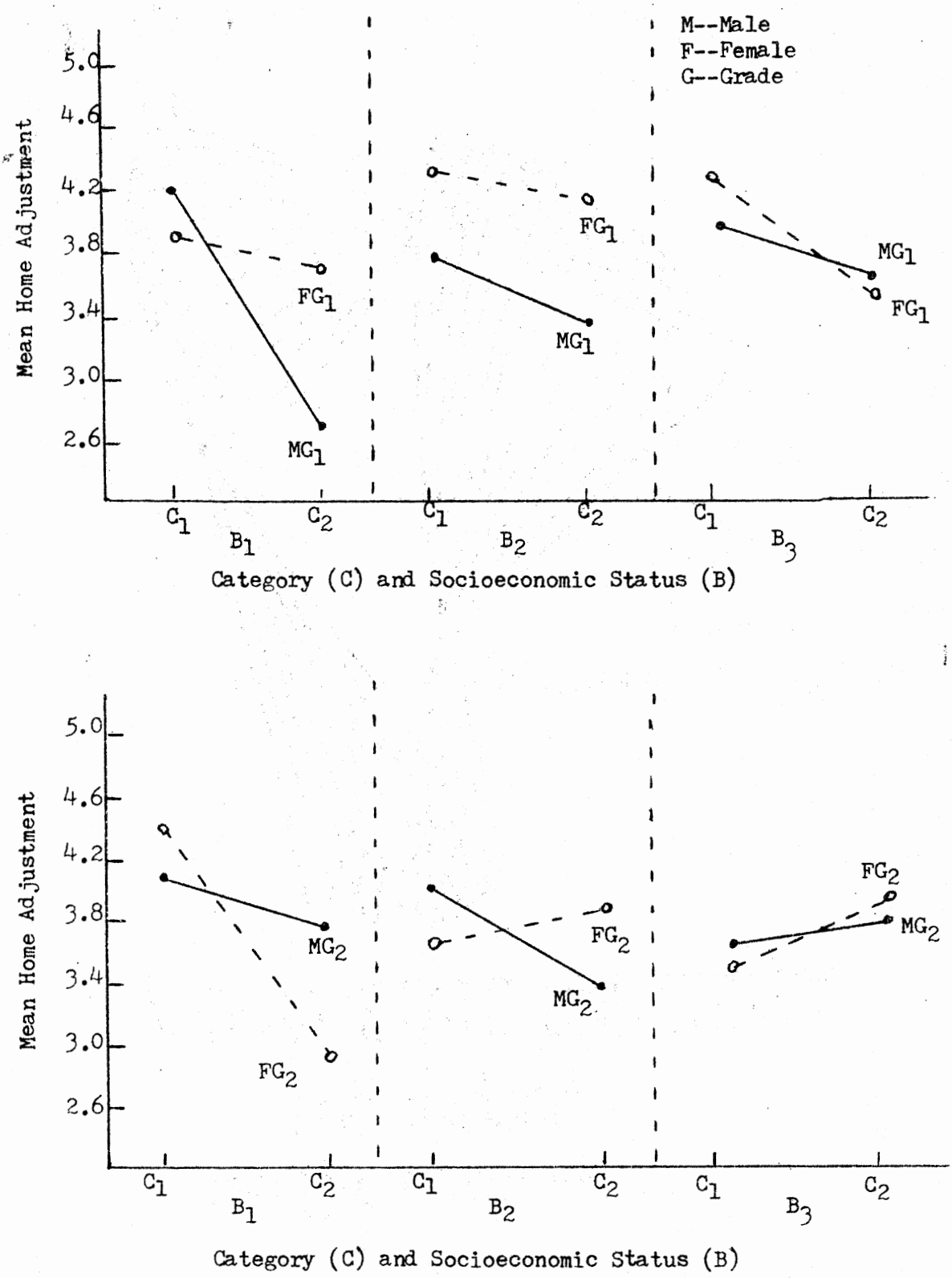


Figure 3. Grade x SES x Category of Adjudication x Sex Interaction for Home Adjustment

The hypothesis was made that all of the factors, grade x SES x category x race x sex would have an interaction effect on home adjustment. The results support this hypothesis ($F = 4.259$, $p<.01$). To determine the variance accounted for by category of adjudication, an analysis of simple, simple, simple, simple main effects was carried out (see Table I).

The test of simple effects revealed three significant ($p<.01$) levels at which category of adjudication made a difference between groups. It was found that non-adjudicated and adjudicated 9th and 10th grade, high SES, balck males are significantly different ($p<.001$). An inspection of the means shows that the non-adjudicated subjects report a higher home adjustment score ($M = 5.000$ and $M = 3.000$; $p<.01$). Figures 4 and 5 illustrate this difference between adjudicated and non-adjudicated subjects. A difference was also shown to exist between 9th and 10th grade, low SES, white females ($p<.005$). The non-adjudicated subjects reporting a poorer home adjustment than adjudicated subject (Means 4.400 and 3.000 respectively, Figure 5). The third significant group difference was among non-adjudicated and adjudicated 11th and 12th grade, low SES, black males ($p<.001$). The difference in the means shows adjudicated ($M = 4.800$) have a poorer home adjustment than non-adjudicated subjects ($M = 3.200$). This difference can be seen in Figure 4. The findings clearly show that category of adjudication makes a difference between some groups in their home adjustment. These findings do not, however, answer the question of whether adjudicated, high SES, black females have the poorest home adjustment among all groups. The results of the multiple means comparison using Scheffe's

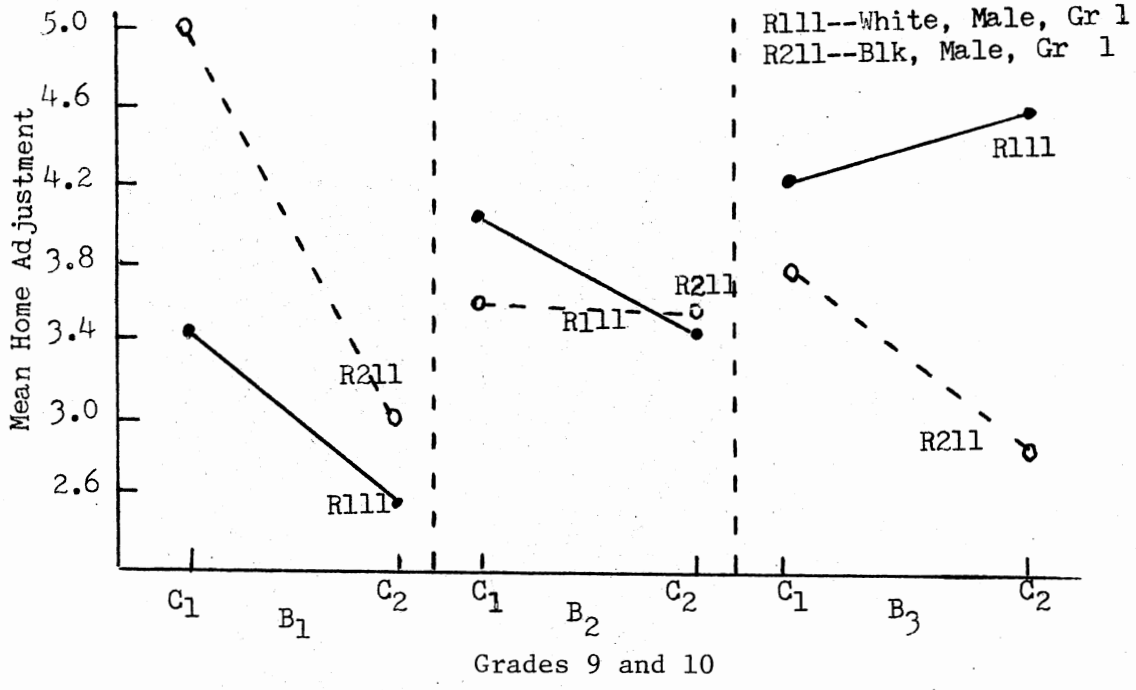
TABLE I

SIGNIFICANT MEANS FOR FOURTH ORDER INTERACTION FOR HOME ADJUSTMENT IN ORDER OF CONTRIBUTION TO OVERALL INTERACTION EFFECT

Ordinal Position		Ordinal Position		Ordinal Position	
First	P<Than	Second	P<Than	Third	P<Than
$B_1@A_1C_1D_1E_2$	.01	$E_1@A_1B_1C_2D_1$	.005	$D_1@A_1B_1C_1E_1$	.001
$B_1@A_1C_2D_2E_2$	.01	$E_1@A_1B_1C_1D_2$	.001	$D_1@A_1B_3C_2E_1$	.001
$B_1@A_2C_2D_2E_2$	.01	$E_1@A_1B_3C_2D_2$	.005	$D_1@A_2B_3C_2E_1$	.001
$B_1@A_1C_2D_1E_2$**	.01	$E_1@A_1B_3C_2D_1$	.001		
$B_1@A_1C_2D_1E_1$	.01	Fourth	P<Than	Fifth	P<Than
$B_1@A_1C_2D_2E_2$	.01	$C@A_1B_1D_2E_1$	.001	$A_1@B_3C_2D_2E_2$	.001
$B_1@A_2C_1D_2E_1$	.01	$C@A_1B_3D_1E_2$	.005	$A_1@B_3C_2D_1E_1$	.001
$B_1@A_2C_2D_1E_1$	.01	$C@A_2B_3D_2E_1$	.001		
$B_1@A_2C_2D_2E_1$	.01				
$B_1@A_2C_2D_2E_2$	.01				
$B_2@A_1C_2D_1E_1$*	.01				
$B_2@A_1C_2D_1E_2$	.01	A = Grade: A_1 = 9th & 10th, A_2 = 11th & 12th B = SES; B_1 = High, B_2 = Middle, B_3 = Low C = Category; C_1 = Non-Adjudicated, C_2 = Adjudicated D = Race: D_1 = White, D_2 = Black E = Sex: E_1 = Male, E_2 = Female			
$B_2@A_2C_1D_2E_1$	.01				
$B_2@A_2C_2D_2E_1$	.01				

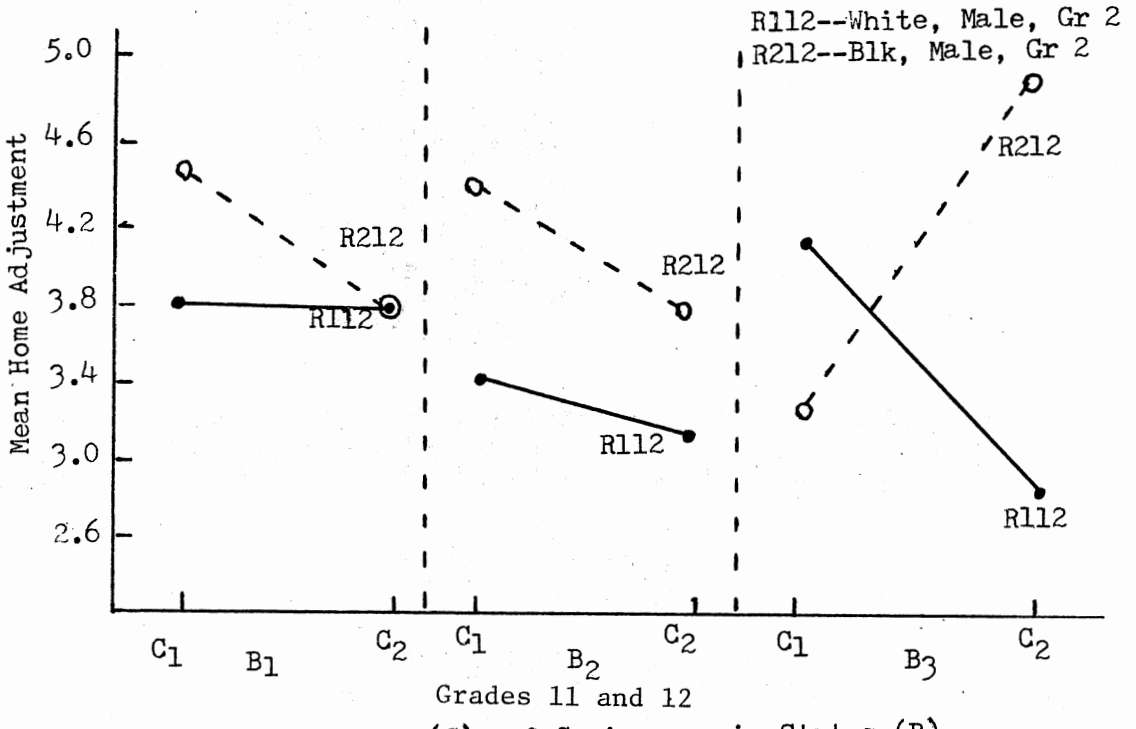
*B_2XB_3 Comparison

**B_1xB_3 Comparison



Grades 9 and 10

Category (C) and Socioeconomic Status (B)



Grades 11 and 12

Category (C) and Socioeconomic Status (B)

Figure 4. Socioeconomic Status by Category by Race by Sex by Grade Interaction for Home Adjustment

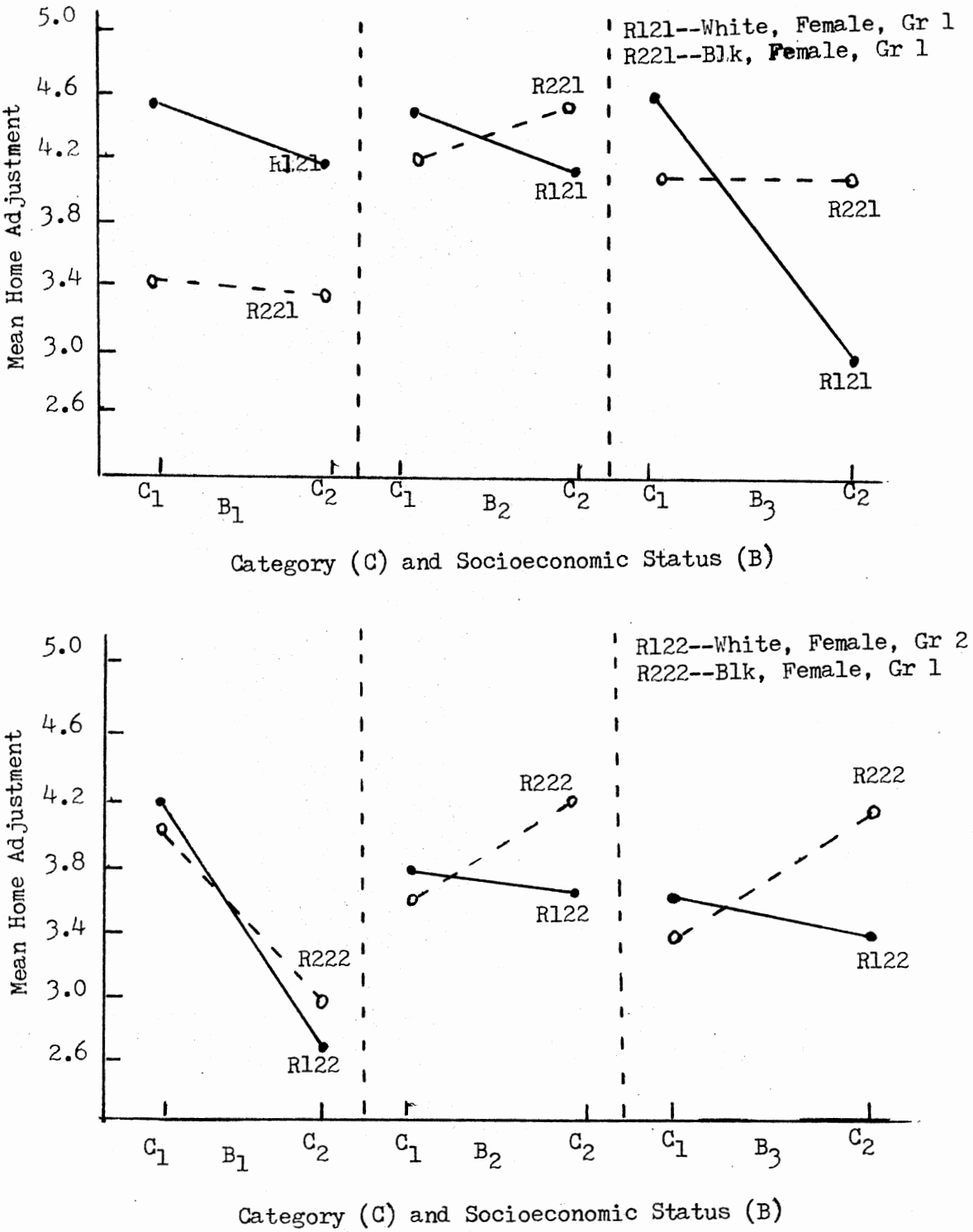


Figure 5. Socioeconomic Status by Category by Race by Sex by Grade Interaction for Home Adjustment

(1959) method does not support this hypothesis. It was found that adjudicated 9th and 10th grade, high SES, black females did not have a higher home adjustment than all other groups ($F_{obs} = 6.578$ $F'_{.01;2,192} = 4.71$).

