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VALUES, RISK TAKING AND SELECTION OF LEISURE TIME ACTIVITIES AMONG DELINQUENT AND NON-DELINQUENT BOYS

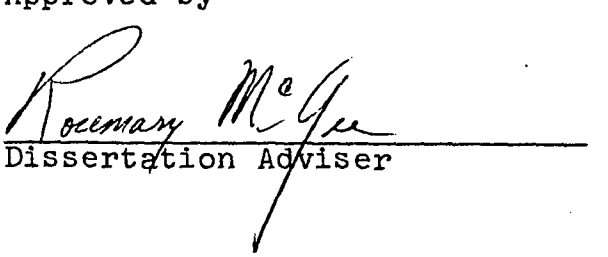
by

Howard McCoy Braxton, Jr.

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

Greensboro
1975

Approved by



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APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

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BRAXTON, HOWARD McCOY, JR. Values, Risk Taking and Selection of Leisure Time Activities Among Delinquent and Non-delinquent Boys. (1975) Directed by: Dr. Rosemary McGee. Pp. 171.

The study was exploratory in nature, seeking to describe (1) personal factors, (2) professed values, (3) risk taking propensities, and (4) leisure time activity pursuits among delinquent and non-delinquent boys. A total of 50 males, 25 delinquents and 25 non-delinquents from Guilford County, North Carolina, ranging in age from 15 to 17, served as subjects for the study. Subjects chose the time most suitable for each one for data collection. Administration of the test battery (VRTTB) took approximately one hour. Testing for the non-delinquent group was done at Smith and Ragsdale High Schools. Testing for the delinquent group was conducted in the Juvenile Court Counselors' section of the Guilford County Courthouse in Greensboro, North Carolina and the office of the Juvenile Court Counselors in High Point, North Carolina. All data gathering was done individually or in small groups by the writer.

A Value-Risk Taking Test Battery (VRTTB) was used as the major instrument for this study. It was composed of:

(1) Allport-Vernon-Lindzey Study of Values (AVL-SV).

(2) Self Rating Risk Taking Scale (SRRTS) developed by the writer.

(3) Dice Bets-Gambling Situation (DB-GS) (variation of the Wallach and Kogan Chance Bets Instrument [1964]).

(4) Leisure Time Activity Scale (LTAS) developed by the writer.

(5) Personal Factors Scale (PFS) developed by the writer.

The Statistical Package for the Social Sciences (SPSS) was used. Programs were run which provided (1) descriptive summaries--means and standard deviations of all value and risk taking variables, (2) factor analysis of all value and risk taking variables, and (3) cross tabulation-frequency distribution of all personal factors and leisure time activity variables.

Findings of the inquiry revealed the following:

1. "Value-risk taking" characteristics may be associated with both "high risk taking" and "low risk taking."

2. No specific personal factors were identified that can be associated with "high risk taking" or "low risk taking."

3. Personal factors may be determined that are associated with the delinquent and non-delinquent groups.

4. Although both the delinquent and non-delinquent groups fall close to the value norms of male high school students, the delinquent is higher in theoretical, aesthetic and social values than the non-delinquent.

5. There is considerable similarity between a "high risk" delinquent and a "high risk" non-delinquent.

6. "Social" seems to be the value characteristic

that is similar between a "low risk" delinquent and a "low risk" non-delinquent.

7. In terms of leisure time pursuits, delinquent boys reported frequent participation in 11 activities, while non-delinquents participated in the same leisure time activities but with less frequency.

8. The delinquents reported that, out of 90 leisure time activities, they would like to participate more in 39 of the activities than they are presently doing. The non-delinquents, however, indicated that out of the 90 leisure time activities they would like to participate more in 52 of the activities.

DEDICATION

To my wife Pat and son Bob I wish to dedicate this study. If it had not been for their sacrifices, understanding and support, this study could not have been completed.

ACKNOWLEDGMENTS

The preparation of this dissertation was made possible only through the guidance, suggestions, and encouragement of some very capable and considerate individuals.

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Finally, the writer expresses sincere thanks to Mr. J. Manley Dodson, Chief Counselor, Juvenile Court Counselors of Guilford County; Mr. Lawrence Bass, Court Counselor II; Mr. Walter Byrd, Court Counselor II; Mr. James DeGraphenreid, Court Counselor I; Mr. John Calhoun, Court Counselor I; Mr. Barry Smith, Court Counselor I; Mr. Aubrey Strother, Court Counselor III; Mr. Robert Weiss, Court Counselor II; Mr. Timothy Sullivan, Court Counselor I; Mr. David Bryant, Court Counselor I; and Mrs. Hilda Moffitt, Secretary,

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CHAPTER I

THE PROBLEM

Introduction

Values

Values are believed to exert a strong influence on the behavior of the individual as he strives to survive or succeed in his work or play. These values, derived from an individual's associations with the family, church, school, peer group and many other sources, are basic values and are unlikely to change. But, as the individual matures through time and experience, his values may shift along a hierarchical continuum of importance.

It has been documented that the family, church, school, and peer group may integrate or mold a person's values at a very early age. A valid contention is that actions are partly based on value construct and the rank of importance which an individual attaches to his value structure. If the above is true, it may be assumed that because of the different actions taken by individuals, such factors as sex, age, height, weight, race, intelligence, community population, athletic participation, marital status of

parents, age of parents, age of friends, religious affiliation, number of brothers and sisters and many other variables play an important role in directing human behavior.

Reed (1965) confirms this theory by stating that "values are individual standards involving a deep commitment which are the bases for the direction of human behavior."

Risk Taking

A prevalent societal belief is that man should and does take great risks in his attempt to achieve his goals in contemporary life. Because of his willingness to take chances, society rewards him when he is successful and punishes him when he fails. For example, Alpenfels and Hayes (1961) note that

> . . . success stories throughout our history [place] a premium on "taking a chance." The pioneers took a chance; they were courageous "killers of bears." These themes are instilled into the growing child without regard to sex. This is what Davy Crockett did, this is what the space cadet does [p. 525].

Society places a value on this courageousness by rewarding it. A person's value construct is often revealed when his risk taking propensities enable him to make choices among alternate paths of action during leisure time participation.

Leisure Time Activity

It has been generally hypothesized that a person's basic values are related to his choice of behavior, and particularly to his leisure time behavior (Lowrey, 1969). It has also been stated that one's values are evident and visible during participation in leisure time activities. The person's values have already been established through the influence of the family, church, school, and peer group allowing leisure to provide the setting and opportunity for expressing and shaping values.

Delinquency

In an analysis of the delinquent it is customary to consider those facts which may make up his profile. Delinquency is said to come primarily from lower-class phenomena stemming from social and deprived backgrounds. Matza (1964) points out that delinquents exist within a narrow life space centering around the family, school, and peers. It seems the problems of delinquency are not personality disturbances, but may rather concern values and risk taking or role expectations of conformity according to societal standards.

Summary

In summary, values are deep commitments which influence individual choices of alternatives in living experiences. Often, this value structure is unconscious in

the mind of the person. It is, however, a crucial factor in determining his risk taking behavior. It was upon this premise that the writer undertook this study to determine if there are relationships among personal factors, professed values, risk taking propensities and leisure time activities.

Statement of the Problem

The focus of this study was exploratory in nature, seeking to describe (1) the personal factors, (2) the professed values, (3) the risk taking propensities, and (4) the leisure time activity pursuits among delinquent and non-delinquent boys in Guilford County, North Carolina.

Sub-Problem

In order to seek the solution of the major problem it was necessary to investigate the following eight questions:

1. Are there value-risk taking characteristics which may be associated with high risk?
2. Are there value-risk taking characteristics which may be associated with low risk?
3. What are the personal factors which may be associated with high risk?
4. What are the personal factors which may be associated with low risk?
5. Are there value-risk taking characteristics which may be associated with high risk that are different for delinquent and non-delinquent boys?

6. Are there value-risk taking characteristics that may be associated with low risk that are different for delinquent and non-delinquent boys?

7. What leisure time activities do delinquent and non-delinquent boys participate in?

8. What leisure time activities are preferred by delinquent and non-delinquent boys?

Limitations of the Study

This study had the following limitations:

1. The study involved only 50 subjects.

2. Twenty-five of the subjects were delinquent boys (as defined in this study) between the ages of 15 and 17.

3. Twenty-five of the subjects were non-delinquent boys (as defined in this study) between the ages of 15 and 17.

4. All subjects came from within Guilford County, North Carolina.

Assumptions

In order to use the Value-Risk Taking Test Battery (VRTTB) as the data gathering instrument for the selected subjects the following assumptions were made.

1. The various scales used to gather the data are understood by delinquent and non-delinquent boys between the ages of 15 and 17. Therefore all scales seem appropriate for the age group.

2. The boys are expected to respond honestly since there was no threat involved.

3. The Kogan and Wallach Dice Bet Instrument indicates how a person will actually play his bet in a dice bet risk taking game.

Definition of Terms

VALUES--the standards, beliefs, or feelings which the individual uses consciously or unconsciously as a basis for directing behavior.

RISK TAKING--the tendency to take a chance to achieve a goal even when there is the possibility of a penalty if not successful.

LEISURE TIME--that block of time not committed to existence needs and which is free from occupation, employment or engagement.

DELINQUENT--one who has demonstrated the inability to conform to minimal standards of behavior at home or in the community and has been adjudicated as such by a court of proper jurisdiction. More specifically for this study, those boys who have been adjudicated and are responsible to the Juvenile Court Counselors of Guilford County.

NON-DELINQUENT--one who has demonstrated the ability to conform to minimal standards of behavior at home or in the community. More specifically for this study, those boys from Smith High School or Ragsdale High School who have never (1) been in contact with the Juvenile Court Counselors for any disciplinary reasons, (2) have never been picked up by the police for some illegal actions and (3) have never been brought before the Guidance Counselor or Principal for disciplinary reasons.

CULTURAL VALUES--those values which are accepted by society.

LEISURE TIME ACTIVITIES--those activities which offer the participant the opportunity to restore face-to-face social contacts, to express individual creative experiences, and which belong to and accomplish individual ideals as well as fill a void of time in a person's daily routine.

PROFILE--a description, as interpreted by the writer, of the variables found in each of the selected factors.

Significance of the Study

It has been hypothesized that risk taking behavior has become an increasingly important element in a person's daily life. Assumptions have been made that no situation, no experience and no decision a person may make is value free. Therefore, assuming the above is true, we might conclude that leisure time activities may provide a setting for the display, shaping, and expressing of one's value structure as well as one's risk taking tendencies. It is hoped that the development of the Value-Risk Taking Test Battery (VRTTB) as the instrument will yield data that help contribute to our insights about delinquent boys. Such an instrument could be used by teachers, administrators, and counselors in the recognition of a student's values, risk taking propensities, personal factors and leisure time activities that may be involved in affecting his behavior in an educational and social environment.

CHAPTER II

REVIEW OF LITERATURE

Risk Taking

Introduction

Although many definitions and approaches concerning risk and risk taking have been cited in the literature, it is the writer's belief that the best approach to the study of risk taking is through its characteristics, components or elements. Many factors are involved, but this investigation will consider the following: defensiveness and anxiety, values, uncertainty, motivation, creativity, intelligence, age, and sex.

Conrad and Plotkin (1968) defined Risk as ". . . uncertainty (or lack of predictability) one encounters when looking at the anticipated outcome of an event [p. 13]." Risk taking is defined by McElhiney and Plax (1972) as "the tendency to prefer long shots with higher payoffs over sure things with lower payoffs [p. 3]." Risk taking, according to Strum (1971) "is the tendency to guess even when there is a penalty [pp. 10-11]." Cronback (1946) suggested that it may be a tendency for taking chances.

Wallach and Kogan (1959), in a study concerning sex differences and judgment processes in determining risk

taking, were the first to employ a lifelike situation written test. The subjects for their study consisted of 357 undergraduates (males N = 225; females N = 132). The subjects were given two tests, a probability and certainty test and a dilemmas of choice questionnaire. Both of the tests were of the opinion type and required that the subject make a decision concerning the question on a scale of 1-100 for the first test and 1-10 on the second test.