To understand how category of adjudication fits in among the other factors, Table I is quite helpful. The results of the significant simple effects ($p<.01$) show that category of adjudication is fourth among the factors contributing most to the AxBxCxDxE effect on home adjustment. In order of most significant factors contributing to the interaction effect are (1) SES, (2) Sex, (3) Race, (4) Category, and (5) Grade.

Health Adjustment

The effects of grade (A), socioeconomic status (SES, B), category of adjudication (C), race (D), and sex (E), on health adjustment were analyzed using a 2x3x2x2x2 factorial design. The results of this test are shown in Appendix H. It can be seen that a grade x socioeconomic status x category of adjudication x race interaction is present.

This finding indicates that none of the lower order interactions can be interpreted without giving consideration to this highest order interaction. However, a report of the lower order results may be helpful in explaining this very complex interaction of factors.

It was hypothesized that adjudicated subjects have a poorer health adjustment than non-adjudicated subjects. It can be seen from the main effects that only three factors were statistically significant, category of adjudication ($p<.004$), race ($p<.01$), and sex ($p<.007$). The

face that category of adjudication is among those factors which were significant supports the hypothesis of an effect on health adjustment due to category of adjudication. However, the hypothesis cannot be supported in terms of the predicted direction. As can be seen from the means (Table II) non-adjudicated rather than adjudicated subjects report a poorer health adjustment.

TABLE II

MEANS FOR HEALTH ADJUSTMENT OF NON-ADJUDICATED AND ADJUDICATED SUBJECTS

Category	Non-Adjudicated	Adjudicated
Mean	4.10	3.84
N	120	120

It was found also, that among the significant first order interactions (Appendix G) that socioeconomic status and category of adjudication were not significant ($F = .670$, $p<.513$). This finding casts doubt on the hypothesis that socioeconomic status and category of adjudication combine in an unique way to bring about an effect on health adjustment. The means table (Table III) illustrates this finding. An inspection of the means shows that little difference exists between means. Also, the graphic representation depicts the absence

of an interaction between socioeconomic status and category of adjudication (see Figure 6).

TABLE III

MEANS FOR SOCIOECONOMIC STATUS X CATEGORY OF ADJUDICATION INTERACTION FOR HEALTH ADJUSTMENT

Category of Adjudication	Socioeconomic Status High	Middle	Low
Non-Adjudicated	4.05 (40)	4.20 (40)	4.05 (40)
Adjudicated	3.68 (40)	3.93 (40)	3.93 (40)

Though the hypothesized first order interaction was not significant statistically, there was a significant category x sex interaction ($F = 7.410$, p .01). This indicates that category of adjudication and sex have an effect on health adjustment. The means which have been plotted on the graph in Figure 7 show that there is little difference between non-adjudicated males and females, but a significant difference is depicted between male and female adjudicated subjects. The graph also shows that female, non-adjudicated subjects are not significantly different from adjudicated females. On the other hand male non-adjudicated subjects are quite different in their helath adjustment. Non-adjudicated males report a higher health adjustment score than

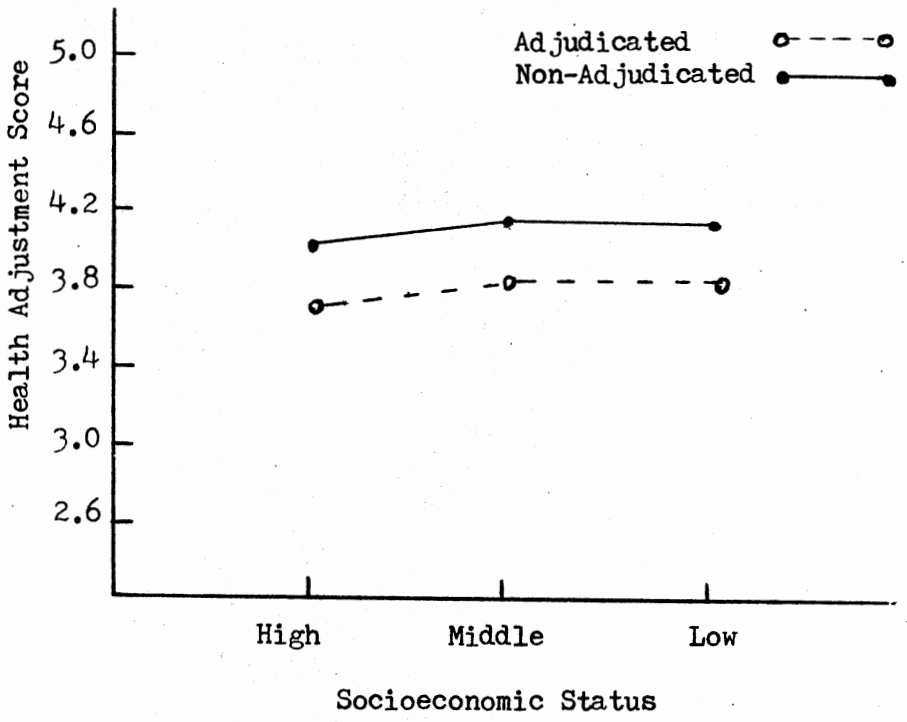


Figure 6. Socioeconomic Status by Category of Adjudication Interaction for Health Adjustment

adjudicated subjects, indicating a poorer health adjustment for the non-adjudicated males.

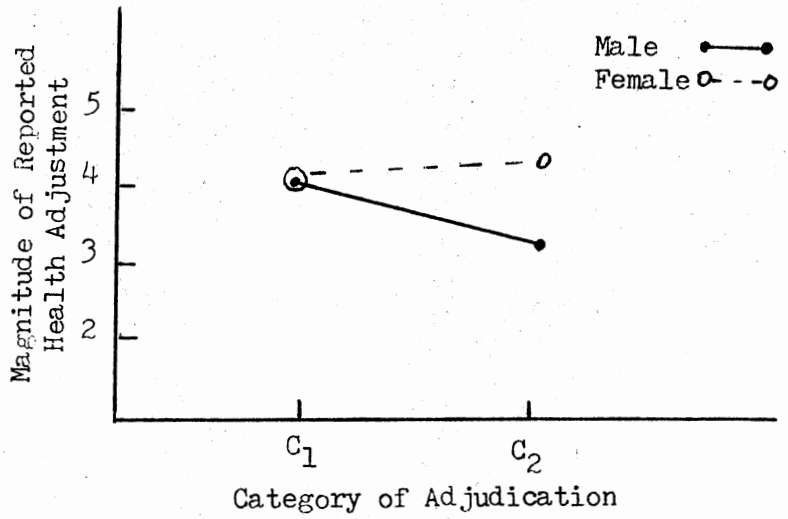
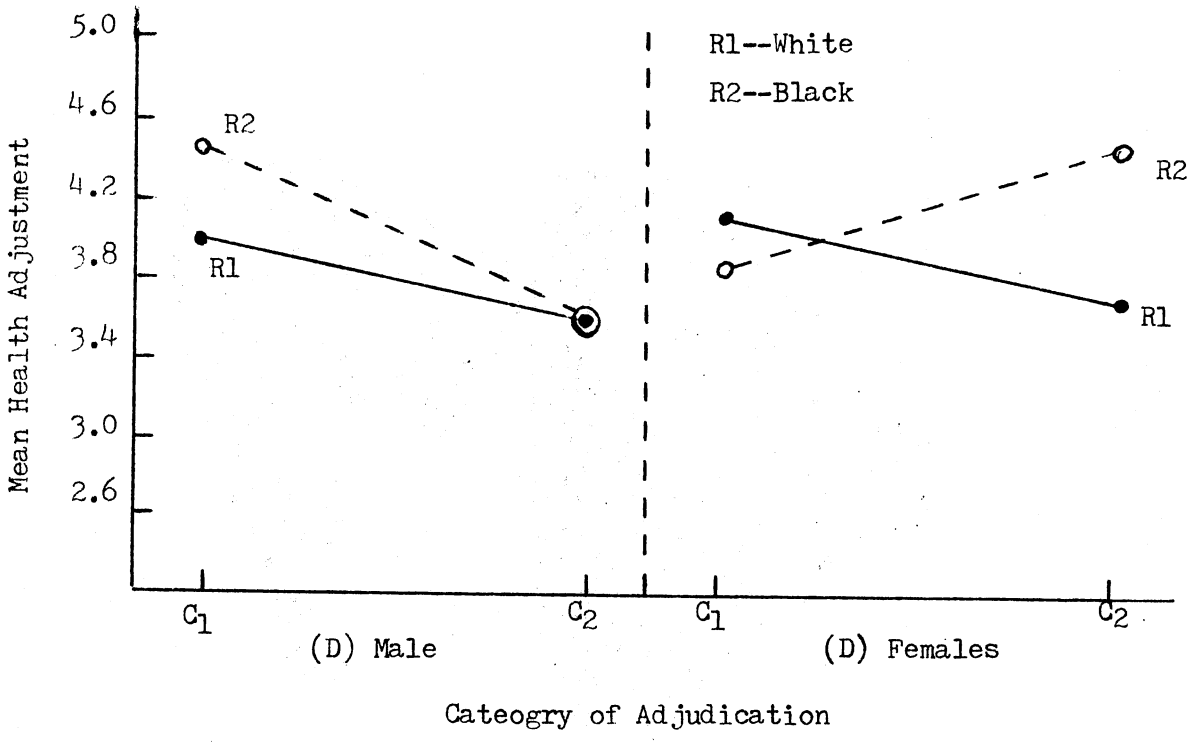


Figure 7. Interaction of Sex of Subject by Category of Adjudication

There were no other first order interactions which combined with category of adjudication and health adjustment. However, a second order combination between category of adjudication x race x sex was significant ($F = 16.291$, $p<.001$).

An inspection of the means (Table IV) and the category x race x sex graphs (Figure 8) is quite informative. It can be seen that among males non-adjudicated subjects are more different with respect to health adjustment. Among the female subjects there is a difference between non-adjudicated and adjudicated females on the health factor. However, the greatest difference is between black and white adjudicated females.



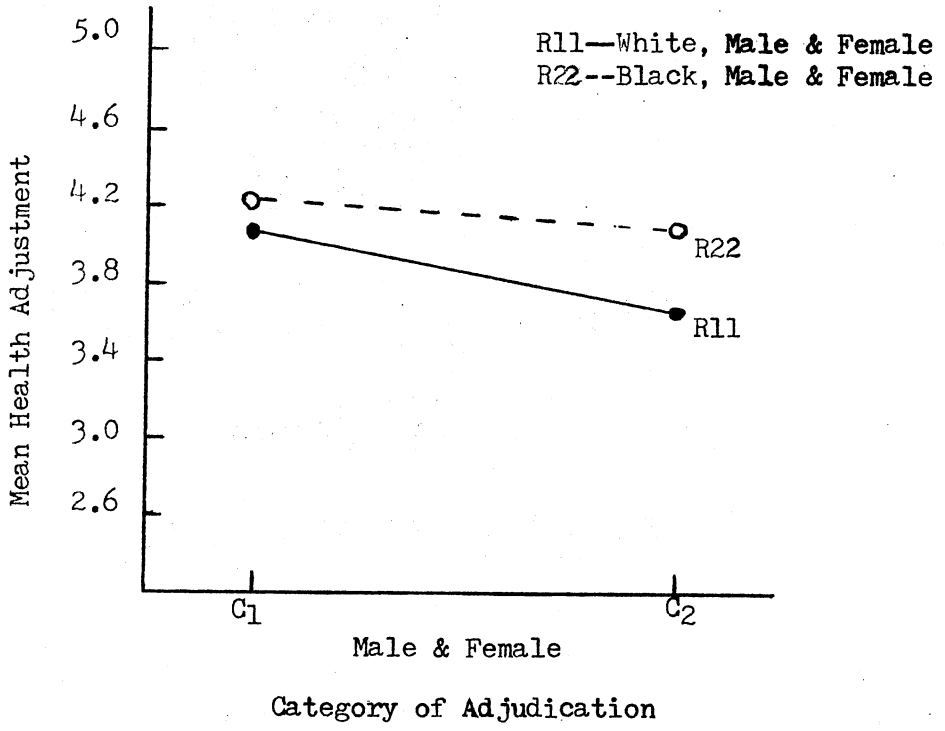


Figure 8. Category by Race by Sex Interaction for Health Adjustment

When the sex variable is viewed in combination it reveals by the means and graphic representation that there is little race difference in health adjustment.

TABLE IV

MEANS FOR CATEGORY OF ADJUDICATION X RACE X SEX FOR HEALTH ADJUSTMENT

Race	Male		Female		Male & Female	
	Non-Adj	Adj	Non-Adj	Adj	Non-Adj	Adj
White	3.90	3.60	4.23	3.70	4.07	3.63
Black	4.30	3.60	3.97	4.47	4.13	4.03

The results of the foregoing main effects and interaction effects are presented to show the reader how the addition of actors changed the effect of the health variable among the subjects. It was found that when all factors were included (grade, SES, category of adjudication, race, and sex) that the highest order interaction which achieved statistical significance at or beyond the .01 level was grade x SES x category x race ($F = 6.062$, p .003). This result does not support the hypothesis that all of the factors interact to produce an effect on health adjustment. The five-way analysis of variance for health adjustment was non-significant ($F = 1.833$, $p < .163$).

The results of the ANOVA may be pursued from a number of perspectives, all of which may be uniquely important. However, the focus of this study is to determine in what way the levels of the adjudication factor interacts with other factors (grade, SES, race, and sex) to effect health adjustment.

The results of the five-way analysis indicates that grade x SES x category x race is statistically significant ($F = 6.062$, p .003) (Appendix G). An indication that these factors combined have an effect on health adjustment. To determine the nature of the contribution category of adjudication contributes to this third order interaction a simple effects test was carried out. The simple, simple, simple main effects for category of adjudication were determined by an analysis of variance (Table V).

TABLE V

MEANS FOR SIGNIFICANT THIRD ORDER EFFECTS FOR CATEGORY OF ADJUDICATION, GRADE, SOCIOECONOMIC STATUS, AND RACE

C at Levels of ABD	Means	
$A_1B_1D_2$	5.000	4.000
$A_1B_2D_1$	4.000	3.200
$A_2B_3D_1$	4.000	3.200
$A_2B_3D_2$	3.800	4.400

The results of the analysis show that there is a significant difference among categories for four combinations of grade, SES, and race (C at levels of ABD). It was found that a) non-adjudicated 9th and 10th grade high SES blacks scored higher on health adjustment variable than adjudicated 9th and 10th grade high SES blacks ($p<.001$); b) non-adjudicated 9th and 10th grade, middle SES whites scored higher on health adjustment than adjudicated 9th and 10th grade, middle SES whites ($p<.01$); c) non-adjudicated 11th and 12th low SES whites scored significantly higher on health adjustment than adjudicated 11th and 12th grade, low SES whites ($p<.01$); d) non-adjudicated 11th and 12th grade, low SES blacks are significantly different from adjudicated 11th and 12th grade, low SES blacks ($p<.01$). In this last instance adjudicated subjects score higher on health adjustment. The decision of whether adjudicated scored higher than non-adjudicated was based on an inspection of the means after the analysis yielded a determination of statistical significance. The table of means (Table V) shows the means involved. A graphic representation of these differences between group means is illustrated in Figure 9.

Emotion

The effects of grade (A), socioeconomic status (B, SES), category of adjudication (C), race (D), and sex (E), on emotional adjustment were analyzed using a 2x3x2x2x2 factorial design. The results of this test are in Appendix G.

It was hypothesized that adjudicated subjects would have a poorer emotional adjustment than non-adjudicated subjects. The results of the

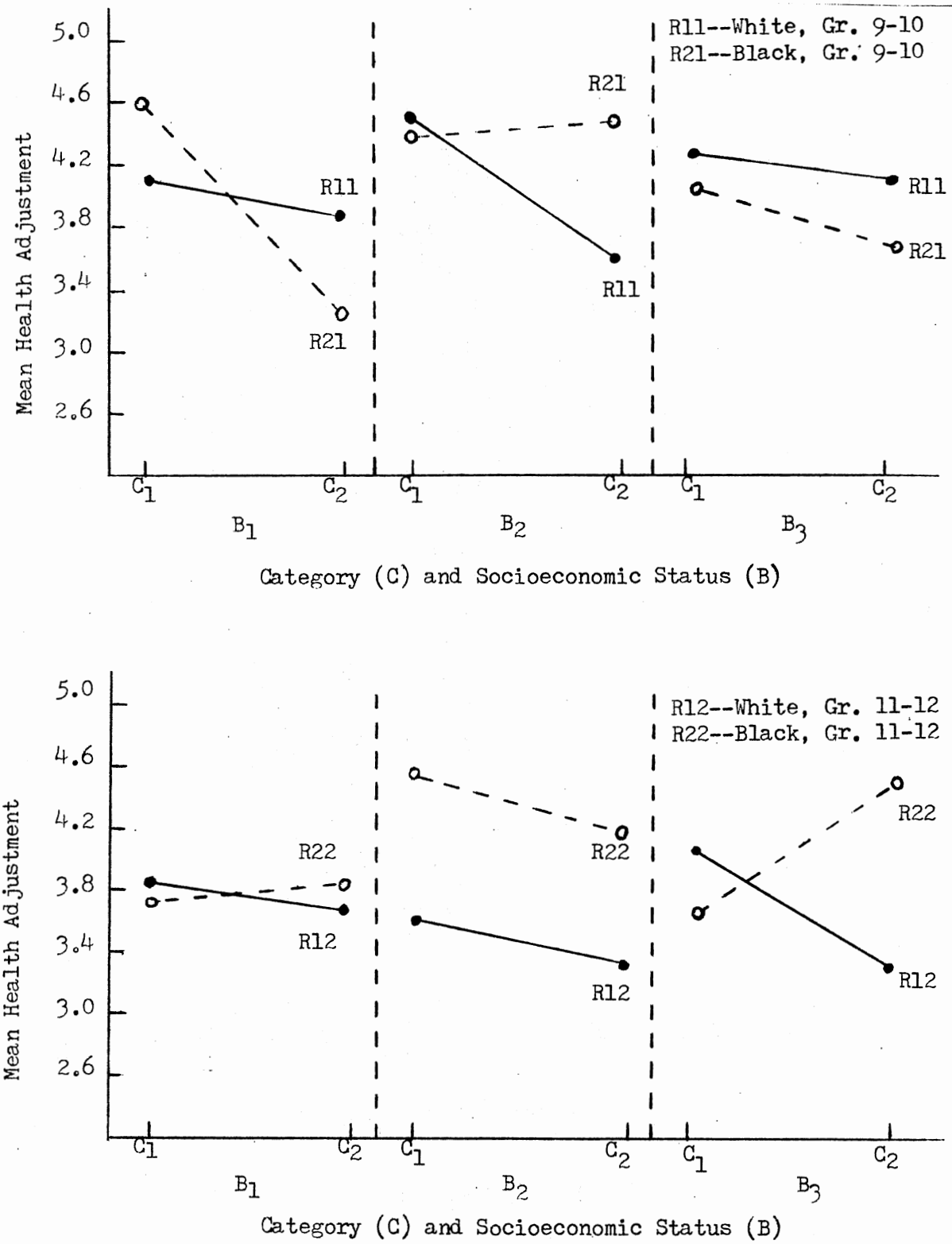


Figure 9. Grade by Socioeconomic Status by Category by Race Interaction for Health Adjustment

main effects of the F test show that this hypothesis is inaccurate. The factor "category of adjudication" did not reach the .01 level of significance required in this study to determine a significant effect ($F = 1.912$, $p<.169$). The only main effect factor to achieve statistical significance was "sex" ($F = 18.888$, $p<.001$). This finding is important in light of other hypotheses about adjudication at higher levels of interaction.

It was further hypothesized that there would be an interaction effect between category of adjudication (C) and sex (E). This combination was found to be non-significant ($F = .039$, $p<.845$) indicating no significant difference in emotional adjustment based on category of adjudication and sex. The only first order interaction to reach significance at the .01 level was grade x sex ($F = 9.990$, $p<.002$).

Two second order hypotheses were made about emotional adjustment differences. It was predicted that grade (A), category (C), and sex (E), would interact to produce a significant effect on emotional adjustment. However, this interaction failed to reach statistical significance ($F = 1.912$, $p<.168$), therefore, it could not be supported. The second hypothesis was that SES (B), category (C) and sex (E), would combine significantly to impact on emotional adjustment. This hypothesis having reached significance beyond the .01 level can be supported ($F = 8.233$, $p<.001$). A second second order interaction which was significant was SES (B), category (C) and race (D) $F = 15.141$, $p<.001$.

A further analysis of the SES by category by race interaction was carried out using Scheffé's Multiple Comparison of Pairs of Means. This test revealed adjudicated, high SES blacks were significantly

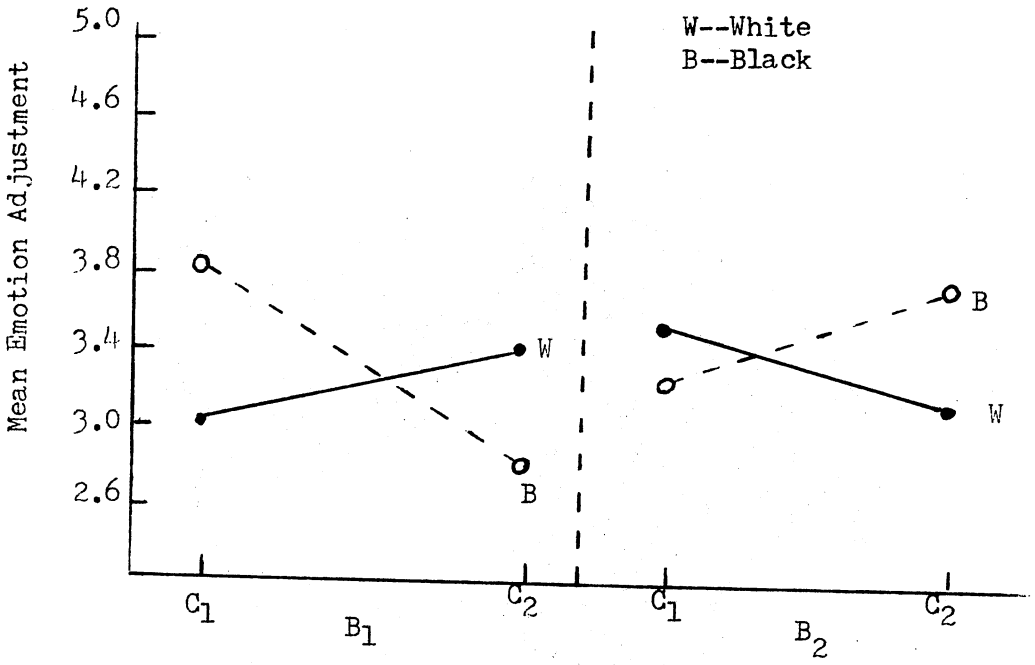
different from non-adjudicated, high SES blacks ($p<.01$; see Table VI). This difference is also presented in the BCD graph in Figure 10. It can be seen that non-adjudicated subjects report a poorer emotional adjustment than adjudicated subjects. It was also revealed by the Scheffé method that a difference exists between adjudicated and non-adjudicated, middle SES, blacks ($p<.01$). In this instance an inspection of the means and the graphic representation show that adjudicated, middle SES blacks report a poorer emotional adjustment than non-adjudicated middle SES blacks (see Figure 10).

TABLE VI

PAIR-WISE COMPARISON OF EMOTIONAL ADJUSTMENT MEANS FOR SOCIOECONOMIC STATUS, CATEGORY OF ADJUDICATION AND RACE INTERACTION

C at Levels of BD	Means	Difference
B_1D_1	2.800 - 3.200	.400
B_1D_2	5.000 - 1.800	3.200*
B_2D_1	3.600 - 3.400	.200
B_2D_2	3.000 - 4.000	1.000*
B_3D_1	3.600 - 2.800	.800
B_3D_2	3.600 - 3.600	.000

*$p<.01$



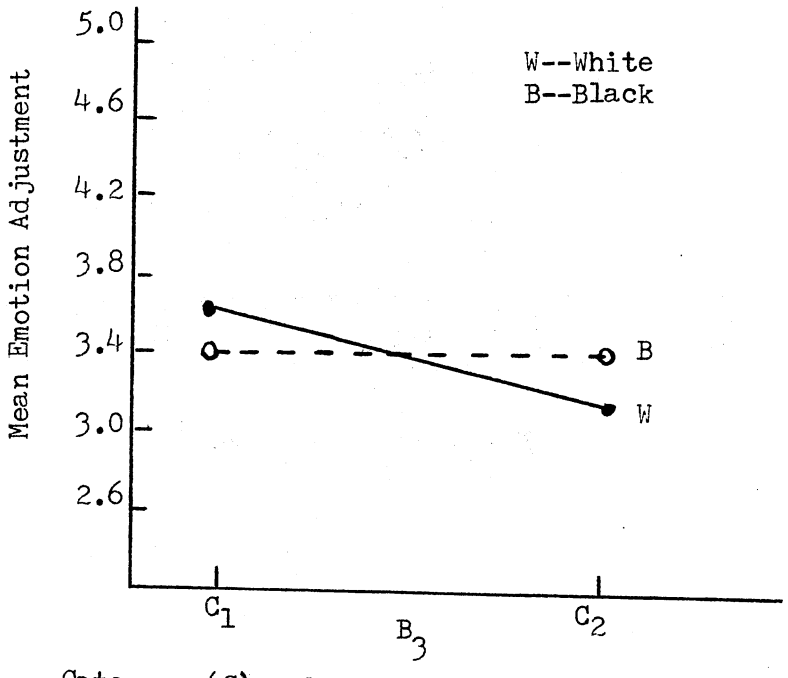


Figure 10. Category by Race by Socioeconomic Status for Emotion Adjustment

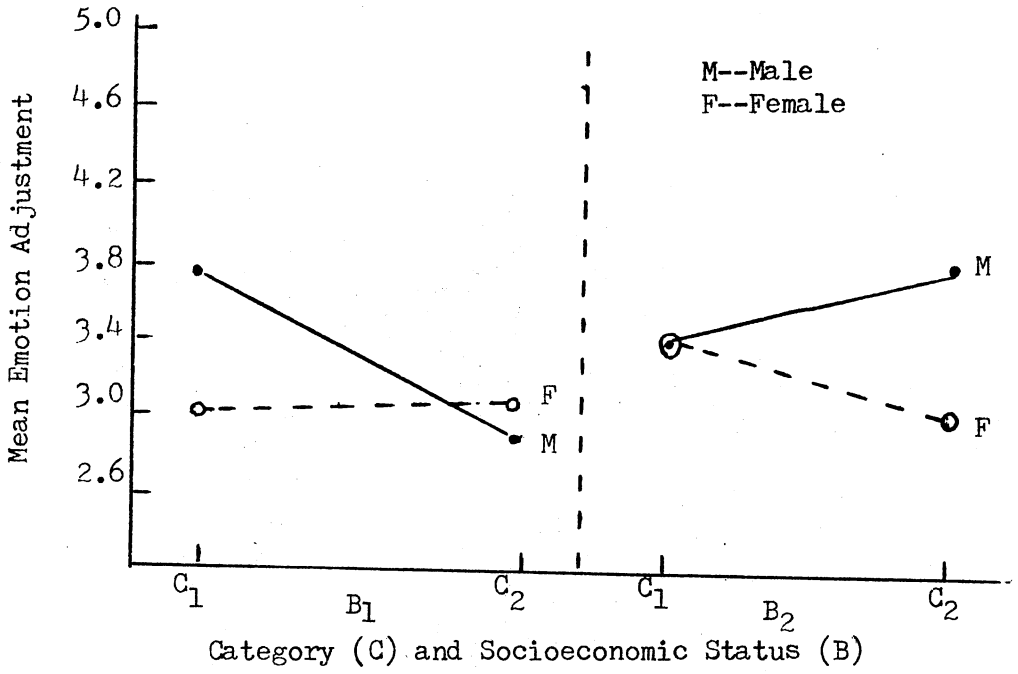
The overall F test as may be recalled yielded a significant SES by category by sex interaction (Figure 11). The contribution made by category of adjudication to this interaction was made using Scheffé's method of pair-wise comparisons. The results of the pair-wise comparisons yield no significant differences between adjudicated and non-adjudicated subjects at the .01 level (see Table VII). It is apparent that the major contributors of effect on emotional adjustment in this interaction are socioeconomic status and sex respectively.