On the basis of the two tests administered the authors concluded that women were more conservative than men when unsure of their decisions and more extreme than men when very sure of their decisions.

Because of the frequency with which the Wallach and Kogan (1959) 12-item choice dilemma questionnaire is referred to, the original 12 items are included in this study in Appendix A.

Stoner (1961), in an unpublished master's thesis, was possibly the first to evaluate the effectiveness of "directional risk-taking" through the use of Wallach and Kogan's (1959) Choice Dilemma Questionnaire to test the hypothesis that groups are more cautious than individuals. According to Jhangiani (1971), Stoner (1961) found that the group decisions were significantly more risky than the mean of the individual group members prior to decisions.

Substantiating support for Stoner's conclusion regarding group decisions came from Wallach, Kogan and Benn (1962). They conducted a study to determine (1) the assessment of level of conservatism or risk taking; (2) the consensual group decisions compared with pre-discussion individual decisions; (3) the post-discussion individual decisions compared with pre-discussion individual decisions; (4) pre-discussion risk taking and influence in the group; and (5) maintenance of the risky shift over a subsequent period of time. A total of 167 subjects (14 all-male groups and 14 all-female groups) was used. The study indicated that group interaction and achievement of consensus on matters of risk influence the groups' willingness to make a decision. This decision was riskier than it may have been if the group interaction and achievement of consensus had not been present.

Teger and Pruitt (1967), in a study of components of group risk taking, administered the choice dilemma questionnaire devised by Wallach and Kogan to 165 male undergraduates. The results showed a risky shift on those items that are risky and a cautious shift on those that are cautious. This also clearly supported Brown's Value Theory that individuals take risks when risk taking is desired and are cautious when a cautious approach is desired.

Defensiveness and Anxiety. Kogan and Wallach (1964) inquired into six areas concerning risk taking, one of which is directly important to this study dealing with anxiety and defensiveness. This area is concerned with the pattern of relationships among decision-making measures, and then to cognitive judgment, ability, and personality indexes. The other areas included (1) the relation among conservatism-risk of decisions made in hypothetical context and in various payoff contexts, (2) relationships among decision-making strategies, outcomes, and post-decisional satisfaction, (3) relationship between cognitive-judgmental processes and risk-taking, (4) the effects of various intellective abilities and conservatism or risk in decision making, and (5) relationship between personality and decision making. The administration of the test battery took five hours. Some thirty-three tests were used, including Self Rating Scales, SAT, Choice Dilemmas Questionnaire, Chance Bets Instruments, and Personality Scales. The subjects were 114 male undergraduates and 103 female undergraduates from two similar non-coeducational private colleges of superior scholastic reputation with student bodies predominantly middle class in socioeconomic background.

Their findings stated that high-anxious/high-defensive and low-anxious/low-defensive subjects tended to exhibit a more stable or consistent pattern of risk-taking behavior than low-anxious/high-defensive or high anxious/low defensive subjects.

A 19-item Test Anxiety Scale developed by Alport and Haber (1960) was used by Kogan and Wallach to determine the direction of anxiousness exhibited by each subject. A 33-item Social Desirability Scale developed by Crowne and Marlowe (1960) was used to measure the need for social approval or direction of defensiveness.

Wilson (1970) studied the effects of defensiveness and anxiety on the ability of four gambling models to predict risk-taking behavior. He used 77 second-year university students in one-outcome gambling situation. The gambling situation was of the Coombs and Bezembinder (1970) technique using a two choice situation. One alternative consisted of a low probability of winning a large prize, and the other alternative consisted of a high probability of winning, but of receiving a small prize. The subjects had to make a decision between the two choices. It was found that the subjects' feelings about the probability of winning the prize were more adequate as predictors of behavior than their knowing the actual probability of winning and the actual value of the prize. It was also found that fewer males who were either high-anxious/high-defensive or low-anxious/low-defensive obeyed their own feelings of probability than did males who were either low-anxious/high-defensive or high-anxious/low-defensive. This concisely substantiated the 1964 study by Kogan and Wallach.

Motivation. One area of particular interest has been the study of motivation for stress-seeking in cases where the potential risk is very high.

Atkinson (1957) suggested that a theoretical model relating need achievement and fear of failure to risk taking may influence a person's behavior in given situations.

Based on Atkinson's theory, a study by Atkinson and Litwin (1960) hypothesized that persons in whom the motive to achieve success is stronger than the motive to avoid failure (a) more often select tasks of intermediate difficulty in order to achieve success, (b) work for a longer time on the final examination to achieve success, and (c) get higher scores on the final examination. Forty-nine male students enrolled in a sophomore-junior psychology course at the University of Michigan were used as subjects. They were given an Achievement Test and a Test Anxiety Questionnaire. The subjects were then placed in a Ring Toss Game and were scored on the final examination which they took for the course. The findings from the study confirmed the hypothesis and supported Atkinson's earlier theory.

Scodel, Ratoosh, and Minas (1959) conducted a study to determine the personality correlates of decision making under conditions of risk. The subjects, 28 Air Force enlisted men and 34 college students from Kirtland Field, Albuquerque, New Mexico and the University of New Mexico

respectively, were given an opinion questionnaire, a risk taking situation (Gambling Test), intelligence tests, Thematic Apperception tests, Allport-Vernon-Lindzey Study of Values, and the Hope for Success-Fear of Failure test. They reported that Atkinson's Theoretical Model also fits in cases of risk taking in chance contexts (gambling situations) as well as showing a significant difference between value and social class and preferred high or low payoff bets.

Values. Stoner (1968) accepting the Nordhoy-Brown Value Theory, used two instruments: (1) a 12-item life situation questionnaire and (2) a value-ranking instrument. A total of 212 subjects participated in the experiment (136 males and 76 females). His conclusion confirmed the Nordhoy-Brown Value Theory by suggesting that in situations where widely held values favor risky decisions there will be a shift toward risk, and in situations where values favor a cautious decision the shift will be in the conservative direction.

Levinger and Schneider (1969), attempting to provide a new approach to Brown's "Value Theory," administered the Kogan and Wallach choice dilemmas test to 182 male and 68 female subjects. They were asked to respond under three different conditions: (1) as they would advise others, (2) as they would accept, and (3) as they would most admire. Their findings were interpreted as evidence for placing a cultural value on risk.

Willems (1969), in an effort to support Brown's Value Theory, used one item from Kogan and Wallach's Choice Dilemmas test. This item (number 4, Kogan and Wallach, 1964) describes an electrical engineer who may remain at his current job at a modest but adequate and secure salary, or take a new job that offers a much higher income but no assurance of long-range security. One hundred seventy students were used in the study. The findings support the assumption that persons tend to view themselves as moderately riskier than their peers. This result may be interpreted as evidence and support of Brown's Value Theory of Cultural Value.

Uncertainty. Raiffa in 1961 conducted an experiment with students at the Harvard Business School and a few business executives. He asked them how much they would pay to play a game in which they would win $100 if successful in predicting the color of a ball picked from an urn. Urn No. 1 was known to contain 50 black and 50 red balls. Urn No. 2 contained 100 balls, the proportion of red to black being unknown. The majority of his subjects preferred to pay more to draw from Urn No. 1 than from Urn No. 2, indicating that they were low risk takers.

Marquis and Reitz (1965), studying Chipman's (1960) and Hubbard's (1963) unpublished master's theses, reported that Chipman's subjects in general preferred to draw from the known proportion box if the ratio of heads to tails

was 50-50 or greater, thus implying low risk takers. However, if there were fewer heads than tails, the subjects preferred the uncertain box. Hubbard's study, using 34 first-year male graduate students, found that uncertainty reduces the willingness of individuals to take risks in gambling situations. It was also stated that the effect of uncertainty to reduce willingness to take risks increases as uncertainty is increased. After careful consideration Marquis and Reitz (1969) concluded that "uncertainty describes the situation in which the decision maker is unable to assign definite probabilities to each outcome [p. 281]."

Intelligence. Information relating cognitive processes to the decision-making process in risk taking has been characterized by its paucity.

Brim, Glass, Lowin, and Goodman (1962), using 200 men and women, concerned themselves with how people made decisions. They included a verbal intelligence test which this writer felt, because of the results, should be included at this point in the review. Their findings pointed to a significant influence on several of the decision-making factors.

Scodel et al. (1959) referred to earlier, compared the Wechsler Vocabulary Subtest scores with risk taking in a gambling situation, but no significant correlations were obtained.

Creativity. Strum (1971) has stated that "creativity is a trait separate and distinct from intelligence. It encompasses the concepts of adventurousness, extensionality or openness to experience, and growth as opposed to safety . . . [p. 1]."

The previous quotation was taken from a study by Strum (1971) in which he attempted to determine the relationship of creativity and academic risk taking. Two hundred ninety-one children, 143 boys and 148 girls, were given Torrance's Test of Creative Thinking, a Wide Range Vocabulary Test, and the SRA Tests of General Ability. His conclusion stated that there was little relationship between creative thinking ability and individual risk taking.

Age and Sex. Originally Wallach and Kogan (1959) administered their Choice Dilemmas Test to 357 college students to determine any significant difference between sex and the judgment process. They concluded that "one can make no simple generalization about sex differences in judgment and risk-taking, but rather must analyze the level of certainty of the decisions in question, and the subject matter they concern [p. 564]."

Again in 1961, Wallach and Kogan, using their Choice Dilemma Test, conducted a study to determine the interrelationships and changes with age in aspects of

judgment and decision making. Five hundred eleven persons (89 older women [mean age 69.5 years], 132 younger women, 65 older men [mean age 70.2 years], and 225 younger men) were used in the study. They found that young subjects were more extreme in their decision making than older subjects. The older the subject the more unwilling they were to go out on a limb to make a decision. Older women were more extreme than older men, as was the case in comparing younger men and women. Finally, young men were more extreme than young women under moderate and low confidence but no such sex differences were obtained for the older subjects.

Slovic (1966), using a decision-making game designed to assess the willingness to take risks, used 735 boys and 312 girls between the ages of 6 and 16 to determine risk-taking propensities in children. The results suggested a sex difference in greater risk taking propensity by the boys appearing between the ages of 9 and 11.

Vroom and Pahl (1971) administered a short version of the Kogan and Wallach Choice Dilemmas Test to 1,484 managers from over 200 companies. The results showed a significant negative relationship between age and both risk taking and the value placed upon risk.

Summary

Educational and psychological researchers have increasingly focused on the study of risk-taking behavior.

Although many definitions and approaches concerning risks and risk taking have been cited, it is the writer's belief that the best approach to the study of risk taking is through its characteristics, components or elements. The factors reviewed within this study are a few but perhaps some of the more significant of the many influencing a persons' risk taking behavior. The review of literature concerning risk taking lends itself to one important question. What effects do changes in risk taking behavior have on an individual's performance in life?

Values

Introduction

Values are not easily defined, but the writer feels they do exist and do play an important role in the individual's behavior. In an attempt to show the range and diversity in the literature regarding values, definitions and interpretations will be cited. The two major Value Theories will also be reviewed.

Blackmon (1968) in an address to the twenty-first National Conference of Professors of Educational Administration, suggested that no administrative decision is value free. He confirmed this by stating that values exist and have a bearing on an individual's behavior. He also concluded that their importance is seen in their relationship to educational objectives in the public school systems of this country.

Regarding the range and diversity of values reviewed in the literature Blackmon (1968) cited several references by known individuals in the area of values.

Thorndike asserted,

> Things are not good and bad for no reason. Better and worse, worthy and harmful, right and wrong, have meaning only in reference to conscious beings whose lives can be made more satisfying or more bearable.
> A thing or event or act or condition is not, in the last analysis, desirable because it is valuable. It is valuable because it is desirable--because it satisfies a want or craving or impulse of some man or other conscious being. . . .
> Value or worth or the good means <u>power</u> to <u>satisfy wants</u> [p. 5].

Russell said:

> . . . when we assert that this or that has value, we are giving expression to our own emotions, not to a fact which would still be true if our personal feelings were different. Since no way can be even imagined for deciding a difference as to values, the conclusion is forced upon us that the difference is one of tastes, not one as to any objective truths [p. 5].

Brightman held that

> By a value (or worth or good) is meant whatever is desired, or enjoyed, or prized, or approved, or preferred. According to . . . Parker, "value is the satisfaction of any interest in any object." . . . Urban believed that "Value is that which satisfies human desire, furthers or conserves life, and leads to the development of selves, or to self-realization." . . . MacIver expressed a definition of values indirectly as "the concept of the desirable, and its comparative, that of progress, is never absent from human affairs." All conduct implies a consciousness of welfare, of less and greater welfare--we could neither live nor act without it. To live is to act, and to act is to choose and to choose is to evaluate [p. 6].

Dewey (1939) suggested that maybe it is not what you value in the end, but the way in which you establish

your values that is important. He gives three ways in which a person may select his values: (1) value-expression as ejaculatory: this is an expression of right or wrong, good or bad; (2) values through likes and dislikes: these can be considered in terms of observable and identifiable modes of behavior; and (3) propositions of appraisal: these are desires and interests of the individual as they exist to the extrinsic conditions. Dewey (1939) concludes that a value is "final in the sense that it represents the conclusion of a process of analytic appraisals of conditions operating in a concrete case, the conditions including impulses and desires on one side and external conditions on the other [p. 45]."

Hafen and Faux (1972) express their feelings toward the movement of the young people in our society today by suggesting that some say ". . . we are witnessing a hedonistic generation of young people who seem to have idealized their purposes in a confused combination of pleasure seeking indignation, and regressed primitive behavior mounted upon prime moralistic concepts, while others suggest that these types of behaviors are a natural outgrowth of the value conflicts being experienced in our society [p. v]."

Quist (1972) also expressed his feelings concerning issues of value change upon elementary, junior, and senior high school students. He summarized that many believe that

the values of American youth are in a state of flux. Students are no longer content with the existing value systems.

Raths, Harmin and Simon (1966) suggested that just to have values or a value is not enough. You must have a reason for the value and it must satisfy specific requirements before it can truly be called a value. They suggested that the following seven criteria be satisfied before a value can surface.

> 1. Choosing freely. [If something is to be a value it must be freely selected.]
>
> 2. Choosing from among alternatives. [There must be more than one alternative from which to freely choose before it is of value.]
>
> 3. Choosing after thoughtful consideration of the consequences of each alternative. [Impulsive or thoughtless choices do not lead to value, only intelligent and meaningful selection results in values.]
>
> 4. Prizing and cherishing. [We must prize, cherish, respect and be happy with our selection in order to call it a value.]
>
> 5. Affirming. [We must be willing to publicly affirm our value in order for it to be a true value.]
>
> 6. Acting upon choices. [We must be able to live, work and play according to our values.]
>
> 7. Repeating. [A true value will reappear in different situations at different times in a life experience; if it does not it can not be a real value.] [pp. 28-29]

It has been established, through the above review, that values involve known and unknown factors which may influence the ordering of choices between possible

alternatives in actions. If this is true, then it can equally be stated that values may influence the ordering of choices between possible alternatives in actions during leisure time activities.

Value Theories

Two major theories have been developed that are crucial to this paper. These are Nordhoy's Theory of Cultural Values (1962) and Brown's Value Theory (1965).

Nordhoy's Theory of Cultural Values. Nordhoy (1962) dealt with the problem of risk and conservatism from a position which he called "Values common to a culture[p. 19]." (The writer is using cultural values as those values accepted or rejected by society.) He did this by expanding each of Wallach and Kogan's Choice Dilemma Problems (1959) directed toward group risk taking behavior. Nordhoy loaded all of the terms developed by him or used by Wallach and Kogan with cautious or risky cultural values. For example,

> . . . the first W & K problem involves a young electrical engineer who is beset by a conflict between his present employment position which is secure, but offers little potential for financial advancement and a prospective position which offers very high monetary potential but has poor job security prospects. Nordhoy sees this situation as a conflict between an individual's value which prizes job security and a cultural value which suggests that young people should take chances to get ahead [Jhangiani, 1971, p. 6].

This was done in order to create a shift in the direction of the value employed.

Brown's Value Theory. The second major value theory associated with this study is Brown's Value Theory (1965). Brown (1965) like Nordhoy (1962) used the Wallach and Kogan Choice Dilemma Questionnaire (1959) in order to determine the level of riskiness or conservatism of his subjects. He presented a value theory which attempted to explain both the willingness of an individual to change from a position of risk to one of caution or from a position of caution to one of risk that was found to exist on the 12 items of the Wallach and Kogan test. In essence, Brown's V-theory elicits two value tendencies, risky or cautious. If the risky tendency is engaged, then the individual will perceive himself to be equally or more risky than his peers. If the cautious tendency is utilized, then the individual making the risk evaluation perceives himself as equally or more cautious than his peers. Brown's V-theory seems to support Nordhoy's Theory of Cultural Values, when Brown suggests that people take risks when risk taking is culturally desired, and exhibit caution when a cautious approach is culturally desired (Brown, 1965).

Stoner (1968) attempted to corroborate the two congruent theories and titled them the Nordhoy-Brown Value Theory. According to Stoner, Brown's Theory should support the hypothesis that items on the Wallach and Kogan test which require caution as a value should elicit caution. Those individuals who rate themselves high on caution on

the scale should perceive themselves as more cautious than their peers. Comparably, on items within the Wallach and Kogan test that engage a risky value should elicit a risky shift. Those individuals should perceive themselves as riskier than their peers.

Stoner (1968) revealed, in his study, that "individuals considered themselves as significantly more risky than their peers on risk oriented items. However, on the caution oriented items [in contrast to the findings of Brown], they did not consider themselves as more cautious than their peers . . . [p. 5]."

Nordhoy's Theory, according to Stoner (1968), did support the hypothesis that overloading items on the Wallach and Kogan Test with risky values did indeed exhibit a risky shift, but loading items on the Wallach and Kogan Test with cautious cultural values does not seem to be the key to creating a conservative shift as was found by Brown.

Summary

No situation, no experience, and no decision is value free. Values do exist and they do play an important role in the behavior of an individual. Values are not easily defined; therefore, no agreement upon one definition of value has been accepted. According to Lowry (1969) there is considerable confusion even in the terminology, with numerous terms being used interchangeably to denote the same

basic idea. He listed such terms as: "attitude, worth, ideal, belief, opinion, craving, wish, desire, motive, goal urge, standard, incentive, reward, interest, moral, ethic duty, absolutes, etc. [p. 2]." Lowry possibly can substantiate this idea of interchangeability because he believes that values are "primarily a relational concept developed through experience [p. 6]," and this "concept of value pervades every human act, both conscious and unconscious [Stoner, 1968, p. 2]."

Leisure Time Activities

Introduction

The term leisure derives from the Latin licere, meaning "to be permitted," and is summarized by Brightbill (1961) as freedom from occupation, employment, or engagement.

Wiess stated that "leisure time is that portion of the day not used for meeting the exigencies of existence [p. 1]."

DeGrazia has been quoted as saying "leisure is freedom from necessity of being occupied, and is incompatible with necessity, obligation or pressure. Real leisure means doing something solely because you want to do it or doing nothing for the same reason [p. 3]."

Nash (1960) referred to leisure as "all the time left over after the survival activities: eating, sleeping, wage work, and other necessities have been attended to [p. 7]."

Brightbill (1961) also stated that leisure is "freedom from work [p. 3]."

Leisure means many things: fullness or nothingness, boredom or stress, happiness, free gift, existence, killing time, enjoyment, enrichment, self-improvement, self-satisfaction, creativity, challenging, meaningfulness, or social betterment.

According to Mead (1958) "leisure is something that has to be earned and re-earned, except for the very old [p. 10]." Leisure can be something to all, if only a person will let it. Mead (1958) also contends that a person with no time for leisure is a person, for the most part, with no strong philosophy, goals, interests or devotion in life. In fact, a person who lives in a vicious circle and has only to look for the coming of old age.

Leisure, according to Nash (1965), is a human need. It ranks high in priority along with education of the young, religion, family, and work. In fact, it has been through leisure time activities that the education of the child and solidifying of family life and religion have taken place.

Although leisure time activities have been very difficult to evaluate in terms of values, Nash (1965) has listed criteria which may apply to an activity in determining whether it is harmful or helpful:

> Criteria which tend to place an activity low on the scale of individual and social values:
>
> Activity would:

Be forced on the individual--drudgery and slavery.
Contribute only to the individual.
Have artificial motivation.
Lead on only to more of the same.
Have no way to compare self with others.
Be non-creative.
Be routine.
Be of a "merry-go-round" type.
Be carried on for reward only.
Be disliked, even hated.
Undermine health.
Contribute to tension.
Exploit others.
Make tomorrow feared or dreaded.

Criteria which tend to place an activity high on the scale of individual and social values:

Activity should:

Have an inner drive (play concept).
Contribute to group objectives.
Be genuinely interesting.
Be of chain-reaction type.
Build stature through self-confidence.
Stimulate self and group evaluation.
Be creative.
Challenge ingenuity.
Be valuable for its own sake.
Bring happiness to the participant.
Contribute to health
Offset tension.
Have approval of large groups of people over a long period of time.
Include others in the plan (service).
Contribute to fullness of life.
Promote a "travel hopefully" philosophy.
Allow an individual to let down, relax, even daydream [pp. 116-117].

Leisure time participants come in all sizes, colors, and ages, as well as socioeconomic backgrounds. They participate as a family or individually. They use clubs, teams, cliques, businesses, churches, schools, communities, etc. as entrances into the leisure time world.

Leisure time activities should offer participants the opportunity to restore face-to-face social contacts, to express individual creative experiences, to belong to something, to accomplish individual ideals, to participate in any selected activity, or to just rest and relax enjoying the pleasures of life.

Leisure Time Risk Taking Activities

In a study concerning the experience, skill, expressed fear, and emotional reaction to motor skills performed under conditions of height, Wyrick (1970) used 139 college women grouped on the basis of excellent, average or poor in motor skills. She reported the excellent group participated in more risk-taking activities such as water skiing, riding, diving, skydiving, and ski-jumping.

In his psychological study of participants in high risk sports, Huberman (1968) found mountaineering, sky-diving, and scuba diving as representatives of high risk activities.

The Metropolitan Life Insurance Company suggested that danger (risk) is an ingredient of the thrills associated with high risk activities such as automobile racing (1965, 1967); motorcycle racing (1965, 1970); power boat racing (1965); horse racing (1965); football (1965); skin diving, scuba diving (1967); sport parachuting (1967, 1970); mountain climbing, snowmobiling (1970); and swimming (1972). Accident Facts, 1971 listed bicycling,

boating, football, motorcycling, scuba diving, skin diving and swimming as being the activities with the highest number of fatalities; thus suggesting a risk involvement built into the activities.

Summary

Brightbill (1961) suggests a leisure time activity is an "instrument for social control, a status symbol, an organic necessity, a state of calm, quiet, contemplative dignity, or a spiritual, aesthetic, cultural condition [p. 3]." Leisure time activities, however, seem to be described in accordance with an individual's associations with self-enriching or self-fulfilling endeavors.

The reason for an individual pursuing such high risk activities as waterskiing, skydiving, ski jumping, scuba diving, mountain climbing, parachuting, or snowmobiling, just to mention a few, seems to be related to an individual's value structure. With this in mind, it can be said that leisure time activities may provide a setting for the display, shaping, and expressing of a person's value structure as well as his risk taking tendencies.

Juvenile Delinquency

Introduction

Juvenile delinquency occurs throughout the world, in any socioeconomic class, within any religious beliefs, and seems to be increasing in the number of delinquents reported as well as the number adjudicated. No one sex, nationality, race, or creed in any milieu of life is immune to the wastefulness or destructiveness of delinquent behavior.