The overall F test indicates that category of adjudication is a factor in emotional adjustment, only in the second order interaction described. The highest order interactions for emotional adjustment at or beyond the .01 level of significance was grade x socioeconomic status x race x sex ($p<.001$). This finding indicates that as hypothesized adjudication category is not a factor in emotional adjustment beyond the second order interactions.

Hostility

As with the other dependent variables, hostility adjustment was analyzed using a 2x3x2x2x2 factorial design (Appendix G).

The results of the analysis show a significant main effect for category of adjudication ($F = 31.842$, $p<.001$). This finding supports the hypothesis that category of adjudication has a significant effect on hostility adjustment. It was further hypothesized that adjudicated subjects would have a poorer hostility adjustment than non-adjudicated subjects. This hypothesis cannot be supported by inspection of the



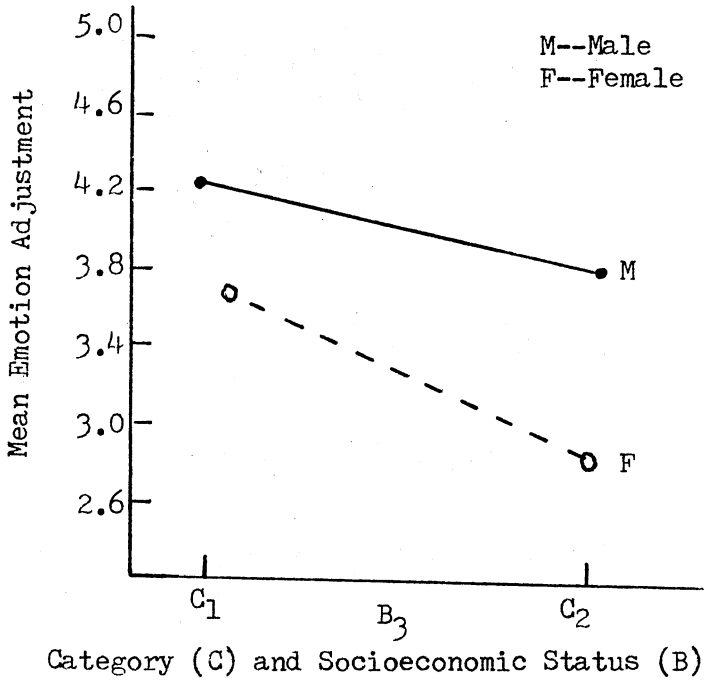


Figure 11. Category by Sex by Socioeconomic Status for Emotion Adjustment

TABLE VII

PAIR-WISE COMPARISON OF EMOTIONAL ADJUSTMENT MEANS FOR CATEGORY OF ADJUDICATION BY SOCIO-ECONOMIC STATUS BY SEX INTERACTION

Simple Effects CxBxE	Difference
$C@B_1E_1$	.400
B_1E_2	.800
B_2E_1	.200
B_2E_2	.000
B_3E_1	.000
B_2E_2	.000
$B@C_1E_1$	.800
C_1E_2	.800
C_2E_1	.200
C_2E_2	.800
$B_{1.3}@C_1E_1$*	1.400***
C_1E_2	.600
C_2E_2	1.000***
$B_{2.3}@C_1E_1$**	.600
C_1E_2	.200
C_2E_1	.600
C_2E_2	.200
$E@B_1C_1$	.200
B_1C_2	.400
B_2C_1	.200
B_2C_2	.400
B_3C_1	.600
B_3C_2	1.200***

* B_1 compared with B_3

** B_2 compared with B_3

*** $p<.01$

means. The non-adjudicated subjects report a higher mean hostility score (M = 3.43) than adjudicated subjects (M = 2.97).

Although this hypothesis was supported, the fact that higher order interactions exist precludes acceptance of this finding without considering the higher order interactions with adjudication category. It was found that no first order interaction with category of adjudication were significant at the .01 level. Therefore, the hypothesis that SES and category have a significant effect on hostility may not be supported.

A number of second order interactions with category of adjudication were present (Appendix G). However, the hypothesis that grade, category, and sex (ACE) would have an effect on hostility could not be supported ($F = 1.274$, $p<.260$). However, a number of other planned combinations of factors with adjudication category were statistically significant.

It was found by analysis of variance (Appendix G) that grade x socioeconomic status x category of adjudication interact yielding a significant hostility adjustment effect ($F = 5.147$, $p<.01$). To determine the effect category of adjudication played in this interaction Scheffe's multiple comparison procedure was used. This procedure revealed that when each factor (ABC) is compared with all possible levels of each factor, only two comparisons were statistically significant (Table VIII). There was a SES difference between high (B_1) and middle SES (B_2) subjects in the 9th and 10th grades and adjudicated ($p<.01$). The only other significant comparison was between non-adjudicated and adjudicated 11th and 12th grade, low SES subjects ($p<.01$).

TABLE VIII

MEAN DIFFERENCES FOR SECOND ORDER INTERACTIONS FOR HOSTILITY ADJUSTMENT

ABC	ACD	BCD	BCE	CDE
$A@B_1C_1$=.450	$A@C_1D_1$=.030	$B@C_1D_1$=.100	$B@C_1E_1$=.450	$C@D_1E_1$=.230
$A@B_1C_2$=.400	$A@C_1D_2$=.360	$B@C_1D_2$=.500*	$B@C_1E_2$=.050	$C@D_1E_2$=.600*
$A@B_2C_1$=.150	$A@C_2D_1$=.260	$B@C_2D_1$=.200	$B@C_2E_1$=.400	$C@D_2E_1$=.900*
$A@B_2C_2$=.150	$A@C_2D_2$=.160	$B@C_2D_2$=.250	$B@C_2E_2$=.150	$C@D_2E_2$=.100
$A@B_3C_1$=.000	$C@A_1D_1$=.300	$B_{1.3}@C_1D_1$=.250	$B_{1.3}@C_1E_1$=.400	$D@C_1E_1$=.830*
$A@B_3C_2$=.400	$C@A_1D_2$=.760*	$B@C_1D_2$=.400	$B@C_1E_2$=.300	$D@C_1E_2$=.360
$B@A_1C_1$=.400	$C@A_2D_1$=.530*	$B@C_2D_1$=.600*	$B@C_2E_1$=.350	$D@C_2E_1$=.160
$B@A_1C_2$=.550*	$C@A_2D_2$=.240	$B@C_2D_2$=.400	$B@C_2E_2$=.150	$D@C_2E_2$=.140
$B@A_2C_1$=.050	$D@A_1C_1$=.400*	$B_{2.3}@C_1D_1$=.150	$B_{2.3}@C_1E_2$=.200	$E@C_1D_1$=.030
$B@A_2C_2$=.000	$B@A_1C_2$=.060	$B@C_1D_2$=.100	$B@C_1E_2$=.200	$E@C_1D_2$=.160
$B_{1.3}@A_1C_1$=.300	$D@A_2C_1$=.070	$B@C_2D_1$=.200	$B@C_2E_1$=.050	$E@C_2D_1$=.660*
$B@A_1C_2$=.500*	$D@A_2C_2$=.360	$B@C_2D_2$=.150	$B@C_2E_2$=.300	$E@C_2D_2$=.640*
$B@A_2C_1$=.150		$C@B_1D_1$=.100	$C@B_1E_1$=.100	

TABLE VIII (Continued)

ABC	ACD	BCD	BCE	CDE
$B@A_2C_2$=.300		$C@B_1D_2$=.250	$C@B_1E_2$=.250	
$B_{2.3}@A_1C_1$=.050		$C@B_2D_1$=.600*	$C@B_2E_1$=.250	
$B@A_1C_2$=.050		$C@B_2D_2$=.000	$C@B_2E_2$=.150	
$B@A_2C_1$=.150		$C@B_3D_1$=.250	$C@B_3E_1$=.350	
$B@A_2C_2$=.300		$C@B_3D_2$=.250	$C@B_3E_2$=.650*	
$C@A_1B_1$=.100		$D@B_1C_1$=.650*	$E@B_1E_1$=.050	
$C@A_1B_2$=.200		$D@B_1C_1$=.500*	$E@B_1E_1$=.100	
$C@A_1B_3$=.300		$D@B_2C_1$=.050	$E@B_2E_1$=.550*	
$C@A_2B_1$=.250		$D@B_2C_2$=.550*	$E@B_2E_2$=.650*	
$C@A_2B_2$=.200		$D@B_3C_1$=.000	$E@B_3E_1$=.700*	
$C@A_2B_3$=.700*		$D@B_3C_2$=.500*	$E@B_3E_2$=.400	

*p<.01

The F-test further revealed that grade, category, and race (ACD) were significant ($F = 5.568$, $p<.01$). Again, using the Scheffé method it was found that in the three comparisons which were significant, category of adjudication accounted for two of these (Table VIII). It was found that category of adjudication was a factor in the difference between 9th and 10th grade black subjects ($p<.01$); and between 11th and 12th grade whites ($p<.01$). In both instances non-adjudicated subjects report a poorer hostility adjustment.

The significant socioeconomic x category x race (BCD) interaction ($F = 10.81$, $p<.001$), yield five significant comparisons when Scheffé's method was applied to the means. It was found that among the five only one was significant for a category effect on socioeconomic status and race. It was found that non-adjudicated middle class whites report a poorer hostility adjustment than adjudicated middle class whites ($p<.01$).

The second order SES x category x sex (BCE) was also significant ($F = 4.305$, p .01). The comparison among means at the various levels of each factor, revealed four significant comparisons (Table VIII). Among them only one comparison was significant for category, an indication that category of adjudication accounts for little of the differences. The significant difference was between non-adjudicated and adjudicated low SES females. The non-adjudicated reporting a poorer hostility adjustment. The factor contributing most in this BCE interaction was sex (females reporting highest hostility adjustment scores).

The results of the overall F test yielded a significant category x race x sex (CDE) interaction ($F = 12.89$, p .001). This supports the

hypothesis that these factors (CDE) combine in an unique way to effect hostility adjustment. The Scheffé method of multiple comparisons was used to determine what combination and levels of factors are significantly different. The focus of course is on the amount of variance accounted for by the factor category of adjudication (see Table VIII and Appendix H).

The results of the Scheffé method show that five of the pair-wise comparisons are significant (Table VIII) two of which show category differences. This indicates that nearly half of the differences among the means is accounted for by category of adjudication, and the other half by sex. The results show that there is a category difference between non-adjudicated and adjudicated white females ($p<.01$). The non-adjudicated subjects reporting the poorer hostility adjustment. A significant difference was also found between non-adjudicated and adjudicated black males ($p<.01$). The non-adjudicated subjects reporting a higher hostility adjustment score; therefore, a poorer hostility adjustment.

To determine if the hypothesis that non-adjudicated white females were different from all other category x race x sex groups on the hostility variable, Scheffe's Multiple Comparison Test was utilized. The result was a statistically significant difference between non-adjudicated white females and the other groups. The F' ($F'_{.01}$; 2,192 4.71). The hypothesis was supported at this level.

The highest order interaction for hostility adjustment was a third order interaction between SES x category x race x sex ($F = 4.495$, $p<.01$).

It was hypothesized that grade, SES, category, sex, and race would interact to produce a significant effect on hostility adjustment, but the results do not support this hypothesis.

An analysis of variance was applied to the SES x category x race x sex interaction to determine at what levels significant differences occurred (simple, simple, simple main effects, Table IX. The area of most concern in this study is the category differences and the results are focused here, even though there are other significant results evident.

It can be seen among the eleven significant comparisons, two are for category of adjudication differences. Non-adjudicated, high SES, black males are different from adjudicated high SES, black males. The non-adjudicated report a poorer hostility adjustment than adjudicated subjects. Also, there is a difference between non-adjudicated and adjudicated low SES, white females. The non-adjudicated subjects again reporting poorer hostility adjustment than adjudicated subjects. The graphs (Figure 12) are helpful in illustrating these differences.

The overall view of this third order interaction is that sex is the factor which accounts for the most variance in hostility adjustment and all other factors (category, SES, and race) are nearly equal in their contribution in accounting for hostility differences.

Delinquent Behavior

The evaluation of delinquent behavior scores by grade (A), socio-economic status (SES, B), category of adjudication (C), race (D), and sex (E), utilized a 2x3x2x2x2 factorial design. Though all factors

TABLE IX

SIMPLE, SIMPLE, SIMPLE, SIMPLE MAIN EFFECTS FOR SOCIOECONOMIC STATUS, CATEGORY OF ADJUDICATION, RACE, AND SEX

Factor	F	Significance
$B@C_1D_2E_1$	11.200	.001
$B@C_2D_2E_1$	7.663	.001
$C@B_1D_2E_1$	66.821	.001
$C@B_3D_1E_2$	15.284	.001
$D@B_1C_1E_1$	40.926	.001
$D@B_1C_2E_1$	18.833	.001
$E@B_1C_1D_1$	18.189	.001
$E@B_1C_2D_1$	8.084	.005
$E@B_1C_2D_2$	19.967	.001
$E@B_2C_1D_1$	8.084	.005
$E@B_2C_2D_1$	8.084	.005