Though there are many factors which may be associated with delinquency, only the following will be reviewed by the writer: family, broken home, residence, mother's role, father's role, physique, values, school and friends, and intelligence.

The number of reported delinquency cases in North Carolina increased 48.8% from 1969 to 1970. Reported male delinquency increased 47.1% while female delinquency increased 56.7% from 1969 to 1970. However, males still outnumbered girls more than 5 to 1 in delinquency cases in 1970 (Cox, 1971). Because of the non-mandatory and non-uniform system of reporting along with insufficient data obtained from 1970 to 1973 in North Carolina, only the following can be substantiated: (1) the number of delinquency cases increased 12.5% in 1972, and (2) it is still observed that males outnumber females 4.5 to 1.00 (Dworsky, 1974).

Definitions. There is no general agreement on just what constitutes delinquency. The term "delinquency" is many centuries old. The Romans used it to refer to failure, neglect of duty and abandonment of an agreement (Barros, 1954, p. 11).

Barrow (1954) refers to the delinquent child as one who seeks emotional satisfaction that he cannot find in his environment. Quay (1965) defines delinquent as ". . . a person whose behavior is a relatively serious legal offense, which is inappropriate to his level of development; is not committed as a result of extremely low intellect, intracranial organic pathology, or severe mental or metabolic dysfunction, and is alien to the culture in which he has been reared. Whether or not the individual is apprehended or legally adjudicated is not crucial [pp. 24-25]." Wert and Briggs (1969) have also concurred with Quay's definition of delinquent. Tappan (1949) stated that "delinquency is any act, course of conduct, or situation which might be brought before a court and adjudicated [p. 23]." Cowan (1969) refers to delinquency as the failure of children and youth to meet certain obligations expected of them by the society in which they live.

Family. The family is possibly the one most common factor contributing to delinquent behavior of youth today. Glueck

and Glueck (1950) found that their sample of 500 delinquent males came from homes where the families were more mobile and homes that had a greater scarcity of sanitary facilities, less tidiness, and more overcrowding.

One theory relating to the family is that of the "only child" showing signs of delinquent behavior more frequently than others. Sletto (1934) found that in general delinquent boys in the "only child" position did not differ significantly from boys in large families.

The "broken home" offers a basis for formulation of still another theory about delinquency. A great many surveys have been conducted to determine the incidence and significance of the "broken home." Stern (1946) claims that 45-60% of the children coming from the juvenile courts of the United States are from broken homes. Cowan (1969) strongly suggested that the broken home has been one of the causes of delinquency. Sutherland (1947) in opposition to the above belief stated that the "broken home" may be a factor, but empirical studies have failed to agree with regard to this theory. One problem that impedes the significance of the "broken home" theory is that juveniles from the "better" homes are not so often detected.

Employment of the mother has been another factor studied with the family theory. Glueck and Glueck (1950) found no deleterious effect to come from regular employment

on the part of the mother; while on the other hand Nye (1958) found "very slightly stronger" tendencies toward delinquency where the mothers worked. Cowan (1969) substantiated this finding by agreeing that employed mothers may be a factor in contributing to delinquency.

In regard to the father, one significant factor was detected by Burt (1929). His conclusion was no difference between delinquent and non-delinquent groups in regard to the death of the father. In the cases of divorce, separation, and desertion the groups differed widely.

Residency. One of the most striking differences is found in comparing delinquency rates for rural areas with those in large cities. Studies have shown the rates are substantially higher in big cities than they are in the country (Watt, 1931; Lottier, 1938; Clinard, 1942).

Physique. Propositions about height, weight, age, sex and other aspects of body build have been made in an effort to differentiate between delinquents and non-delinquents (Sheldon, 1949; Glueck & Glueck, 1956).

Glueck and Glueck (1956) suggested that the mesomorph build may be deemed the core of the delinquent group. They felt the mesomorph type contained those traits more suitable to the act of aggression, together with a relative freedom from such inhibitions as feelings of inadequacy,

emotional instability and the like. The reliability of Sheldon (1949) and Glueck and Glueck (1956) was tested by Sutherland and Cressey (1956) concluding that no somatotype in any of its cases was demonstrated to be a direct force in the production of crime or delinquency.

Values. The delinquent, who runs counter to the law, also stands opposed to the dominant social order because of his norms, attitudes and values. Culturally, the delinquent may not display prevailing values of his large culture group. He tends to become more socialized in his own set of values or those of a delinquent group or subculture (Cavan, 1969).

Matza and Sykes (1969) suggested that the "Juvenile Delinquent's values are far less deviant than commonly portrayed and the picture that most people have of delinquents is due to an erroneous or oversimplified view of the middle class value system [p. 109]."

One of the oldest values of the delinquent is that of his religious views. Glueck (1968) stated that low church attendance may be a factor in delinquency.

School and Friends. Truancy appears as a first offense in the record of many delinquents. In a recent investigation of the effect of school adjustment on delinquency involvement, Toby and Toby (n.d.) rejected the use of arrest and court

appearance of a juvenile as a satisfactory index of "commitment to a delinquent style of life [p. 7]," and proposed, instead, that the arrest histories of the boy's friends are a more valid index toward his own arrest record.

Hardt and Peterson (1968) examining a population of 700 junior high school boys, suggested that a combination of arrest records of the juvenile and of his friends promises to provide a much better means of identifying boys with differential commitments than the use of either measure alone, thus rejecting Toby and Toby's (n.d.) findings to some degree.

Intelligence. In Tennessee a delinquent group of 152 institutionalized boys (14-18 years old) was compared with a group of 157 institutionalized but non-delinquent boys of the same age range. The tests used were the Otis S-A and the Myers Mental Measure. The median I Q of the delinquent group was found to be significantly below that of the non-delinquent group. But it is of interest to note that both groups scored below the norms on the tests (Quay, 1967).

Kvaraceus and Miller (1959) made the same finding when a study of 761 delinquents revealed an average I Q of 89 as contrasted with an average of 103 in the general school population.

Summary

By the age of five or six, the basic personality structure, the selection of friends, and ultimate social adjustments are all strongly determined. They have been determined largely by the family. In a family where adequate love, care and guidance are extended, the child gradually may become a social human being. Socially, the delinquent may cut himself off completely from such conforming groups as family, school, church, and community.

It is accepted by this writer that not all children who commit delinquent acts are delinquents or that delinquency may control part of their values or behavior. It is evident, however, that many cultural, social, and psychological factors contribute to the formation of a delinquent personality.

CHAPTER III

PROCEDURE

The writer undertook the following pilot study in an effort to understand the actions of students who profess to have certain values, who display certain risk taking tendencies and who select certain leisure time activities.

Pilot Study

Measuring Instruments

A Value-Risk Taking Test Battery (hereafter referred to as VRTTB) consisting of four tests was used.

1. The Allport-Vernon-Lindzey Study of Values. Hereafter referred to as AVL-SV.
2. A Self Rating Risk Taking Scale. Hereafter referred to as SRRTS.
3. Dice Bet--Gambling Situations. Hereafter referred to as DB--GS.
4. Leisure Time Activity Scale. Hereafter referred to as LTAS.

Allport-Vernon-Lindzey Study of Values

The AVL-SV was chosen as one of the tests because of its ability to discriminate between certain interest values.

These values were:

1. Theoretical--the discovery of truth.

2. Economic--the pursuit of that which is useful.

3. Aesthetic--the pleasures of form and harmony.

4. Social--the interest in love for people.

5. Political--the procurement of power.

6. Religious--the interest in the mystical, as well as seeking comprehension and unity with the cosmos as a whole.

The above classification is based directly upon Spranger's (1928) Types of Men.

The AVL-SV consists of a number of questions, based upon a variety of familiar situations to which two alternative answers in Part I and four alternative answers in Part II are provided.

Feldman and Newcomb (1969) remark that "this instrument provides the best single source of information about value changes during the college years."

Jacob (1957) and Campbell (1962) made similar statements concerning the use of the value scale on the college level.

The Study of Values is standardized on a college population. Table 1 shows the mean scores for all six values. The results of the test were scored manually by the writer. A copy may be found in Appendix B.

Self Rating Risk Taking Scale

A SRRTS was developed by the writer to determine the risk taking level where a person perceives himself to be.

TABLE 1

Mean Scores of Six Values Held by College Students According to Sex*

Values**	All Students	Men	Women
Theoretical	39.80	43.09	36.50
Economic	39.45	42.05	36.85
Athletic	40.29	36.72	43.86
Social	39.34	37.05	41.62
Political	40.61	43.22	38.00
Religious	40.51	37.88	43.13

*Taken from Allport-Vernon-Lindzey, Study of Values Manual, p. 11.

**High and Low Scores:

Theoretical	39-49	Social	32-42
Economic	37-48	Political	38-47
Aesthetic	29-41	Religious	32-44

A score on one of the values may be considered definitely high or low if it falls outside the above limits.

A scale of one to ten, with one being very conservative in nature and ten representing a very high risk taker, was used. See Appendix C.

Dice Bets--Gambling Situations

Dice Bets in Gambling Situations were used for the third test. Thirty-three pairs of bets (odd numbers) were taken from the Kogan and Wallach (1964) chance bet instrument. A copy of the Kogan and Wallach 66 pairs of bets may be found in Appendix D. Four strategy indexes were derived; two based on selection of the potential of winning or losing (maximization of gain [MG] and minimization of loss [ML]), two based on selection of probabilities (long shot [LS] and conservative play [CP]).

A scoring key was prepared for each of the four strategies. The subject's score on each strategy represents his intent to take a chance (MG, LS) or be conservative (ML, CP). The test key may be found in Appendix E.

Leisure Time Activity Scale

A Leisure Time Activity Scale was developed by the writer in an effort to determine those activities in which an individual shows active participation. The subjects were asked to rate the activities, in order of the degree of active participation using the following scale: 0 = never, 1 = seldom, 3 = sometimes and 5 = often.

The writer rated all activities according to physical or monetary risk, using the following scale: 5 = high risk

activity, 3 = minimal risk, and 1 = conservative.

The rank score given by each subject was multiplied by the numerical rating score given each activity to determine the leisure time activity score for each subject.

A copy of the Leisure Time Activity Scale and its rated score values may be found in Appendix F.

Selection of Subjects

Twenty-five subjects were selected from 78 students (male and female) who were enrolled in Health 338 the spring semester of 1973 at the University of North Carolina at Greensboro. No distinction between sex, age, or class was employed. All subjects were chosen at random from the 78 students.

Administration of the Test

The VRTTB composed of 4 scales was administered to each of the 25 subjects individually by the writer.

The instructions for each test were read with the subject until he understood exactly what he was to do. The subject was then given 24 hours to complete the test battery and return it to the writer.

Data Analyses

Numerical values were assigned each test within the test battery. The raw data collected from the VRTTB are shown on Table 2.

Statistical computations were carried out at the University of North Carolina at Greensboro Computing Center.

TABLE 2

Raw Data Sheet--Pilot Study

Number	Age	Sex	Class	Theoretical	Economic	Aesthetic	Social	Political	Religious	Self Rating Risk Taking Scale	Leisure Time Activities	Max. Gain	Min. Loss	Long Shot	Cons. Play
				L	H	L		H	L						
1	20	M	Jr.	37	48	35	50	48	22	9	284	17	7	6	17
				L	H	L	H	L	L						
2	22	F	Sen.	30	53	33	46	37	41	5	137	23	6	9	11
				H	H	H	L	L	L						
3	22	F	Sen.	37	43	52	37	33	38	5	72	29	11	12	3
				L	H	L	H	L	H						
4	22	F	Sen.	25	41	38	49	36	51	4	90	16	5	6	17
				L		L	H	L	H						
5	22	F	Sen.	29	36	41	44	28	62	4	73	9	14	4	23
				L	H	L	H	L	H						
6	22	F	Sen.	24	45	39	47	31	54	5	71	16	17	6	16
				L	L	H		L	H						
7	21	M	Sen.	40	39	46	37	39	39	5	181	20	10	8	11
				H	L	H	H	L							
8	21	M	Sen.	46	40	40	41	36	37	7	218	12	20	7	18
				H	L	H	H	L	H						
9	20	F	Soph.	38	30	47	44	29	52	7	166	9	14	4	23

TABLE 2 (Continued)

Number	Age	Sex	Class	Theoretical	Economic	Aesthetic	Social	Political	Religious	Self Rating Risk Taking Scale	Leisure Time Activities	Max. Gain	Min. Loss	Long Shot	Cons. Play
10	20	F	Jr.	H 41	L 28	H 49	H 45	H 40	L 37	2	163	4	13	0	28
11	21	F	Sen.	H 51	H 37	H 52	L 33	L 37	L 30	6	193	18	18	9	15
12	20	M	Jr.	L 40	H 45	H 48	H 43	L 42	L 22	8	387	19	16	12	11
13	20	M	Jr.	L 38	H 59	L 22	37	H 44	H 40	7	81	19	4	5	15
14	22	F	Sen.	L 31	H 51	L 42	L 37	H 50	L 29	9	78	21	10	7	13
15	26	M	Jr.	L 37	H 49	L 39	H 42	H 51	L 22	10	439	27	4	9	7
16	20	M	Soph.	L 28	L 41	H 44	H 39	L 40	H 44	6	367	31	7	11	3
17	21	F	Jr.	36	H 46	L 41	H 44	H 39	L 34	4	205	5	11	0	28
18	20	F	Jr.	4 37	36	H 53	L 34	H 37	43	4	268	21	6	8	13
19	20	M	Jr.	H 58	L 38	H 47	H 47	L 29	L 21	7	226	7	10	0	26

TABLE 2 (Continued)

Number	Age	Sex	Class	Theoretical	Economic	Aesthetic	Social	Political	Religious	Self Rating Risk Taking Scale	Leisure Time Activities	Max. Gain	Min. Loss	Long Shot	Cons. Play
20	22	F	Sen.	H 44	H 37	L 41	L 36	H 53	L 29	7	158	24	9	9	11
21	21	F	Sen.	A 36	L 31	L 30	H 50	H 39	H 54	7	110	16	9	5	14
22	21	F	Jr.	H 50	L 32	L 38	L 33	L 32	H 55	2	131	11	9	0	21
23	19	M	Fr.	L 38	H 48	L 27	L 35	L 38	H 54	7	58	13	13	4	21
24	19	M	Soph.	L 38	H 52	L 33	L 29	H 51	37	7	205	26	7	10	8
25	20	F	Soph.	H 40	H 38	H 46	H 43	L 36	L 37	6	120	27	10	10	5

Programs were run which provided (1) descriptive summaries--means and standard deviations of all variables, (2) correlation coefficients, and (3) factor analysis of 14 variables.

Descriptive Statistics

Table 3 identifies the 14 variables and their means and standard deviations.

Correlation Coefficients

Table 4 identifies the 14 variables and their relationships to one another.

Factor Analysis

The responses from the test battery were factor analyzed. A quartimax related factor matrix was used. Using the eigenvalue--one criterion, five factors comprising 80.1% of the proportion of total variance were identified. These five factors presented on Table 5 are briefly interpreted below.

Factor 1 was constituted by 6 variables from the VRTTB which loaded $\pm$ .30 or higher. Three of these variables, theoretical, social, and political values, were found in the Allport-Vernon-Lindzey instrument. The three remaining variables, maximization of gain, long shot, and conservative play were found in the gambling situation test. The negatively loaded theoretical, social, and conservative play variables along with the positively loaded political,

TABLE 3

Variables, Means, and Standard Deviations

Variable 001---------Age
Variable 002---------Sex
Variable 003---------Class
Variable 004---------Theoretical
Variable 005---------Economic
Variable 006---------Aesthetic
Variable 007---------Social
Variable 008---------Political
Variable 009---------Religious
Variable 016---------Self Rating Risk Taking Scale
Variable 018---------Leisure Time Activity Scale
Variable 020---------Maximization of Gain
Variable 021---------Minimization of Loss
Variable 022---------Long Shot
Variable 023---------Conservative Play

Variable	Mean	Standard Dev	Cases
VAR001	20.9600	1.4283	25
VAR003	3.2000	0.8660	25
VAR004	37.9600	7.9188	25
VAR005	41.7200	7.8397	25
VAR006	40.9200	7.9053	25
VAR007	40.8800	5.8617	25
VAR008	39.000	7.1647	25
VAR009	39.3600	11.7788	25
VAR016	6.0000	2.0207	25
VAR018	179.2400	104.1487	25
VAR020	17.6000	7.5498	25
VAR021	10.4000	4.3589	25
VAR022	6.4400	3.6977	25
VAR023	15.1200	7.2187	25

TABLE 4

Correlation Coefficients

	VAR001	VAR003	VAR004	VAR005	VAR006
VAR001	1.00000	0.54571	-0.24328	0.11060	0.04030
VAR003	0.54571	1.00000	-0.10207	-0.07733	0.15459
VAR004	-0.24328	-0.10207	1.00000	-0.31631	0.25155
VAR005	0.11060	-0.07733	-0.31631	1.00000	-0.54295
VAR006	0.04030	0.15459	0.25155	-0.54294	1.00000
VAR007	0.18356	0.22654	-0.29453	-0.14583	-0.07844
VAR008	0.15879	-0.05372	-0.05949	0.47995	-0.28985
VAR009	-0.11550	-0.04411	-0.43002	-0.30660	-0.26906
VAR016	0.15880	-0.14286	0.04947	0.47343	-0.24518
VAR018	0.13032	-0.22599	0.17739	0.04423	0.28525
VAR020	0.22643	-0.01912	-0.26651	0.39718	0.01550
VAR021	-0.16462	0.14349	0.23226	-0.35019	0.35768
VAR022	0.16126	0.08848	-0.25693	0.31777	0.18371
VAR023	-0.22178	-0.03066	0.25156	-0.32333	-0.06116

VAR007	VAR008	VAR009	VAR016	VAR018
0.18356	0.15879	-0.11550	0.15880	0.13032
0.22654	-0.05372	-0.04411	-0.14286	-0.22599
-0.29453	-0.05959	-0.43002	0.04947	0.17739
-0.14583	0.47995	-0.30660	0.47343	0.04423
-0.07844	-0.28985	-0.26906	-0.24518	0.28525
1.00000	-0.26986	0.01876	0.04573	0.01773
-0.26986	1.00000	-0.56088	0.55544	0.35002
0.01876	-0.56088	1.00000	-0.54443	-0.58750
0.04573	0.55544	-0.54443	1.00000	0.38191
0.01773	0.35022	-0.58750	0.38191	1.00000
-0.35043	0.46448	-0.22884	0.37144	0.24389
0.02153	-0.42427	0.09528	-0.08988	-0.13863
-0.27428	0.35858	-0.26112	0.40149	0.29833
0.30561	-0.39153	0.19696	-0.35134	-0.24483

TABLE 4 (Continued)

	VAR020	VAR021	VAR022	VAR023
VAR001	0.22643	-0.16462	0.16126	-0.22178
VAR003	-0.01912	0.14349	0.08848	-0.03066
VAR004	-0.26651	0.23226	-0.25693	0.25156
VAR005	0.39718	-0.35019	0.31777	-0.32333
VAR006	0.01550	0.35768	0.18371	-0.06116
VAR007	-0.35043	0.02153	-0.27428	0.30561
VAR008	0.46448	-0.42427	0.35858	-0.39153
VAR009	-0.22884	0.09528	-0.26112	0.19696
VAR016	0.37144	-0.08988	0.40149	-0.35134
VAR018	0.24389	-0.13863	0.29833	-0.24483
VAR020	1.00000	-0.42288	0.88565	-0.98226
VAR021	-0.42288	1.00000	-0.07600	0.32549
VAR022	0.88565	-0.07600	1.00000	-0.91366
VAR023	-0.98226	0.32549	-0.91366	1.00000

Determinant = 0.0000000 (0.127535100-07)

TABLE 5

Identifiable Factors

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
VAR001	0.19152	0.13328	-0.08163	0.76607	0.26508
VAR003	0.00150	-0.10364	0.14156	0.92464	-0.01766
VAR004	-0.36205	0.45185	0.35063	-0.13255	-0.58302
VAR005	0.24319	0.18023	-0.78812	0.06716	-0.08882
VAR006	0.19568	0.20535	0.88183	0.07405	-0.02244
VAR007	-0.35894	0.05457	0.02445	0.22596	0.81540
VAR008	0.30066	0.54094	-0.56389	0.06219	-0.18327
VAR009	-0.08169	-0.91788	0.02254	-0.13042	0.15342
VAR016	0.20984	0.65688	-0.41993	0.03073	0.02562
VAR018	0.24117	0.77572	0.16929	-0.20789	0.27380
VAR020	0.94849	0.13356	-0.21116	0.02480	-0.05896
VAR021	-0.27044	-0.06980	0.55652	0.12262	-0.23398
VAR022	0.92455	0.17984	-0.00038	0.09197	-0.05450
VAR023	-0.95809	-0.11210	0.12072	-0.05294	0.03970

maximization of gain, and long shot variables suggest these variables as clustered in Factor 1 may appropriately be called a "high risk profile."

Five variables were found to be loaded significantly in Factor 2. From the AVL-SV instrument religious, theoretical and political were found to cluster. High self perception was indicated in this factor as well as a high selection of leisure time activities. Because of the mixed composition of this factor, it does not lend to labelization.

Factor 3 seems to represent the low risk taker. Clustering high in theoretical, aesthetics, and minimization of loss, and low in economic, self perception, and political variables, this factor suggests a total clustering of the six variables as being appropriate to label "low risk taker."

Age and class, although clustering very high, do not alone seem to suggest any profile of risk taking in Factor 4.

Factor 5, loading with theoretical and social, does not alone suggest labeling.

Conclusions

As a result of the factor analysis the following assertions were made.

1. Three value variables, theoretical (negative), social (negative), and political (positive) seem to group with three risk taking variables, maximization of gain (positive), minimization of loss (positive) and conservative play (negative) to represent "high risk taking."

2. Two value variables, theoretical (positive) and aesthetic (positive) along with economic (negative) and political (negative) seem to group with minimization of loss (positive) and self risk taking score to represent "low risk taking."

3. Leisure time pursuits do not seem to be related to either professed values or risk taking propensities.

The findings of this Pilot Study and the related interest of the writer in the areas of value risk taking and leisure time pursuits led to the following study.

The Study

Selection of Subjects

Fifty males, 25 delinquents and 25 non-delinquents from Guilford County, North Carolina, ranging in age from 15 to 17, were used for the study.

Delinquents.--The 25 delinquent males were selected from the files (active and inactive) of the Juvenile Court Counselors of Guilford County. The subjects selected were contacted by the counselors to ascertain if the subjects would like to participate in the study. A Statement of Consent form is available. This form may be found in Appendix G.

Non-Delinquents.--The 25 non-delinquent males were selected from Smith High School, Greensboro, North Carolina, and Ragsdale High School, Guilford County, North Carolina. They were selected by the principal, guidance counselor and/or teacher of the respective schools using the following criteria:

1. The student had not been in contact with the Juvenile Court Counselor for any disciplinary reason.

2. The student had not been picked up by the police.

3. The student had not been brought before the guidance counselor or principal for disciplinary reasons.

4. The student was between the ages of 15 and 19.

5. The student was in the tenth grade or would have been if he had been enrolled in school. The latter pertained to those delinquents who were not enrolled in school.

6. From among all male students available in both Smith High School and Ragsdale High School adhering to the criteria of selection listed above, 25 were selected at random and contacted by the principal, guidance counselor or teacher. Fifteen were from Smith High School and 10 from Ragsdale High School. This ratio was selected in order to maintain a comparable ratio with the available delinquents.

Those males willing to participate were given a Statement of Consent form (Appendix G).