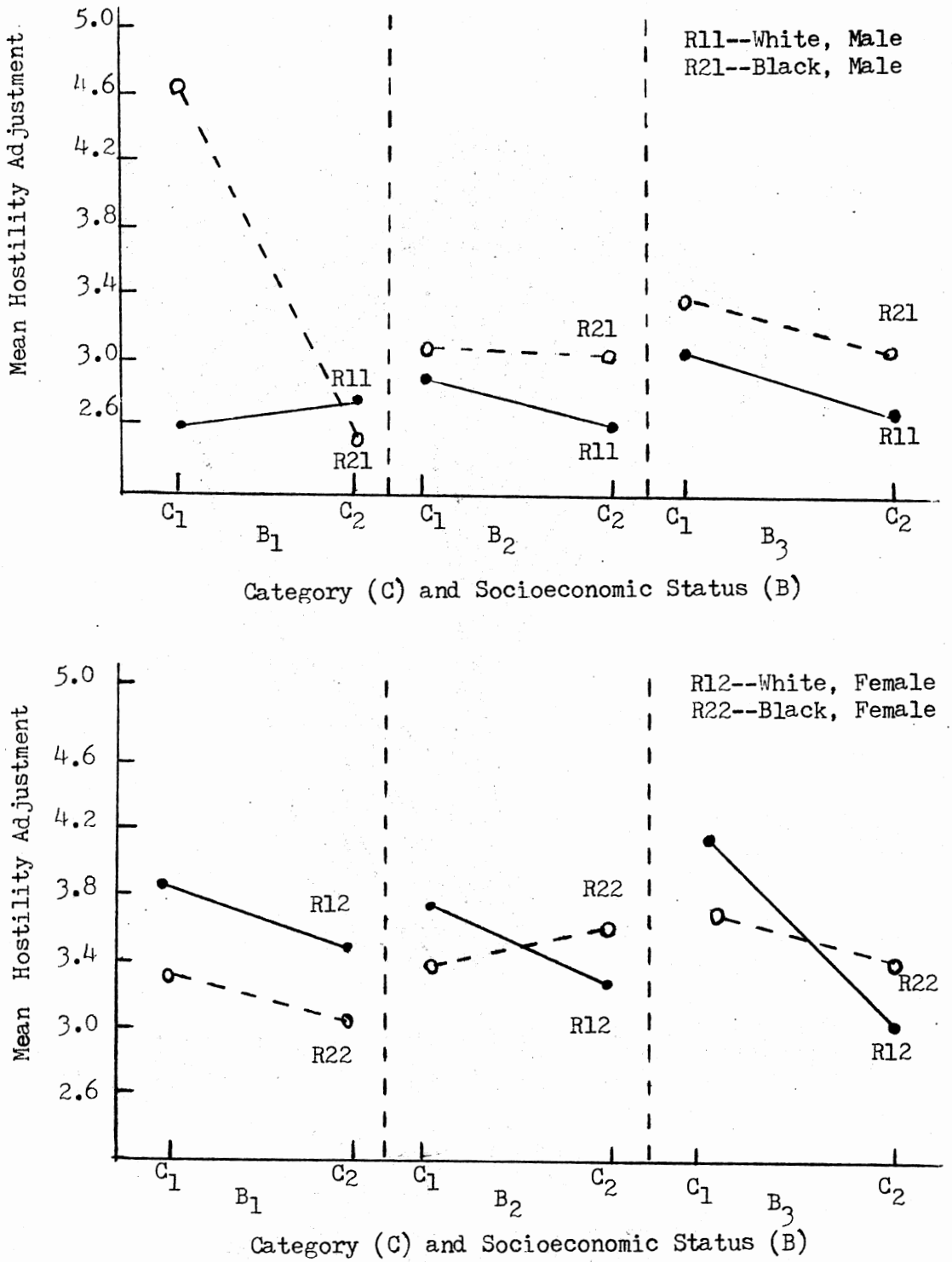


Figure 12. Grade by Socioeconomic Status by Category by Race Interaction for Hostility Adjustment

are thought to be important, the emphasis in this study is on differences due to category of adjudication. It should also be noted that an explanation of lower order effects will be given so the reader can better understand in a step-wise manner what has happened when the highest order interaction with category of adjudication is reached.

To begin with, the main effect results for the overall F test, show that only race (D) is statistically significant ($F = 9.460$, $p<.001$). The white subjects reported a higher frequency of delinquent behavior. This finding does not support the hypothesis that category of adjudication has a significant effect on delinquent behavior.

The first order interaction results show that only the race by sex is significant ($F = 6.145$, $p<.01$). This finding doesn't support any of the first order hypothesis that category of adjudication combined either with SES (BC), sex (CE), race (CD), or grade (AC) produces a significant effect ($p<.01$) on reported delinquency ($p<.03$; .384; .680; and .200 respectively).

The only second order interaction to reach a statistical level of significance was the SES by race, by sex interaction ($F = 5.483$, $p<.005$). This finding refutes the second order hypotheses regarding category of adjudication. It was hypothesized that SES by category by race ($p<.866$) and category by race by sex ($p<.100$) would significantly affect delinquent behavior, however, none reached statistical significance.

The highest order interaction to reach statistical significance was the SES by category, by race, by sex interaction ($F = 6.877$, $p<.001$). This finding supports the hypothesis that socioeconomic status, category

of adjudication, race, and sex interact with delinquent behavior. It was further suggested that all five factors (ABCDE) would have a significant effect on delinquent behavior, but this interaction failed to reach the .01 level of significance.

An analysis of variance was applied to the third order interaction to determine the simple effects of category of adjudication for reported delinquent behavior. The test of simple effects revealed six significent contrasts, among which two were significant for category of adjudication differences. It was found that there is a significant difference for category of adjudication ($p \leq .005$) between non-adjudicated and adjudicated, high SES, white males. The non-adjudicated subjects reporting less delinquent behavior than adjudicated, high SES white males. The means for non-adjudicated and adjudicated subjects are 12.60 and 16.20 respectively. This indicates that adjudicated (C_2) subjects report a higher delinquency behavior score (see Figure 13). It was also found that a significant difference exists between non-adjudicated and adjudicated high SES, black females ($p < .005$). Again an inspection of the means (non-adjudicated (C_1) M = 10.20; adjudicated (C_2) M = 13.80) and the graphic representation (see Figure 13) show adjudicated subjects have higher delinquency scores ($p \leq .01$). These findings cast doubt on the hypothesis that low SES, adjudicated, black males have the highest delinquency behavior score among all groups. To answer this question Scheffé's Multiple Comparison Method was utilized with these results. The multiple comparisons showed that the mean for low SES, adjudicated, black males is significantly different from the group average ($F_{2.192} = 52.69$, $p \leq .01$). The hypothesis cannot be supported

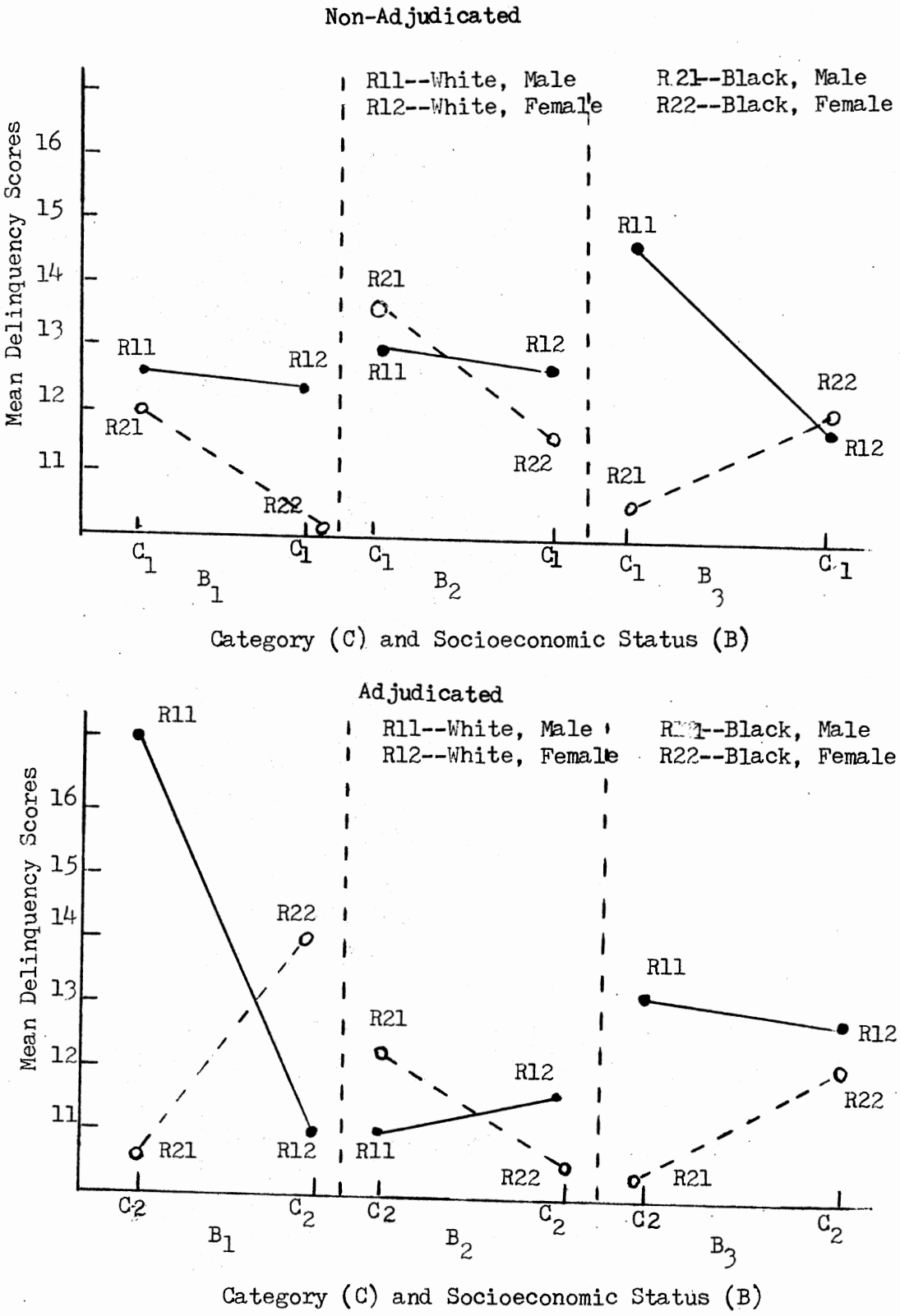


Figure 13. Socioeconomic Status by Category by Race by Sex Interaction for Mean Delinquency Scores

that this group reports more delinquent behavior. In looking at the group means (see Table X) it can readily be seen that the mean for this group is among the lowest delinquent behavior scores (M = 10.10).

Summary of Results

The following are the major findings of this study:

1. The variables Home and Health differentiated between adjudicated and non-adjudicated subjects. It was found that non-adjudicated subjects reported a poorer adjustment than adjudicated subjects.

2. The variable Hostility revealed that non-adjudicated subjects were more hostile than adjudicated subjects. White non-adjudicated females were most hostile among the subject groups.

3. There were no differences found among adjudicated and non-adjudicated subjects on the Emotional Adjustment variable.

4. There were no differences found between adjudicated and non-adjudicated subjects in delinquent behavior. There was, however, a race difference with white males reporting the greater delinquency interaction results.

5. The results of the interaction of factors on home and health adjustment show that the socioeconomic factor accounts best for home and health adjustment differences. High socioeconomic showed the poorer adjustment.

6. The interaction of factors on emotional adjustment shows that category of adjudication is not a good predictor of poor emotional adjustment.

TABLE X

MEANS FOR SOCIOECONOMIC STATUS BY CATEGORY OF ADJUDICATION BY RACE, BY SEX

		MALES					
		White, Male				Black, Male	
		Non-Adjudicated	Adjudicated			Non-Adjudicated	Adjudicated
SES	High	12.60	16.20	SES	High	12.10	10.50
	Middle	12.80	11.00		Middle	13.20	12.10
	Low	14.40	12.90		Low	9.80	10.10*

		FEMALES					
		White, Female				Black, Female	
		Non-Adjudicated	Adjudicated			Non-Adjudicated	Adjudicated
SES	High	12.20	11.10	SES	High	10.20	13.80
	Middle	12.50	11.20		Middle	11.40	10.60
	Low	11.50	12.50		Low	11.70	12.00

*Mean for low SES, adjudicated, black males.

7. The interactions in hostility adjustment revealed that among these factors, sex accounts for the most variance in hostility.

8. The interactions among factors for delinquent behavior was best accounted for by race rather than category of adjudication. Where category made a difference, adjudicated high socioeconomic status white males and black females had the higher scores than their non-adjudicated counterparts.

CHAPTER V

DISCUSSION

Since the results of this study stand somewhat in opposition to the findings of many studies found in the literature, the discussion chapter will, in general, look at some factors which may or may not account for the differences in findings. These factors will be presented under the following headings: 1) Sample Differences, 2) Instruments, 3) Response Sets, 4) Societal-Cultural Differences, and 5) Analytical Methods.

Sampling Differences

Past studies have generally utilized incarcerated, urban, lower socioeconomic subjects, chosen through the use of "official statistics" (court records, etc.) and compared them with unscreened (for delinquency) high school youth often of higher socioeconomic status. Matching has usually been on a single characteristic and control has been lax over other characteristics.

The present study has utilized probationary (adjudicated), rural youth from all levels of the socioeconomic strata. The delinquency of these youth have been determined by the Nye-Short Self Report Scale. The adjudicated youth have been compared with non-adjudicated rural youth also from all socioeconomic levels. These non-adjudicated youth

were also evaluated for delinquency on the Nye Short Scales. Race, Sex and other characteristics which have been ignored or loosely controlled in the past studies were carefully balanced in the present study. Results in general agree with Self-Report studies.

Instruments

Could the differences be the result of the choice of instruments and/or the method of using them? Both the Bell Inventory and the Nye Short were used in a standard manner and both seem suitable for the age groups included in the present study. Moreover, they are every bit as sound in norm structure, reliability and validity as most of the instruments used in other studies. The Bell Inventory Scales has not been as widely used with adjudicated and black subjects as it has with non-adjudicated and white subjects. This fact, alone, however does not satisfactorily explain the surprisingly poor showing of white, middle class, non-adjudicated males.

The Nye Short Scale on the other hand has been tested in a number of studies and with a consistent lack of correlation between delinquency scores and socioeconomic and/or adjudication status. While neither of these instruments represent the optimum in test instruments for the study of delinquents, there appears to be little evidence that artifacts present in these instruments can account for the discrepant findings and their directions.

Response Sets

It has been suggested that "response sets" may account for some of the differences. Such response sets as: 1) white males seeking

a "macho" image by exaggerating their delinquency, 2) blacks and female subjects acting in a culturally-defined submissive fashion, 3) adjudicated subjects answering "correctly" to avoid further punishment by the law enforcement agencies, have been postulated. In the present study appeals to honesty and anonymity were made. Answers were rotated to prevent a "place set". Despite these efforts, "response sets" may have occurred. This problem, however, would not necessarily have been unique to, or more present in this study than in other studies. Therefore, it does not appear that response sets per se can account for result differences.

Societal-Cultural Differences

As mentioned previously under sampling differences, the present sample was drawn from among rural youth and the adjudicated group were probationers, not incarcerated subjects. It is possible that rural youth are more homogeneous than urban youth. It is also possible that the rural social climate represents a difference in attitudes toward delinquent behavior in youth. Police officials and courtroom personnel may know the offender and his family better than their urban counterparts. This may lead to probationary status for youth of "good" family more commonly than in an urban setting. Attitudes toward some delinquent behaviors may be more relaxed in a rural setting. For example, driving a car without a license or underage driving may be seen as more permissible in rural areas. This present study does not really speak to these differences but does suggest that further research comparing rural and urban youth be pursued.

Analytical Method

The understanding of the results and benefits of the present study are enhanced when the analytical methodology is contrasted with early and contemporary delinquency studies. The early studies were characterized by single variables, in the hope of predicting and/or understanding delinquent behavior. It is quickly evident that no single factor is responsible for delinquent behavior. It is more likely that delinquent behavior is a complex interaction of factors, and can most legitimately be understood and researched using multifactor analysis. The present study has made use of a multifactored analysis, which may have led to results that are predominantly contrary to those found when single factor analysis was utilized.