All subjects were given a schedule of the times available for testing and were asked to choose one time most suitable for him. Administration of the test battery (VRTTB) took approximately one hour. Testing for the non-delinquent group was done at Smith and Ragsdale High Schools. Testing for the delinquent group was conducted in the Juvenile Court Counselors' section of the Guilford County Courthouse in Greensboro, North Carolina and the office of the Juvenile Court Counselors in High Point, North Carolina. All testing was done individually or in small groups.

Value-Risk Taking Test Battery

Allport-Vernon-Lindzey Study of Values

The AVL-SV was used because of its ability to discriminate between certain interest values. It has been recognized by the writer that the AVL-SV scale is designed primarily for use with college students, or with adults who have had some college (or equivalent) education. However, the writer believes that the scale can be used by high school age groups because of the following two reasons:

1. The inventory was administered in 1968 to a national sample of high school students in grades 10, 11, and 12. For grades 10-12 combined the total number of females tested was 7,296 and for males the total number tested was 5,320. For the purpose of this study, only the

male norms will be discussed. Based on the 5,320 high school males tested the mean scores were obtained for the six values shown on Table 6. The norms shown on Table 6 provided for the high school population follow the same general pattern as those used for the college group reported in the pilot study and given on Table 1.

2. High school age delinquent males, according to Ardoff (1972), are below average in intelligence with 70% being below an I Q of 100. Quay (1965) stated that the intelligence of delinquents is 15 to 20 points below the general population. The writer obtained permission from the Director of the Juvenile Detention Home in Greensboro, North Carolina, to test two male delinquents said to be representative of the 15 to 19-year-old delinquent male population in the Home. The writer administered part of the AVL-SV to the two subjects and found that if the instructions were read aloud and sample items were studied, both subjects could comprehend and answer the questions. It was at this point the writer assumed that if the delinquent subjects could understand the test the non-delinquent subjects could also. For this reason no trial test was administered to the non-delinquent group.

A copy of the AVL-SV may be obtained from the Houghton Mifflin Company, Boston.

TABLE 6

Mean Scores of Six Values Held by Male High School Students*

Values**	Means
Theoretical	43.32
Economic	42.81
Aesthetic	35.14
Social	37.05
Political	43.17
Religious	37.93

*Taken from Allport-Vernon-Lindzey, Study of Values Manual, p. 22.

**High and Low Scores:

Theoretical	39-48	Social	33-41
Economic	38-48	Political	39-47
Aesthetic	30-40	Religious	32-44

A score on one of the values may be considered definitely high or low if it falls outside the above limits.

Self Rating Risk Taking Scale

A Self Rating Risk Taking Scale was developed by the writer to determine the risk taking level where a person perceives himself to be. A scale of one to ten, with one being very conservative in nature and ten representing a very high risk taker was used. See Appendix C.

Dice Bets-Gambling Situations

Dice Bets-Gambling Situation was used for the third test. Thirty-three pairs of bets (odd numbered) were taken from the Kogan and Wallach (1964) chance bet instrument. See Appendix D.

Four strategy indexes were derived; two were based on selection of the potential of winning or losing (maximization of gain [MG] and minimization of loss [ML]) and two were based on selection of probabilities (long shot [LS] and conservative play [CP]).

A scoring key was prepared for each of the four strategies. The subject's score on each strategy represents his intent to take a chance (MG, LS) or be conservative (ML,CP).

Example:

Situation (A)	1 chance in 9 to win $1.20
	and
	8 chances in 9 to lose $.15
	vs
Situation (B)	1 chance in 2 to win $.15
	and
	1 chance in 2 to lose $.15

Which do you want to bet? (A) or (B) ☐

If a subject chose situation (A) as his answer, a check would be given for maximization of gain (MG) and long shot (LS). If a subject chose situation (B) as his answer, a check would be given for conservative play (CP). No score for minimization of loss (ML) will be recorded because the amount being bet, $.15, is the same in both situations. These responses change according to the odds being placed and the amount of money being used. The test key may be found in Appendix E.

The Dice Bet Instrument used for this study was slightly different in construction and format than the one used in the pilot study. This was done primarily because of the difference in the age of the subjects. It is the writer's feeling that the change enhanced the reading effectiveness of the subjects, resulting in a better understanding of the dice bet situations. A copy of the new form may be found in Appendix H.

Leisure Time Activity Scale

A Leisure Time Activity Scale (LTAS) developed by the writer was used as the fourth test in the VRTTB. The bases for scoring the LTAS were the results obtained from the scale used in the pilot study except that all activities were used as variables. Additional activities were inserted, including those activities which deal directly with delinquent interests.

The scale then required two responses from the subjects: (1) Column I--rating of the activities in order of the amount of active participation, according to the scale of 5 = often, 3 = sometimes, 1 = seldom, and 0 = never; (2) Column II--preference of activities. A copy of the LTAS may be found in Appendix I.

The activities used in this study were rated according to physical or monetary risk using the following scale: 5 = high risk activity, 3 = minimal risk, and 1 = conservative. The following criteria were used for the rating of the activities:

1. Experts in the field of Physical Education and Recreation were given a list of the activities and asked to rate them according to their physical or monetary risk using the above scale. The following experts agreed to participate:

Coordinator of the Recreational Majors program, University of North Carolina at Greensboro.

Coordinator of the Recreational Association, University of North Carolina at Greensboro.

Coordinator of the Men's Intramural Program, University of North Carolina at Greensboro.

Coordinator of the Women's Intramural Program, University of North Carolina at Greensboro.

2. Activities were found in the review of literature to be placed at certain levels of risk (Lowrey, 1969; Stone, 1967; Monroe, 1967; Knight, 1967; Klausner, 1967; Jones, 1946;

Houston, 1967; Parker, 1965; Metropolitan Life Insurance Company Statistical Bulletin, 1965, 1967, 1970, 1972; Vaughan, 1972; Carls, 1969; Accident Facts, 1972, 1973; Brademas, 1955; Huberman, 1968; Toppan, 1948; Neil, 1971; Wyrick, 1970).

A level was assigned an activity only after (1) it appeared two or more times by the raters, (2) it was found to be at a certain level according to the review of literature or (3) a combination of both. The result of the tabulations by the experts and review of literature may be found on Table 7. A copy of the rating key may be found in Appendix J.

Personal Factors

Certain personal factors were also used with the VRTTB in an effort to strengthen any profile that may be found.

Such factors as those listed in Appendix K were used in this study. Tobias (1970) suggested that such factors as influence of friends, feeling of boredom, and the influence of parents would contribute to a person's social behavior.

Peterson (1956) found that variables important to differentiate between delinquents and non-delinquents included: intellectual aspects, early developmental history, family life, physical habits, personality-emotionally, interest and activities, recreational preferences, play place, movie

TABLE 7

Leisure Time Activity Ratings

5 = High Risk Taker
3 = Minimum Risk Taker
1 = Conservative

	Rating
Archery	3
Attending art shows or museums	1
Attending plays and concerts	1
Attending sports events	1
Badminton	1
Baseball	3
Basketball	3
Bicycling	3
Billiards or pool	1
Boating (power)	3
Bowling	1
Boxing	5
Breaking and entering	5
Bridge (cards)	1
Camping	1
Casting (fly or bait)	1
Checkers	1
Chess	1
Conditioning	1
Crafts	1
Crew/kyacking/rowing	3
Crossword puzzles	1
Dancing	1
Dating	1
Destroying property	5
Dice games	3
Diving	3
Drag racing	5
Dramatics	1
Drinking (liquor)	3
Driving for pleasure	3
Fencing (foil/sabre/epee)	3
Field hockey	3
Fighting (street)	5
Figure skating	3
Fishing (salt or fresh)	1

TABLE 7 (continued)

5 = High Risk Taker
3 = Minimum Risk Taker
1 = Conservative

	Rating
Football (tag/flag/tackle)	5
Gambling for money	5
Golf	1
Gymnastics	5
Handball or squash	3
Hiking	3
Horseback riding	3
Hunting	3
Ice skating for pleasure	1
Jogging	1
Keeping late hours	3
Lacrosse	5
Lotteries or raffles	3
Motor cycling	5
Mountain climbing	5
Painting or drawing	1
Parachuting	5
Picnicking	1
Ping pong	1
Playing a musical instrument	1
Pleasure shooting (target)	3
Poker	3
Problem solving games	1
Reading	1
Roller skating	3
Running away from home	3
Sailing	3
Scuba diving	5
Sex participation	3
Shuffleboard	1
Skeet shooting	1
Ski jumping	5
Skin diving	5
Skiing (snow)	5
Skydiving	5
Sneaking into theaters	5
Snowmobiling	3

TABLE 7 (continued)

5 = High Risk Taker
3 = Minimum Risk Taker
1 = Conservative

	Rating
Soccer/speedball	3
Softball	3
Surfing	5
Swimming (indoor/outdoor)	3
Table games	1
Table tennis	1
Television	1
Tennis	3
Track and field	3
Truck hopping (stealing rides)	5
Tumbling	3
Using drugs	5
Volleyball	3
Water skiing	3
Weight training	3
Working around the house	1
Wrestling	3

attendance, church attendance, companions, and fondness of reading.

Statistical Procedures

Statistical computation was carried out at the University of North Carolina at Greensboro Computing Center. The Statistical Package for the Social Sciences (SPSS) was used. Programs were run which provide (1) descriptive summaries--means and standard deviations of variables 27-47, (2) factor analysis of variables 27-47 using a quartimax rotated factor matrix, and (3) cross-tabulation-frequency distribution of variables 1-26 and 48-227.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

The study was designed to discover if any of the six basic interests of personality (values), as determined by the Allport-Vernon-Lindzey Study of Values, and the four strategy indexes as shown by the Dice Bet-Gambling Situation, could suggest possible "Value-Risk Taking" characteristics for a delinquent or non-delinquent boy.

Personal factors and leisure time activities were also considered in relation to the delinquent or non-delinquent classification of subjects.

Value-Risk Taking

Numerical values were assigned each item within the Values-Risk Taking Test Battery (VRTTB). The raw data, direct responses from subjects, collected from the VRTTB for the first 47 variables are presented in Appendixes L and M for delinquent and non-delinquent subjects respectively. A list of all 227 variables considered in the study may be found in appendix N.

Descriptive Statistics

Table 8 identifies the 21 value and risk taking variables associated with the delinquents and their means and standard deviations. Table 9 identifies the 21 value

TABLE 8

Variables, Means and Standard Deviations
Delinquents

Variables 027-047 as Identified in Appendix N

Descriptions	Variable	Mean	Standard Dev.
Self Rating Risk Taking Score	VAR027	6.3200	2.5120
Theoretical	VAR028	43.3600	6.0888
Economic	VAR029	39.8800	5.0441
Aesthetic	VAR030	36.2400	6.9957
Social	VAR031	40.8400	6.2094
Political	VAR032	42.5200	5.4093
Religious	VAR033	36.2800	6.0106
Theoretical (coded)	VAR034	1.9600	0.6110
Economic (coded)	VAR035	1.7200	0.4583
Aesthetic (coded)	VAR036	2.1200	0.6658
Social (coded)	VAR037	2.2800	0.6137
Political (coded)	VAR038	1.9600	0.6110
Religious (coded)	VAR039	1.9600	0.5385
Maximization of Gain	VAR040	17.8800	7.4907
Minimization of Loss	VAR041	12.7600	2.9760
Long Shot	VAR042	7.0800	4.3197
Conservative Play	VAR043	14.8000	7.1473
Maximization of Gain (coded)	VAR044	1.8000	0.6455
Minimization of Loss (coded)	VAR045	2.2800	0.4583
Long Shot (coded)	VAR046	1.9200	0.7024
Conservative Play (coded)	VAR047	2.0800	0.6403

N = 25

and risk taking variables associated with the non-delinquents and their means and standard deviations. Variables 034-039 and 044-047, as identified in Appendix N, were coded in order to show the range (below average, average, above average) of each item as it related to the norms of the group (N=25). Variables 034-039 and 044-047 were not used in the factor analysis because of the possibility of contaminating the data. Only variables 027-033 and 040-043 (raw data scores) were used in the factor analysis.

The delinquent group, although similar in value profile with the national high school norms for boys (Table 6) shows the delinquent boys higher in theoretical, aesthetic and social values than the non-delinquent. The non-delinquent group, also similar in value profile with the national high school norms for boys (Table 6) shows the non-delinquent boys higher in economic, political and religious values than the delinquent group.

Variables 040-043 in both Table 8 and Table 9 suggest a similarity in maximization of gain, long shot and conservative play. Minimization of loss seems to be higher, by comparison, in the non-delinquent group than the delinquent group.

Factor Analysis

The responses from the VRTTB were factor analyzed. A Quartimax Rotation was used because it yielded an

TABLE 9

Variables, Means and Standard Deviations
Non-Delinquents

Variables 027-047 as Identified in Appendix N

Descriptions	Variable	Mean	Standard Dev.
Self Rating Risk Taking Score	VAR027	6.000	1.6073
Theoretical	VAR028	41.4000	5.7735
Economic	VAR029	42.9600	4.8432
Aesthetic	VAR030	34.6000	6.4807
Social	VAR031	38.1600	5.5952
Political	VAR032	43.5200	4.8487
Religious	VAR033	38.4400	6.8683
Theoretical (coded)	VAR034	1.7600	0.6633
Economic (coded)	VAR035	2.000	0.5000
Aesthetic (coded)	VAR036	1.9600	0.6758
Social (coded)	VAR037	2.1200	0.6658
Political (coded)	VAR038	2.1600	0.6245
Religious (coded)	VAR039	2.0400	0.6758
Maximization of Gain	VAR040	17.8000	8.2966
Minimization of Loss	VAR041	13.2800	2.9513
Long Shot	VAR042	7.0800	4.5636
Conservative Play	VAR043	14.1600	8.0658
Maximization of Gain (coded)	VAR044	1.9200	0.7024
Minimization of Loss (coded)	VAR045	2.2800	0.4583
Long Shot (coded)	VAR046	2.0400	0.7895
Conservative Play (coded)	VAR047	2.000	0.7638

N = 25

interpretable factor matrix. Using the eigenvalue[1]--one criterion, five factors comprising 84.6% of the proportion of total variance were identified for the delinquents and five factors comprising 86.8% of the proportion of total variance were identified for the non-delinquents.

The communalities[2] of the variables on the five factors for the delinquents ranged from a high of .97919 for variable 042 (long shot) to a low of .71025 for variable 028 (theoretical). A range from a high of .98051 for variable 040 (maximization of gain) to a low of .65742 for variable 040 (minimization of loss) was found for the non-delinquents. Thus, the total variance of a variable that can be accounted for by the factors for the delinquent was between 97.9% and 71.0%; for the non-delinquent, between 98.0% and 65.7%. See Table 10 for a complete list of communalities for those variables 027-033, 040-043 used in the factor analysis.

Eleven of 11 variables, for the delinquents, having a loading of ±.30 or higher were found on at least one of the factors. Eight of these variables loaded on only one of the factors. Two variables loaded on two factors and only one variable, Self Rating Risk Taking Score, loaded on three factors

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[1]Eigenvalue refers to the amount of variation accounted for by a factor (Rummel, 1970, p. 144).

[2]Communalities are the proportions of the variable's total variance that are accounted for by the factor (Rummel, 1970, p. 142).

TABLE 10

Communalities

Variables	Descriptions	Delinquents	Non-Delinquents
027	Self Rating Risk Taking Score	.73632	.80878
028	Theoretical	.71025	.81003
029	Economic	.73266	.91206
030	Aesthetic	.93471	.90481
031	Social	.90349	.86368
032	Political	.80947	.79903
033	Religious	.74498	.88948
040	Maximization of Gain	.94148	.98051
041	Minimization of Loss	.84140	.65742
042	Long Shot	.97919	.94901
043	Conservative Play	.96762	.97528

The non-delinquent group also had 11 of 11 variables loading ±.30 or higher on at least one of the factors. Seven variables loaded on only one of the factors. Three loaded on two factors and only one variable, Self Rating Risk Taking Score (same one cited above in relation to the delinquent subject group) loaded on three factors. The five factors for the delinquents are presented in Table 11; the five non-delinquent factors are presented in Table 12. A brief interpretation of the factor analysis of both groups can be found below. The identifiable factors for the delinquents and non-delinquents can be found in Appendixes O and P respectively.

Delinquents. Factor I was constituted by four variables from the VRTTB which loaded ±.30 or higher. All of these variables, except self risk taking score, were derived from the gambling situation test. The positively loaded maximization of gain and long shot along with the negatively loaded conservative play suggest a label of "high risk." The positive loading of self risk taking score supports the labeling of Factor I as "high risk."

Three variables were found to be loaded ±.30 or higher in Factor II. They were Theoretical, Economic, Political and Religious values. The identification of these three variables--Theoretical (negative),[3] Economic

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[3]Refers to the factor loading.

TABLE 11

Factor Analysis Summation of the Five Quartimax Rotated Factor Matrix for the Delinquent Group

Factor	Variable	Loading	Eigen-value	% of Variance
I			3.33906	30.4
	VAR027 (SRRTS)	.39083		
	VAR040 (MG)	.95980		
	VAR042 (LS)	.96495		
	VAR043 (CP)	-.97177		
II			2.12703	19.4
	VAR028 (Theoretical)	-.36192		
	VAR029 (Economic)	.74066		
	VAR032 (Political)	.77666		
	VAR033 (Religious)	-.83411		
III			1.48724	13.5
	VAR028 (Theoretical)	-.64229		
	VAR029 (Economic)	-.34974		
	VAR031 (Social)	.92146		
IV			1.24838	11.3
	VAR027 (SRRTS)	-.73505		
	VAR041 (ML)	.82404		
V			1.09973	10.0
	VAR28 (Theoretical	.31269		
	VAR30 (Aesthetic	-.94486		
	VAR32 (Political	.34622		

TABLE 12

Factor Analysis Summation of the Five Quartimax Rotated Factor Matrix for the Non-Delinquent Group

Factor	Variable	Loading	Eigen-value	% of Variance
I			3.48233	31.7
	VAR027 (SRRTS)	.67019		
	VAR040 (MG)	.98170		
	VAR042 (LS)	.94839		
	VAR043 (CP)	-.98288		
II			2.03844	18.5
	VAR031 (Social)	.53177		
	VAR032 (Political)	-.87150		
	VAR041 (ML)	.78163		
III			1.56844	14.3
	VAR027 (SRRTS)	.38567		
	VAR028 (Theoretical	-.82204		
	VAR031 (Social)	.75594		
IV			1.37970	12.5
	VAR030 (Aesthetic)	.80224		
	VAR033 (Religious)	.87525		
V			1.08107	9.8
	VAR027 (SRRTS)	.36526		
	VAR029 (Economic)	.94119		
	VAR030 (Aesthetic)	-.49597		

(positive), Political (positive), and Religious (negative) --by the Allport-Vernon-Lindzey Study of Values suggests the labeling of Factor II as "high risk."

Factor III made up of three variables--Theoretical (negative), Economic (negative) and Social (positive) values suggests a value structure appropriate to be labeled "low risk."

Factor IV made up of only two variables--self rating risk taking score (negative) and minimization of loss (positive) suggests a label of "conservative."

Factor V is made up of three variables--Theoretical (positive), Aesthetic (negative) and Political (positive)--suggesting a total collection of three variables as being characteristics of "high achievement."

Non-delinquents. Factor I was constituted by four variables from the VRTTB which loaded ±.30 or higher. Maximization of gain and long shot loaded positively while conservative play loaded negatively as found in the gambling situation test. The remaining variable, self risk taking score, was loaded positively. The gathering of the four variables suggests a label of "high risk."

Factor II was made up of three variables: Social (positive) and Political (negative) from the AVL-SV and minimization of loss (positive) from the DB-GS. Together the two values and the one component from the DB-GS suggest a label of "low risk."

The variables that constitute Factor III are Theoretical (negative), Social (positive) and self rating risk taking score (positive). The loading of these variables lends itself to the label of "sociability."

Aesthetic (positive) and Religious (positive) values are items loaded on Factor IV. These variables suggest the label of "conservative."

Factor V made up of three variables--Economic (positive), Aesthetic (negative) and self rating risk taking score (positive) suggests a label of "achievement-related."

Summary of Findings

The following results represent a summary of the factor analysis of the value and risk taking data of both delinquents and non-delinquents.

First, there seems to be relatively little difference between the items (variables) loading of the "high risk" factor for the delinquents as compared with those identified for non-delinquents. However, the delinquent group shows a factor loading only with "high risk" value items. The "low risk" factors show only a similarity in the positive loading of Social

Secondly, graphic representation of the two structures--value and risk taking--for both groups points out the general similarity in value profiles of the delinquent (Table 8, Variables 28-33) and non-delinquent (Table 9, Variables 28-33)

and in comparison to national norms, as found in Table 6, and presented in Figure 1. While it can be observed that both groups fall close to the norms of male high school students, the delinquent is higher in theoretical, aesthetic and social values than the non-delinquent. The non-delinquent, thus, shows a higher score on economic, political and religious values.

The risk taking characteristics of the delinquents (Table 8, Variables 40-43) and non-delinquents (Table 9, Variables 40-43) suggest a similarity in maximization of gain, long shot and conservative play. The non-delinquent group, by comparison, is higher in minimization of loss than the delinquent group, as depicted in Figure 2.

Personal Factors

A frequency distribution was used to analyze the personal factors and the selective participation and preference of the leisure time activities of the delinquent and non-delinquent groups. The identification of the factors analyzed (Variables 1-26) may be found in Appendix N. The identification of the leisure time activities (Variables 48-227) analyzed may be found in Appendix I.

Delinquents

Age. Eighty-four percent of the delinquents were found to be 16 years old. The remaining 16% were equally distributed between the 15- and 17-year olds.