The strength of the difference in the use of a multifactor and single factor studies, is noted in the agreement between the present study and others using multifactor designs in delinquency study. To illustrate, some of the findings of Peterson et al. (1975) will be given. In her research using a principal components factor analysis, she had this to report: 1) delinquent and non-delinquent youth are not distinguished from one another in terms of their attitudes and beliefs about the major facets of their lives, 2) the expectation that delinquent youths would be more negatively oriented and hence inclined to produce consistently more critical judgements (in regard to their home, families, school experience, and the behavior of others), was <u>not</u> confirmed, 3) the highschool (non-adjudicated) students proved to be more negative and critical than institutionalized delinquents with regard

to their school experience, and showed no differences in their judgement of home and family life. Also non-adjudicated youths were more, rather than less self-centered. The only category where adjudicated subjects had a poorer orientation was with respect to unfavorable judgements concerning the justice system and its personnel. This very long example points out clearly that the findings of the present study are not as curious as they at first may seem.

It is the similarity of findings between the present study and others using a multifactor approach, which bolsters the belief that the results of this study are indeed authentic. Given the authenticity of this and other studies, it will be important to consider the useful application of this data in the prevention and prediction of delinquent behavior. Carefully designed, longitudinal research may well yield valuable answers.

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APPENDIX A

SUBJECT CONSENT FORM

OKLAHOMA STATE UNIVERSITY
CLINICAL PSYCHOLOGY DEPARTMENT
STILLWATER, OKLAHOMA

DATE_____

CHILD'S NAME_____

I, hereby voluntarily authorize DAVID D. COLE , the
Name of Researcher
Oklahoma State University, and such assistants that may be designated to perform the following study: "What Teenagers Have To Say"

I understand that strict confidentiality will be observed of all data collected under the guidelines established by the Department of Psychology, Oklahoma State University. Complete anonymity (no names will be used) will be preserved and data will be released only to qualified professionals for scientific or training purposes.

I further understand and agree that the data and information related to and resulting from the study may be used for publication in scientific journals but that m y name /my child's name shall not be used in association with these publications without my specific written permission.

By signing this consent form, I have not waived any of my legal rights or released this institution from liability for negligence. Should any problem arise during this study, I may take them to the , Chairman, Research Committee: Dr. Julia McHale,Fourth floor, North Murray Hall, O.S.U., Phone: 624-6097

SIGNATURE OF CHILD'S
PARENT OR GUARDIAN_____

SPECIFY RELATIONSHIP TO CHILD

_____

APPENDIX B

PARENT AND SUBJECT RESEARCH DESCRIPTION

RESEARCH DESCRIPTION

To better inform the parents and youth participants about the research project is the intent of this form.

Purpose: The youth of a community, inmany respects is the most important element of the community. There is a great deal written and said about this age group, but much of it is not based on facts obtained directly from the teenaged group. This study is intended to supply many important facts about what young people (14-17), think, feel, and do.

Concerns of Reasearcher:

1. Invasion of privacy.
2. Embarassment to youth participant and/or parent(s).

Some questions in the questionnaire may be viewed possibly as invasion of privacy and/or embarassing to the participant. Hence, a sample o the kinds of questions to be asked is offered here to aid the parent and youth in determining whether participation is advisable. It should be kept in mind that this questionnaire is anonymous (no names used), and all information is strictly confidential.

Example of questions to be asked:

What is the age of your parents?
What kind of grades the youth usually makes?
Is there anything about your physical appearance which makes you self conscious?
Where were you born?
If your parents are divorced or separated, how old were you when your original parents last lived together?
What kind of job do you think you'll work at as a life occupation?
Do you have many colds?
Has lack of money tended to make home unhappy for you?
Are you freightened of lightening?
Have people ever accused you of being critical of them?
Do you get angry easily?
Skipped school without a legitimate excuse?
Had sex relations with a person of the opposite sex?
Gone fishing or hunting without a license?
Take a car for a ride without the owner's knowledge?

Safeguards:

1. All information is anonymous, and in no way will any attempt be made to determine who filled out the questionnaire.
2. Time will be made available to youth and parents after the administration of the questionnaire to discuss any after effects of the procedure.

Signature of Parent_____

Signature of Student_____

APPENDIX C

DEMOGRAPHIC DATA

"WHAT TEENAGERS HAVE TO SAY"

QUESTIONNAIRE

The youth of a community, in many respects, the most important element of the community. There is a great deal written and said about your age group, but much of it is not based on facts. This study is intended to supply many important facts about what young people of your age feel, think, and do. You will not place your name on this questionnaire, and no attempt will be made to identify you through your answers. Please give the facts or your honest opinion on every question.

DIRECTIONS:

1. Read each question carefully once, then answer to the best of your ability.
2. Place an X squarely in the blank by your answer.
3. If you wish to comment on any item, write in the margin next to the item.
4. Some questions refer to parents. Answer these for whomever you usually live with. EXAMPLE: If you usually live with your stepfather or uncle, answer the father questions for them.
5. Remember, this is not a test. What you think and do are the data of this research.

PART I: SOME DESCRIPTIVE FACTS

1. Age at last birthday _____

2. Father's age at last birthday _____ No Father _____

3. Mother's age at last birthday _____ No Mother _____

4. Sex: (1) _____ Male (2) _____ Female

5. On your last report card, did you get mostly: (1) _____ C's, (2) _____ D's and F's, (3) _____ A's, (4) _____ B's

6. Height: _____ feet _____ inches

7. Weight: _____

8. Is there anything about your physical appearance that makes you self conscious?
_____ No If yes, what?_____

9. Are you on any of the school athletic teams? (1) _____ none, (2) _____ One, (3) _____ Three or more. Which one or ones?_____

10. Are you in any organizations outside of school? (1) _____ Yes, (2) _____ No
They are:_____

11. Where were you born? (1) _____ Oklahoma, (2) _____ Another state
If none of these, where? _____

4/14/78

12. Where have you lived in the last 3 years, city and state:_____

_____

13. Where was your father born? (1) _____ Oklahoma, (2) _____ Another state
If none of these, where? _____

14. Where was your mother born? (1) _____ Oklahoma, (2) _____ Another state
If none of these, where? _____

15. With whom do you ordinarily live with? (1) _____ original father and mother, (2) _____ mother and stepfather, (3) _____ father and stepmother, (4) _____ mother only, (5) _____ father only, (6) _____ foster parents (adopted)

16. If one of your parents is dead, how old were you when it happened?
(1) _____ 5 or younger, (2) _____ 6-11, (3) _____ 12-15, (4) _____ 16 or older
(5) _____ neither are dead

17. If your parents are divorced or separated, how old were you when your original parents last lived together? (1) _____ 5 or younger, (2) _____ 6-11, (3) _____ 12-10 (4) _____ 17 or older, (5) _____ not divorced or separated

18. If your parents are divorced or separated, how do you divide your time between your original parents? (1) _____ live entirely with mother, (2) _____ live with mother but visit father occasionally, (3) _____ live entirely with father, (4) _____ live with father but visit mother occasionally, (5) _____ live part the year with both, (6) _____ not divorced or separated

19. Does your mother have other people do part of her housework? (1) _____ Yes, (2) _____ No.

20. Who helps your mother <u>most</u> with her housework? (1) _____ your father, (2) _____ you (and your brothers & sisters), (3) _____ grandmother, (4) _____ part time hired help, (5) _____ full time housekeeper, (6) _____ she does it herself, (7) _____ no mother, (8) _____ entire family helps about equally

21. What kind of job do you think you'll work at as a life occupation?

_____

22. What does your father (stepfather) do for a living? EXAMPLE: Owns a farm, drives a truck etc. _____

23. What is your father's (stepfather's) income? _____
Mother's income, if she works: _____

24. Does your father (stepfather) have a job now? (1) _____Yes, (2) _____ not - because retired, (3) _____ not working because sick or crippled. If he is able to work but has no job, how long un-employed? _____ No father _____

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APPENDIX D

BELL ADJUSTMENT INVENTORY

The adapted version of the Bell Adjustment Inventory was used to test the dependent variables of health adjustment, home adjustment, hostility adjustment, and emotional adjustment. The four dependent variables derived from the Adjustment Inventory are:

1. Home Adjustment: High scorers on this variable tend to be associated with one or more of these conditions in the family: (1) inability to live up to the expectation of one or both parents, (2) role reversals of parents (child as parent), (3) feelings of parental rejection, (4) persistent tensions in the home, (5) arbitrary restrictions and punitive styles of discipline, (6) sibling rivalries, (7) inability to identify with or relate to one or both parents, (8) divorce or separation in the home, (9) possessive parents, (10) fear of parents.

2. Health Adjustment: Very high scorers reflect a history of somatic difficulties or a hypochondriacal preoccupation with somatic functions.

3. Emotionality: High scorers on emotionality suggest that the student has concerns in one or more of these areas: (1) a tendency to live in a world of fantasy, (2) volatile feelings such as fear, anger, and excitement, (3) depressive feelings coming from isolation and from feelings of inferiority, (4) the feeling that one is the victim of persecution, (5) feelings of guilt, (6) feelings of self-consciousness, and easily hurt feelings, (7) worry, anxiety and nervousness.

4. Hostility: The items included in this scale covers the following attitudes toward relationships with others: (1) the feeling that others are stupid, dull, boring, gullible and irrational, (2) the belief that you can't afford to trust people, (3) the feeling that others think you are unfriendly toward them and don't understand them, (4) that its better to cover up a bit by lieing than to tell the truth, (5) belief that one shouldn't hesitate to tell people off and criticize them publicly, (6) belief that others feel the person is critical of them, (7) the belief that fear of punishment is all that restrains others from negative acts toward others, (8) the belief that it one doesn't look out for self no one else will, (9) that altrusm is basically selfish, and good deeds are useless, (10) that the moral codes are stupid, (11) a feeling of superiority toward others.

The subjects in the study received a score for each adjustment category (home, health, emotional, and hostility). The scores were

derived by assigning a number to each descriptive evaluation of adjustment. For example, an "excellent" adjustment would be assigned the numerical designation of one (1), "good" equals (2), "average" equals (3), "poor" equals (4), and "unsatisfactory" would be given a five (5). A composite score is derived by adding the score for each adjustment variable (home, health, emotion, and hostility) together. The result of this procedure is that a subject with excellent adjustment over all four variables would receive a composite score of four (4) and one who was unsatisfactory in all areas would receive a score of twenty (20). The norms for the descriptive evaluations are presented in the graph on page 147.

DESCRIPTIVE NORMS FOR HIGH SCHOOL AND COLLEGE STUDENTS

Scales	High School Raw Score Ranges		
	Boys	Girls	Description
	0- 1	0- 1	Excellent
a.	2- 4	2- 5	Good
Home	5-12	6-14	Average
Adjustment	13-17	15-19	Poor
	Over 17	Over 19	Unsatisfactory
	0- 1	0- 1	Excellent
b	2- 3	2- 4	Good
Health	4- 9	5-11	Average
Adjustment	10-14	12-15	Poor
	Over 14	Over 15	Unsatisfactory
	0- 1	0- 3	Excellent
d	2- 4	4- 8	Good
Emotionality	5-13	9-18	Average
	14-17	19-22	Poor
	Over 17	Over 22	Unsatisfactory
	0- 3	0- 1	Very Friendly
e	4- 7	2- 4	Friendly
Hostility	8-15	5-13	Average
Friendless	16-18	14-17	Somewhat Critical
	Over 18	Over 17	Hostile

PART II: AN OVERVIEW OF YOU

Remember, there are no right or wrong answers to these questions. Indicate your answer to each question by making a mark in the appropriate space on the booklet for "yes", "no", or "?" Use the question mark only when you are certain you cannot answer yes or no.

If you have not been living with your parents, answer certain questions with regard to the people with whom you have been living.

	YES	NO	?
45. Do you daydream frequently?			
46. Do you take cold rather easily from other people?			
47. Do you think that the conversation of many people is pretty trite and silly?			
48. Does it frighten you when you have to see a doctor about some illness?			
49. Are your eyes very sensitive to light?			
50. Did you ever have a strong desire to run away from home?			
51. Do you think it will ever be possible for all the peoples of the earth to live together peacefully?			
52. Do you sometimes feel that your parents are disappointed in you?			
53. Do you frequently have spells of the "blues"?			
54. Are you subject to hayfever or asthma?			
55. Have you found that there are many persons in this world whom you just can't afford to trust?			

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	YES	NO	?
56. Have you ever had scarlet fever?			
57. Do you think that it is a pretty good plan to "cover up" a bit rather than to put yourself in an embarrassing position by telling the whole truth?			
58. Does your mother tend to dominate your home?			
59. Have a number of people acted unfriendly toward you?			
60. Has either of your parents frequently critized you unjustly?			
61. Do you feel lonesome, even when you are with people?			
62. Have you ever been seriously injured in any kind of an accident?			
63. Do you feel there has been a lack of real affection and love in your home?			
64. Do you have many headaches?			
65. Have you ever felt that someone was trying to do you harm?			
66. Do you often feel that people do not understand you?			
67. Have your relationships with your father usually been pleasant?			
68. Do you sometimes have difficulity getting to sleep even when there are no noises to disturb you?			
69. Do you frequently feel very tired toward the end of the day?			
70. Does the thought of an earthquake or a fire frighten you?			
71. Do you believe in being "brutally frank" most of the time?			
72. Do you often use the word "cute" in describing people or things?			
73. Have you lost weight recently?			
74. Has either of your parents insisted on your obeying him or her regardless of whether or not the request was reasonable?			
75. Has illness or death among your immediate family tended to make home life unhappy for you?			

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APPENDIX E

NORTH-HATT OCCUPATIONAL PRESTIGE SCALE

The North-Hatt Occupational Prestige Scale is one of several research attempts to rank order the prestige associated with a wide range of occupations. Their research was in part supported by government sponsorship under the auspices of the President's Scientific Advisory Board. The government was extremely anxious to determine the prestige rating of government service positions. This joint effort was instrumental in reducing one of the major shortcomings of previous occupational rankings, i.e., a representative sample. Also North and Hatt were dissatisfied with the representativeness of previous lists of occupations.

The list of occupations for the North-Hatt scale came from some selections from the list created by Mapheus Smith; selections from the 1940 census report on occupations; and the President's Scientific Advisory Board. The final draft or list included ninety (90) occupational titles.

The occupational prestige ratings given by the respondents were obtained by personal interview. The total sample was 2,920 respondents. The respondents came from various sized cities including rural-farm, three age groups were utilized, both sexes, three socioeconomic status groups and two races.

The result of this research is the North-Hatt Occupational Prestige Scale which ranks a wide range of occupations from 1 to 100 in prestige rankings. Due to the high correlation of the occupational prestige scale with income and education, all of which are individually good predictors of socioeconomic status, the prestige scale can be used to categorize individuals by socioeconomic status.

The conversion of the North-Hatt scale rankings to a socioeconomic index was carried out in this study to avoid the pitfall of having to guess at occupational titles not contained in the North-Hatt listings. Otis Dudley Duncan has derived a formula which takes into account age in relation to education and income. The formula for Duncan's Socioeconomic Index is as follows: $\hat{X}_1 = X_2 + X_3 - (X_1 - \hat{X}_1)$;

$\hat{X}_1$ - Socioeconomic Index

X_2 - Age Adjusted Income

X_3 - Age Adjusted Education

X_1 - North-Hatt Prestige Ranking

Duncan by combining the two predictors (education and income) in a linear multiple-regression equation produced a coefficient which accounted for five-sixths of the variance in occupational prestige.

The following is an example of the North-Hatt Occupational Prestige Scale with Duncan's Socioeconomic Index:

Occupation, by Major Occupation Group	Hatt-North	Socio-economic Index
Professional, Technical and Kindred Workers		
Physician and Surgeons	89	92
Accountants and Auditors	80	78
Architects	86	90
College Professors	83	84
Managers and Proprietors Salaried		
Construction	74	71
Transportation	78	71
Retail Trade		
Gasoline Service Station	65	31
Clerical and Kindred Workers		
Bank Tellers	71	52
Telephone Operator	69	45
Cashier	69	44
Craftsmen, Foremen and Kindred Workers		
Baker	60	22
Brickmason	62	27
Cranemen	59	21
Mechanics and Repairmen		
Airplane	70	48
Radio and TV	66	36
Roofers	54	15
Service Workers		
Hospital Attendants	53	12
Bartender	56	19
Bootblack	46	8
Cooks	54	14
Firemen	67	37
Janitors	47	9

APPENDIX F

NYE-SHORT SCALE FOR DELINQUENT BEHAVIOR

SHORT FORM

Nye-Short Delinquence Scale

Recent research has found that everyone breaks some rules and regulations during his/her lifetime. Some break them regularly, others less often. Below are some frequently borken regulations. Answer those that you have broken since beginning grade school. Place an X in the blank that applies to you.

1. Driven a car without a drivers license or permit? (Do not include "Drivers Training" courses.) (1)_____very often, (2)_____several times, (3)_____once or twice, (4)_____no.
2. Skipped school without a legitimate excuse? (1)_____no, (2)_____ once or twice, (3)_____several times, (4)_____very often.
3. Defied your parent's authority (to their face)? (1)_____no, (2) _____once or twice, (3)_____several times, (4)_____very often.
4. Taken little things (worth less than $2.00) that did not belong to you? (1)_____no, (2)_____once or twice, (3)_____several times, (4)_____very often.
5. Bought or drank beer, wine or whiskey? (1)_____no, (2)_____once or twice, (3)_____several times, (4)_____very often.
6. Purposely damanged or destroyed public or private property? (1)_____very often, (2)_____once or twice, (3)_____several times, (4)_____no.
7. Had sex relations with a person of the opposite sex? (1)_____no, (2)_____once or twice, (3)_____3-4 times, (4)_____5-6 times.

The respondent could make the following responses to each of the delinquent behavior items.

a) no or none (1)
b) once or twice (2)
c) several times, three or four times (3)
d) very often, four or more times (4)

The numbers in parentheses were assigned to each response respectively. The respondent's score on the scaled items will be summed to obtain his/her composite delinquent behavior score. The minimum possible score will be seven (7), indicating no delinquent behavior. The maximum score is 28, indicating a great degree of delinqeunt behavior.

APPENDIX G

ANALYSIS OF VARIANCE

* * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * *

HOMEA
BY GRADE
SES
CATEG
RACE
SEX

* *

SOURCE OF VARIATION			SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS							
GRADE			0.600	1	0.600	0.983	0.323
SES			1.300	2	0.650	1.065	0.347
CATEG			7.350	1	7.350	12.041**	0.001
RACE			1.350	1	1.350	2.212	0.139
SEX			0.600	1	0.600	0.983	0.323
2-WAY INTERACTIONS							
GRADE	SES		1.200	2	0.600	0.983	0.376
GRADE	CATEG		1.667	1	1.667	2.730	0.100
GRADE	RACE		3.267	1	3.267	5.352	0.022
GRADE	SEX		2.817	1	2.817	4.614	0.033
SES	CATEG		6.100	2	3.050	4.997*	0.008
SES	RACE		0.300	2	0.150	0.246	0.782
SES	SEX		2.100	2	1.050	1.720	0.182
CATEG	RACE		2.017	1	2.017	3.304	0.071
CATEG	SEX		0.267	1	0.267	0.437	0.509
RACE	SEX		0.600	1	0.600	0.983	0.323
3-WAY INTERACTIONS							
GRADE	SES	CATEG	1.633	2	0.817	1.338	0.265
GRADE	SES	RACE	1.233	2	0.617	1.010	0.366
GRADE	SES	SEX	0.933	2	0.467	0.765	0.467
GRADE	CATEG	RACE	1.667	1	1.667	2.730	0.100
GRADE	CATEG	SEX	0.417	1	0.417	0.683	0.410
GRADE	RACE	SEX	0.417	1	0.417	0.683	0.410
SES	CATEG	RACE	4.233	2	2.117	3.468	0.033
SES	CATEG	SEX	0.633	2	0.317	0.519	0.596
SES	RACE	SEX	8.100	2	4.050	6.635*	0.002
CATEG	RACE	SEX	2.400	1	2.400	3.932	0.049
4-WAY INTERACTIONS							
GRADE	SES RACE	CATEG	3.733	2	1.867	3.058	0.049
GRADE	SES SEX	CATEG	5.233	2	2.617	4.287*	0.015
GRADE	SES SEX	RACE	7.633	2	3.817	6.253*	0.002
GRADE	CATEG SEX	RACE	1.350	1	1.350	2.212	0.139
SES	CATEG SEX	RACE	0.300	2	0.150	0.246	0.782
5-WAY INTERACTIONS							
GRADE	SES RACE	CATEG SEX	5.200	2	2.600	4.259*	0.015
EXPLAINED			76.650	47	1.631	2.672	0.000
RESIDUAL			117.200	192	0.610		
TOTAL			193.850	239	0.811		

* *

*$P < .01$
**$P < .001$

* * * * * * * * * * * * A N A L Y S I S O F V A R I A N C E * * * * * * * * * * * *

HEALTHA
BY GRADE
SES
CATEG
RACE
SEX

SOURCE OF VARIATION			SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS							
GRADE			2.604	1	2.604	5.507	0.020
SES			1.633	2	0.817	1.727	0.181
CATEG			4.004	1	4.004	8.467*	0.004
RACE			3.037	1	3.037	6.423*	0.012
SEX			3.504	1	3.504	7.410*	0.007
2-WAY INTERACTIONS							
GRADE	SES		0.133	2	0.067	0.141	0.869
GRADE	CATEG		1.504	1	1.504	3.181	0.076
GRADE	RACE		3.504	1	3.504	7.410*	0.007
GRADE	SEX		4.538	1	4.538	9.595*	0.002
SES	CATEG		0.633	2	0.317	0.670	0.513
SES	RACE		6.100	2	3.050	6.449*	0.002
SES	SEX		1.033	2	0.517	1.093	0.337
CATEG	RACE		1.504	1	1.504	3.181	0.076
CATEG	SEX		3.504	1	3.504	7.410*	0.007
RACE	SEX		0.038	1	0.038	0.079	0.779
3-WAY INTERACTIONS							
GRADE	SES	CATEG	0.933	2	0.467	0.987	0.375
GRADE	SES	RACE	0.933	2	0.467	0.987	0.375
GRADE	SES	SEX	3.600	2	1.800	3.806	0.024
GRADE	CATEG	RACE	2.604	1	2.604	5.507	0.020
GRADE	CATEG	SEX	0.704	1	0.704	1.489	0.224
GRADE	RACE	SEX	0.004	1	0.004	0.009	0.925
SES	CATEG	RACE	2.433	2	1.217	2.573	0.079
SES	CATEG	SEX	0.833	2	0.417	0.881	0.416
SES	RACE	SEX	1.300	2	0.650	1.374	0.255
CATEG	RACE	SEX	7.704	1	7.704	16.291**	0.000
4-WAY INTERACTIONS							
GRADE	SES RACE	CATEG	5.733	2	2.867	6.062*	0.003
GRADE	SES SEX	CATEG	2.533	2	1.267	2.678	0.071
GRADE	SES SEX	RACE	1.733	2	0.867	1.833	0.163
GRADE	CATEG SEX	RACE	1.504	1	1.504	3.181	0.076
SES	CATEG SEX	RACE	0.433	2	0.217	0.458	0.633
5-WAY INTERACTIONS							
GRADE	SES RACE	CATEG SEX	1.733	2	0.867	1.833	0.163
EXPLAINED			71.996	47	1.532	3.239	0.000
RESIDUAL			90.800	192	0.473		
TOTAL			162.796	239	0.681		

*P < .01
**P < .001

* * * * * * * * * * * A N A L Y S I S O F V A R I A N C E * * * * * * * * * *

EMOTA
BY GRADE
SES
CATEG
RACE
SEX

SOURCE OF VARIATION			SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS							
GRADE			0.267	1	0.267	0.624	0.430
SES			2.433	2	1.217	2.849	0.060
CATEG			0.817	1	0.817	1.912	0.168
RACE			0.600	1	0.600	1.405	0.237
SEX			8.067	1	8.067	18.888**	0.000
2-WAY INTERACTIONS							
GRADE	SES		0.833	2	0.417	0.976	0.379
GRADE	CATEG		0.817	1	0.817	1.912	0.168
GRADE	RACE		1.667	1	1.667	3.902	0.050
GRADE	SEX		4.267	1	4.267	9.990*	0.002
SES	CATEG		2.233	2	1.117	2.615	0.076
SES	RACE		0.700	2	0.350	0.820	0.442
SES	SEX		0.433	2	0.217	0.507	0.603
CATEG	RACE		0.017	1	0.017	0.039	0.844
CATEG	SEX		0.017	1	0.017	0.039	0.844
RACE	SEX		0.267	1	0.267	0.624	0.430
3-WAY INTERACTIONS							
GRADE	SES	CATEG	0.133	2	0.067	0.156	0.856
GRADE	SES	RACE	0.633	2	0.317	0.741	0.478
GRADE	SES	SEX	0.533	2	0.267	0.624	0.537
GRADE	CATEG	RACE	0.417	1	0.417	0.976	0.325
GRADE	CATEG	SEX	0.817	1	0.817	1.912	0.168
GRADE	RACE	SEX	1.667	1	1.667	3.902	0.050
SES	CATEG	RACE	12.933	2	6.467	15.141**	0.000
SES	CATEG	SEX	8.233	2	4.117	9.639**	0.000
SES	RACE	SEX	0.933	2	0.467	1.093	0.337
CATEG	RACE	SEX	0.817	1	0.817	1.912	0.168
4-WAY INTERACTIONS							
GRADE	SES RACE	CATEG	3.033	2	1.517	3.551	0.031
GRADE	SES SEX	CATEG	3.433	2	1.717	4.020	0.019
GRADE	SES SEX	RACE	6.433	2	3.217	7.532**	0.001
GRADE	CATEG SEX	RACE	1.350	1	1.350	3.161	0.077
SES	CATEG SEX	RACE	4.233	2	2.117	4.956*	0.008
5-WAY INTERACTIONS							
GRADE	SES RACE	CATEG SEX	0.700	2	0.350	0.820	0.442
EXPLAINED			69.733	47	1.484	3.474	0.000
RESIDUAL			82.000	192	0.427		
TOTAL			151.733	239	0.635		

* *

*P < .01
**P < .001

* * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * *

HOSTA
BY GRADE
SES
CATEG
RACE
SEX

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS					
GRADE	0.938	1	0.938	2.368	0.125
SES	0.058	2	0.029	0.074	0.929
CATEG	12.604	1	12.604	31.842**	0.000
RACE	2.204	1	2.204	5.568*	0.019
SEX	17.604	1	17.604	44.474	0.
2-WAY INTERACTIONS					
GRADE SES	0.325	2	0.162	0.411	0.664
GRADE CATEG	0.337	1	0.337	0.853	0.357
GRADE RACE	0.038	1	0.038	0.095	0.759
GRADE SEX	0.938	1	0.938	2.368	0.125
SES CATEG	2.308	2	1.154	2.916	0.057
SES RACE	0.408	2	0.204	0.516	0.598
SES SEX	0.158	2	0.079	0.200	0.819
CATEG RACE	0.104	1	0.104	0.263	0.609
CATEG SEX	0.704	1	0.704	1.779	0.184
RACE SEX	5.704	1	5.704	14.411**	0.000
3-WAY INTERACTIONS					
GRADE SES CATEG	4.075	2	2.038	5.147*	0.007
GRADE SES RACE	0.175	2	0.088	0.221	0.802
GRADE SES SEX	2.325	2	1.163	2.937	0.055
GRADE CATEG RACE	2.204	1	2.204	5.568	0.019
GRADE CATEG SEX	0.504	1	0.504	1.274	0.260
GRADE RACE SEX	0.337	1	0.337	0.853	0.357
SES CATEG RACE	8.558	2	4.279	10.811**	0.000
SES CATEG SEX	3.408	2	1.704	4.305*	0.015
SES RACE SEX	1.408	2	0.704	1.779	0.172
CATEG RACE SEX	5.104	1	5.104	12.895	0.000
4-WAY INTERACTIONS					
GRADE SES CATEG RACE	1.158	2	0.579	1.463	0.234
GRADE SES CATEG SEX	2.808	2	1.404	3.547	0.031
GRADE SES RACE SEX	2.275	2	1.137	2.874	0.059
GRADE CATEG RACE SEX	0.337	1	0.337	0.853	0.357
SES CATEG RACE SEX	3.558	2	1.779	4.495*	0.012
5-WAY INTERACTIONS					
GRADE SES CATEG RACE SEX	0.325	2	0.163	0.411	0.664
EXPLAINED	82.996	47	1.766	4.461	0.000
RESIDUAL	76.000	192	0.396		
TOTAL	158.996	239	0.665		

*P. $<$ .01
**P. $<$ .001

* * * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * * *

DELIN
BY GRADE
SES
CATEG
RACE
SEX

* *

SOURCE OF VARIATION			SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS							
GRADE			0.067	1	0.067	0.008	0.927
SES			12.358	2	6.179	0.781	0.459
CATEG			0.067	1	0.067	[illegible]	[illegible]
RACE			74.817	1	74.817	9.46[illegible]*	0.0[illegible]
SEX			20.417	1	20.417	2.58[illegible]	0.110
2-WAY INTERACTIONS							
GRADE	SES		0.108	2	0.054	0.007	0.993
GRADE	CATEG		13.067	1	13.067	1.652	0.200
GRADE	RACE		2.017	1	2.017	0.255	0.614
GRADE	SEX		1.350	1	1.350	0.171	0.680
SES	CATEG		56.508	2	28.254	3.573	0.030
SES	RACE		37.158	2	18.579	2.349	0.098
SES	SEX		15.358	2	7.679	0.971	0.381
CATEG	RACE		1.350	1	1.350	0.171	0.680
CATEG	SEX		6.017	1	6.017	0.761	0.384
RACE	SEX		48.600	1	48.600	6.145*	0.014
3-WAY INTERACTIONS							
GRADE	SES	CATEG	10.558	2	5.279	0.668	0.514
GRADE	SES	RACE	0.908	2	0.454	0.057	0.944
GRADE	SES	SEX	17.7[illegible]	2	[illegible]	1.124	0.3[illegible]
GRADE	CATEG	RACE	2.017	1	2.017	0.255	0.614
GRADE	CATEG	SEX	1.350	1	1.350	0.171	0.680
GRADE	RACE	SEX	33.400	1	3[illegible].400	4.256	0.0[illegible]
SES	CATEG	RACE	2.275	2	1.138	0.144	0.866
SES	CATEG	SEX	2.908	2	1.454	0.18[illegible]	[illegible]
SES	RACE	SEX	35.775	2	[illegible]	[illegible]*	[illegible]
CATEG	RACE	SEX	21.600	1	21.600	2.731	0.1[illegible]
4-WAY INTERACTIONS							
GRADE	SES RACE	CATEG	46.253	2	23.127	[illegible]	0.056
GRADE	SES SEX	CATEG	33.025	2	16.512	2.088	0.127
GRADE	SES SEX	RACE	6.475	2	3.237	0.409	0.665
GRADE	CATEG SEX	RACE	1.067	1	1.067	0.13[illegible]	0.71[illegible]
SES	CATEG SEX	RACE	103.775	2	54.387	6.877**	0.001
5-WAY INTERACTIONS							
GRADE	SES RACE	CATEG SEX	42.158	2	21.079	2.665	0.072
EXPLAINED			711.533	47	15.139	1.914	0.001
RESIDUAL			1518.400	192	7.908		

* *

*p < .01
**p < .001

APPENDIX H

SECOND ORDER INTERACTION

FOR HOSTILITY

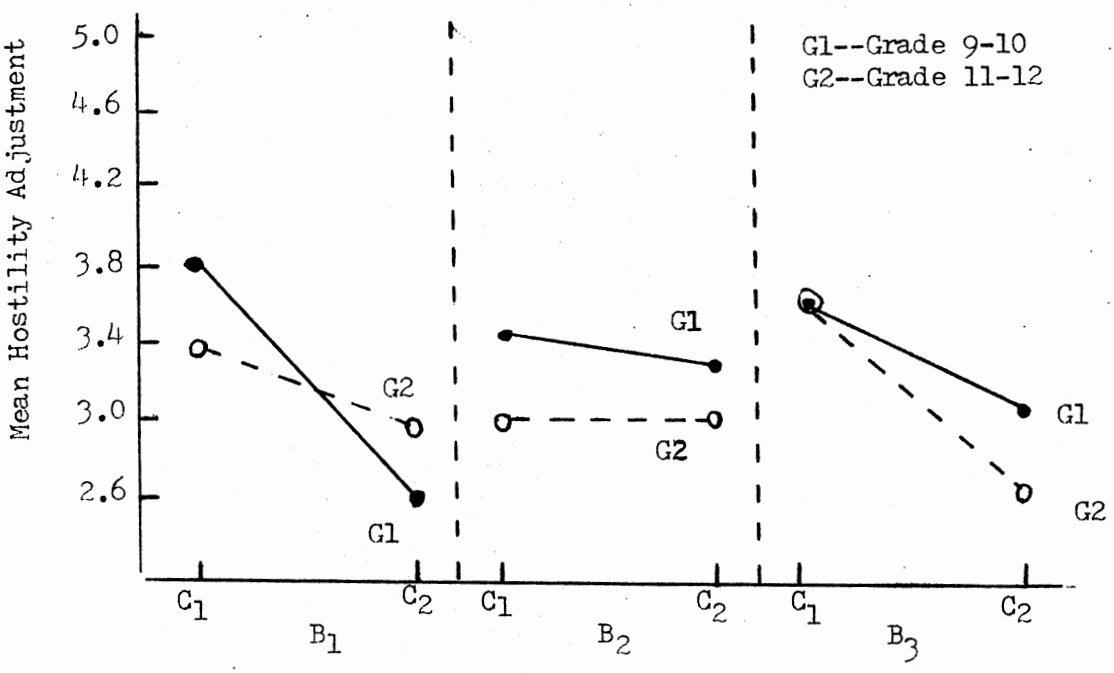

Figure 14. Grade by Socioeconomic Status by Category for Hostility Adjustment

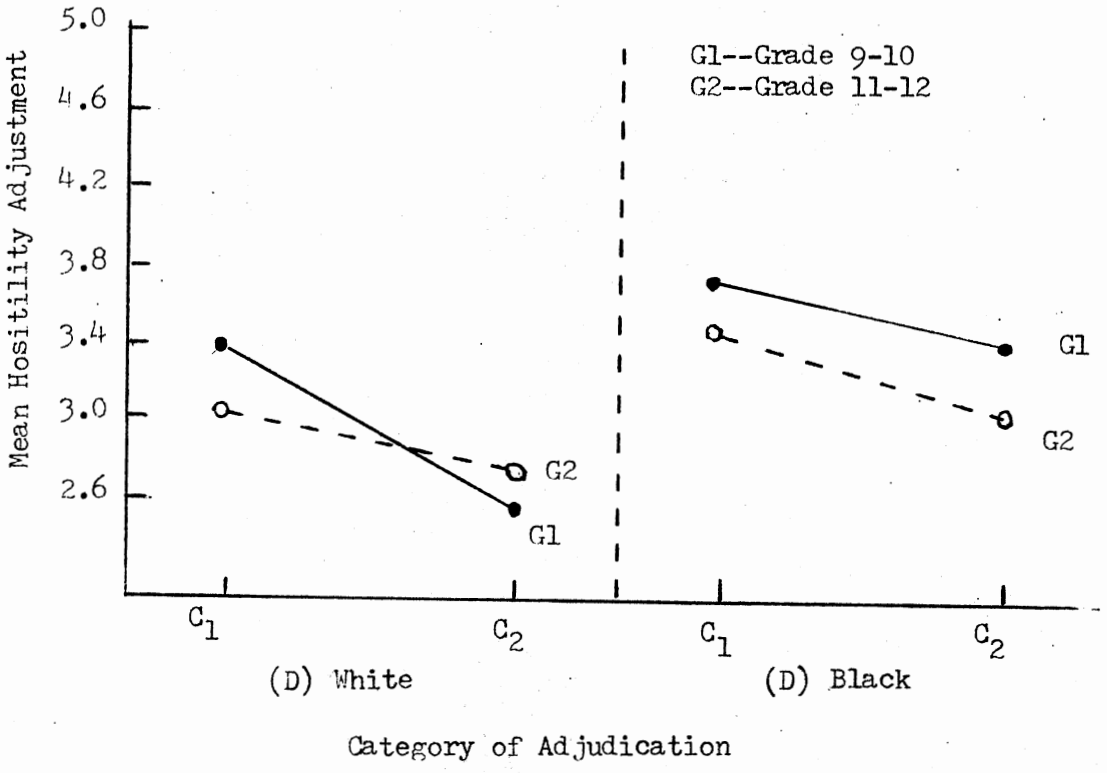

Figure 15. Grade by Category by Race Interaction for Hostility Adjustment

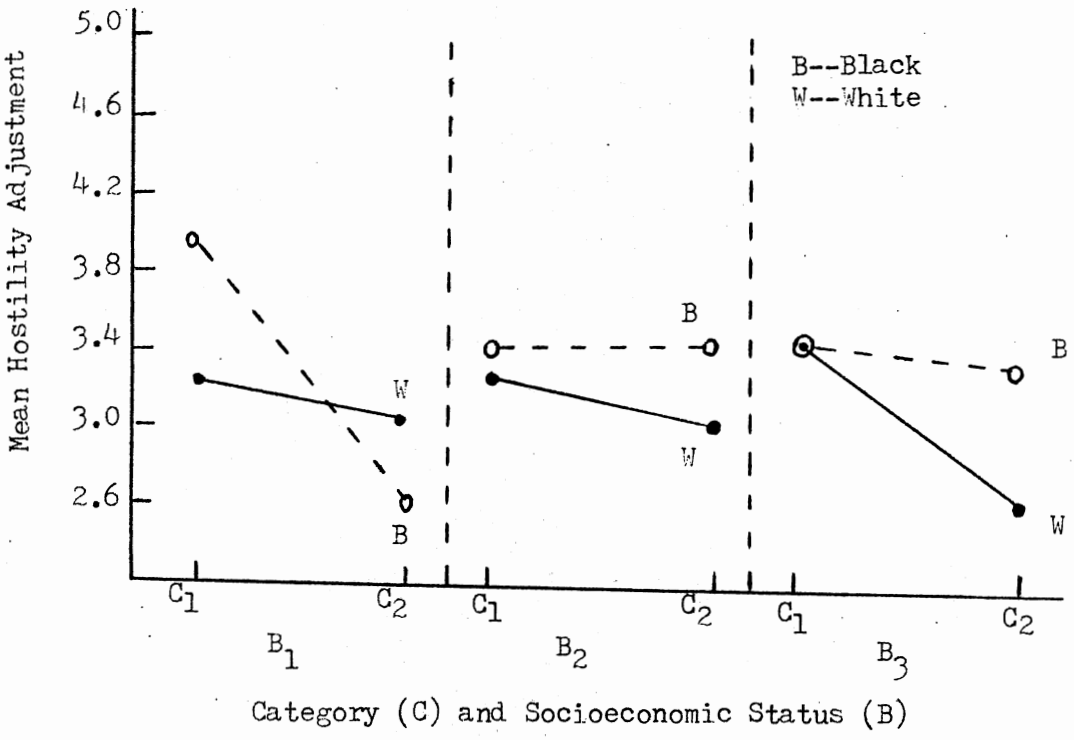

Figure 16. Category by Race by Socioeconomic Status for Hostility Adjustment

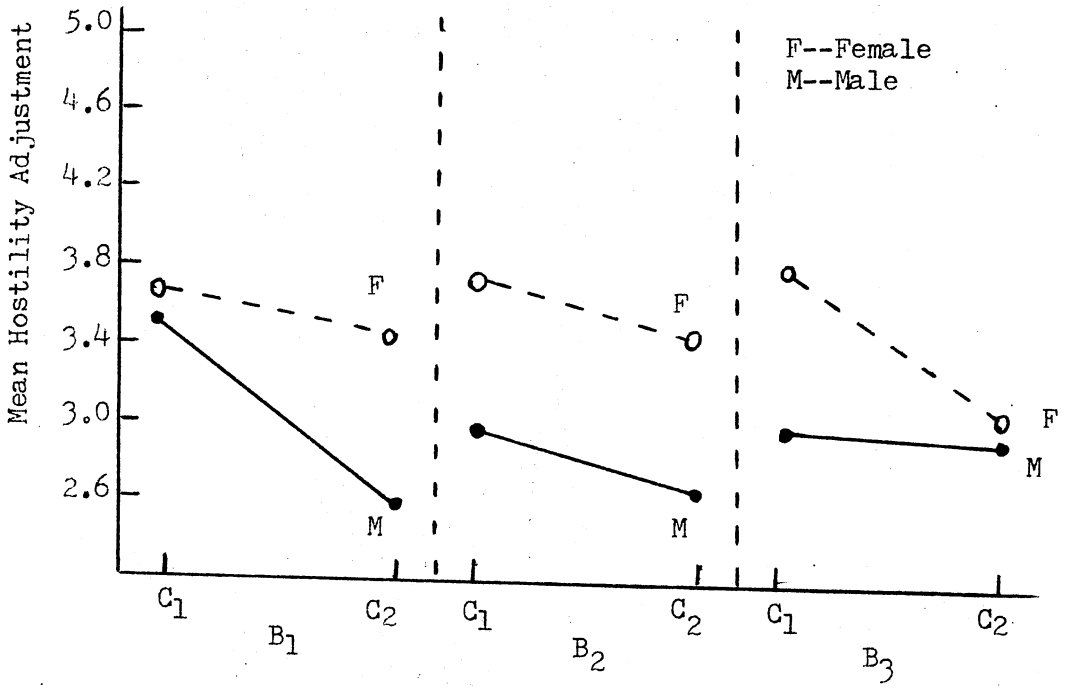

Figure 17. Category by Sex by Socioeconomic Status for Hostility Adjustment

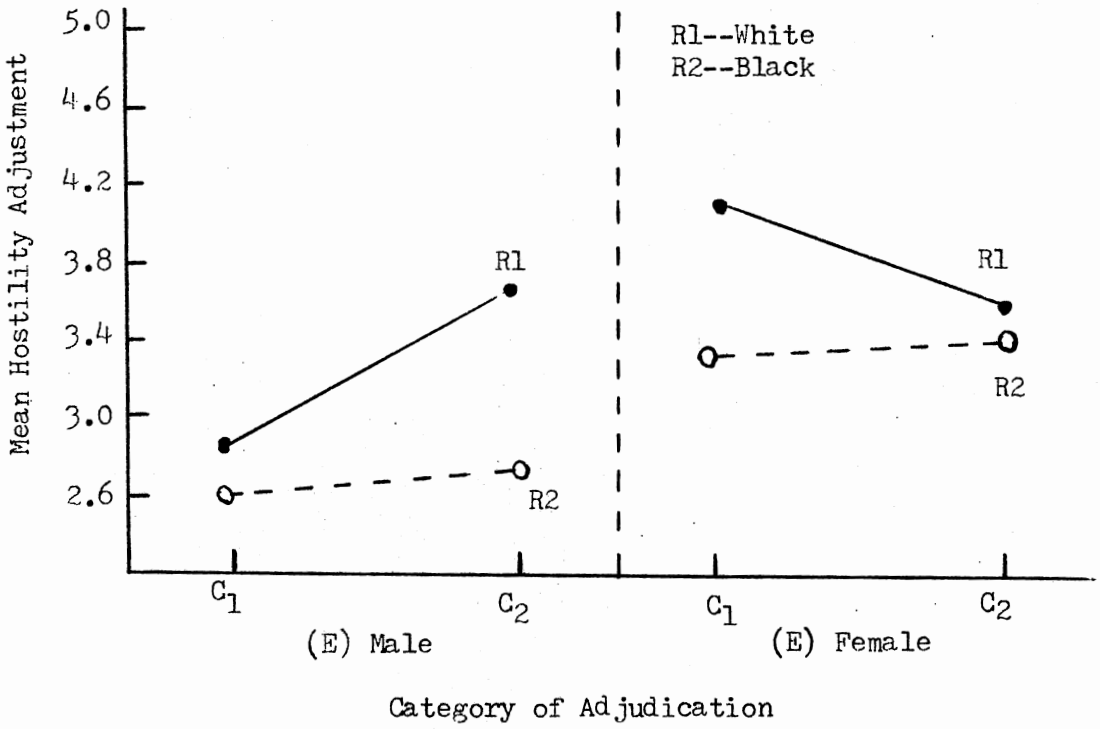

Figure 18. Category by Race by Sex Interaction for Hostility Adjustment

2

VITA

David DeLee Cole

Candidate for the Degree of

Doctor of Philosophy

Thesis: THE RELATIONSHIP OF ADJUSTMENT AND DELINQUENT BEHAVIOR WITH SCHOOL GRADE, SOCIOECONOMIC STATUS, CATEGORY OF ADJUDICATION, RACE, AND SEX

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