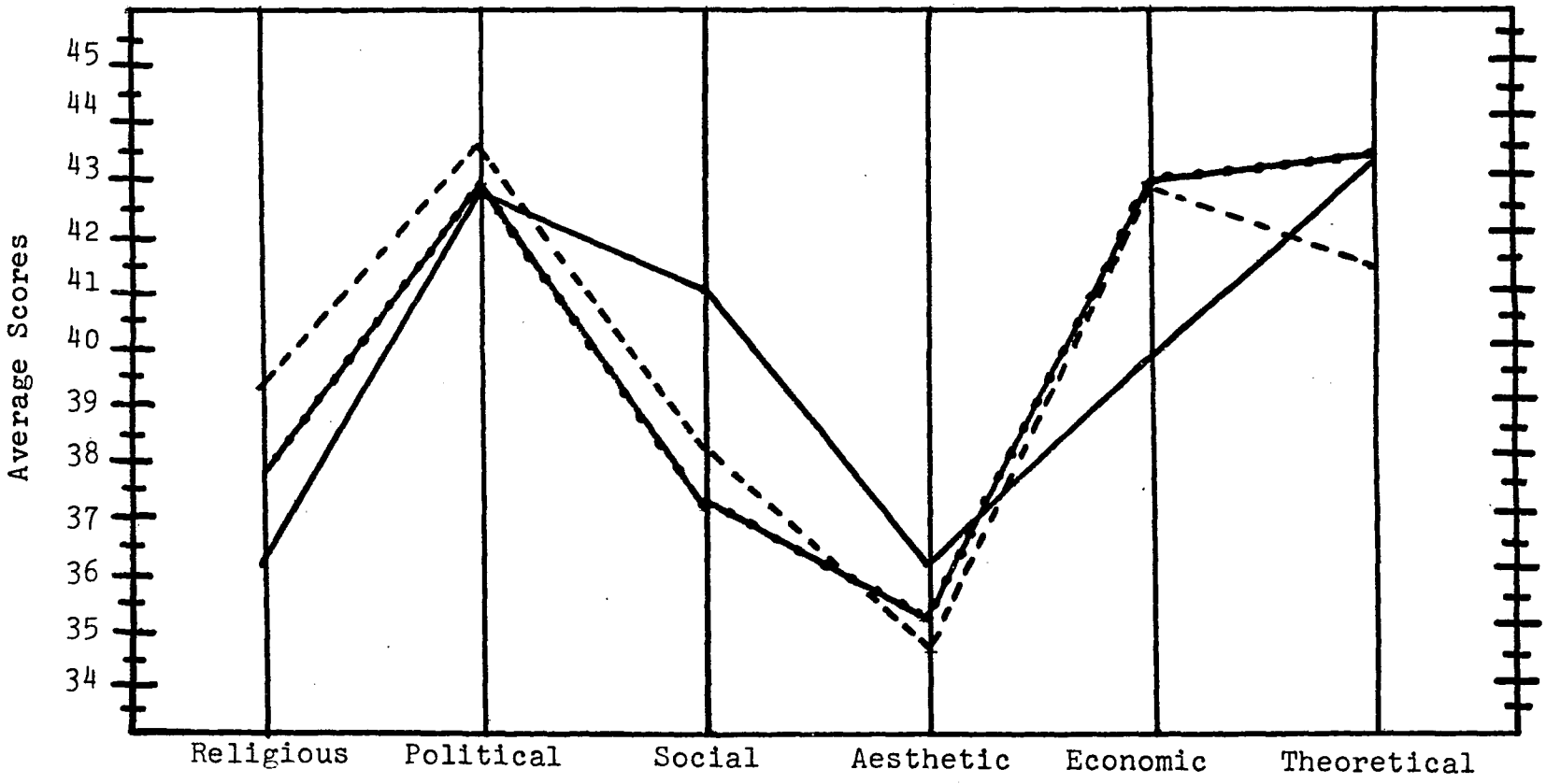
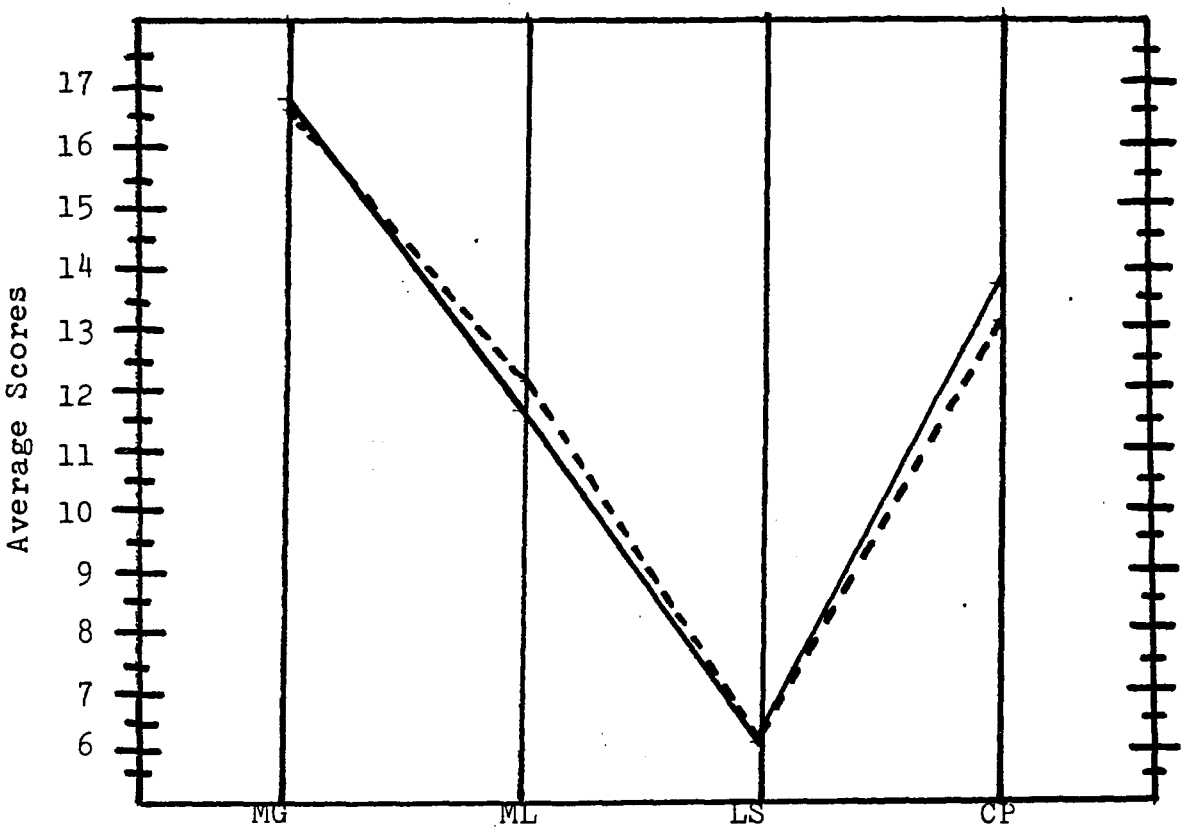


FIGURE 1. Profile of Values



MG=Maximization of Gain LS=Long Shot
ML=Minimization of Loss CP=Conservative Play
——— Average Risk Taking Components for Delinquents
------ Average Risk Taking Components for Non-Delinquents

FIGURE 2. Risk Taking Components

Height. Sixty-eight percent of the delinquents were found to be between 69 inches and 72 inches in height. Twenty-eight percent of the remaining were below the 69 to 72 inches range and 4% above. The range of the delinquent group was 62 inches to 73 inches. It was also found that 52% of the delinquents were within the average height range for boys of their age (66.5 inches to 71.5 inches) (Anderson, 1972). The remaining 48% were divided equally above and below the average.

Weight. Fifty-two percent of the delinquents were found to be from 128 pounds to 153 pounds with the remaining 48% being equally divided above and below. The range of this group was from 100 pounds to 175 pounds. Comparing with Anderson (1972), 68% of the group were within the average weight of 122 pounds and 162 pounds. Twenty percent of the group were over the average and 12% below.

Race. Sixty-four percent of the delinquents used in the study were white and the remaining 36% black.

Intelligence. Forty-eight percent of the delinquents had average intelligence; 20% were below and 32% were above average.

Religious affiliation. Responses to this item revealed that 40% of the delinquents were Baptist, 4% Catholic, 4% Lutheran, 4% Methodist, 4% Presbyterian, 4% not named, and the remaining 40% did not attend or were not affiliated with any religious group.

Age of friends. Fifty-two percent of the delinquents "palled" around with friends of the same age. Forty percent were found to be associated with friends who were older. The remaining 16% chose younger friends. The range of the friends was from 14 years to 19 years of age.

Residence. Ninety-six percent of the delinquents resided in the city with the remaining 4% rural.

Marital status of parents or guardians. At the time of the study, only 48% of the parents or guardians of the delinquents were married. Twenty percent were separated, 24% were divorced and 8% not named.

Resident affiliation. Forty-eight percent of the delinquents were found to reside with their mother and father or guardians. Forty percent of the remaining 52% were found to live with their mother and 12% with others (not named). None (0%) of the delinquents lived with their father alone.

Age of father/guardian. The range was found to be 28 to 53 years of age with 24% of the fathers being 40 years old and 12% being 38 years of age. Sixteen percent were found to be below 38 years of age and the remaining 48% above 40 years of age.

Age of mother/guardian. The range of the age of the mother was 28 to 55 years of age. Responses revealed that 8% were 33 years old, 12% were 36 years old, and 12% were 38 years old. Of the remaining 68%, 12% were below the age of 32 and 56% were over the age of 38.

Father's employment. Only 68% of the delinquents' fathers were employed.

Mother's employment. Seventy-six percent of the delinquents' mothers were employed.

Income of Family. Findings indicated that only 12% of the delinquents' family income was above average ($14,380). Fifty-six percent were found to be average ($7,793-$14,379) and 32% were below.

Siblings. Among the delinquent subjects, 56% have 3 or 4 siblings. Fifty-two percent of the delinquents have both a younger and an older brother. Forty percent of them have a younger sister and 36% have an older sister.

Athletic competition. It was found that 68% of the delinquents did not participate in school athletics, 72% did not participate in a structured recreational program and 80% did not participate in organized community programs.

Non-Delinquents

Age. Seventy-six percent of the non-delinquents were found to be 16 years of age with the remaining 24% being 17 years old. None of the non-delinquents were below 16 years of age.

Height. Sixty-four percent of the non-delinquents were found to be between 66 and 71 inches in height. Twelve percent of the remaining non-delinquents were below the range of 66-71 inches and 20% above. The range of the non-delinquent

group was from 60 inches to 74 inches in height. It was also found that 52% of the non-delinquents were within the average height range for boys of their age according to Anderson (1972). Twenty-eight percent were below this average and 20% above.

Weight. Fifty-six percent of the non-delinquents were found to be from 145 pounds to 160 pounds with 28% of the remaining 44% being below the above range and 16% being above. The range of the non-delinquent group was from 89 pounds to 200 pounds. Comparing with Anderson (1972), 64% of the group were within the average weight of 122 pounds and 162 pounds. It was also found that 16% of the non-delinquents were above the average and 20% were below.

Race. Seventy-two percent of the non-delinquents used in this study were white with 28% being black.

Intelligence. Fifty-six percent of the non-delinquents had average intelligence scores and 28% were below with 16% being above average.

Religious affiliation. Responses revealed that 36% of the non-delinquents were Methodist, 32% Baptist, 12% Lutheran, 8% Presbyterian, 4% not named, and the remaining 8% did not attend or were not affiliated with any religious group.

Age of friends. Sixty-eight percent of the non-delinquents were found to have friends of the same age. Twelve percent had friends that were older and 20% had

friends younger. The range of the friends was from 14 to 19 years of age.

Residence. Eighty percent of the non-delinquents resided in the city with the remaining 20% rural.

Marital status of parents or guardians. At the time of the study 80% of the parents or guardians of the non-delinquents were married. The remaining 16% were divided equally among those separated, divorced and others (not named).

Resident affiliation. Eighty-eight percent of the non-delinquents were found to live with their mother and father or guardians. The remaining 16% live with their mother (4%), father (4%), or others (not named, 4%).

Age of father/guardian. The range was found to be from 35 to 52 years of age. Fifty-six percent of the non-delinquents' fathers were from the age of 39 to 45. Twenty-six percent of the non-delinquents' fathers were above the 39 to 45 year old range and 16% below.

Age of mother/guardian. The range of the age of the mothers of the non-delinquents was from 30 to 51 years of age. Sixty-eight percent of the mothers were from the age of 34 to 42. Only 4% were found to be below 34 years old and 28% above 42 years of age.

Father's employment. One hundred percent of the non-delinquents' fathers were employed.

Mother's employment. It was found that 68% of the non-delinquents' mothers were employed.

Income of family. Findings indicated that 24% of the non-delinquents' family income was above the average ($14,380). Sixty-eight percent were found to be average ($7,793-$14,379) and only 8% were below $7,793.

Siblings. Among the non-delinquents, 48% have 1 or 2 siblings. Thirty-six percent of the non-delinquents have a younger brother at home. Thirty-two percent have an older brother at home. Forty percent have a younger sister and 44% have an older sister.

Athletic competition. It was found that 64% of the non-delinquents did not participate in school athletics, 52% did not participate in structured recreational programs and 48% of the non-delinquents did not participate in organized community programs.

Leisure Time Activities

Delinquents

The leisure time activity participation and preference by the delinquent group is presented in Table 13. Responses have been interpreted in terms of percentage of the 25 subjects who made up the group. It is interesting to note that only one activity (attending art shows or museums) received 100% participation from the delinquents. Twenty-one activities (attending art shows or museums, attending plays and concerts, attending sports events, baseball, basketball, bicycling, billiards or pool, camping, checkers, crossword

TABLE 13

Leisure Time Activities: Participation and Preference

Activity	Delinquents		Non-Delinquents	
	Participation %	Preference %	Participation %	Preference %
Archery	48	36	24	64
Attending art shows or museums	100	40	100	36
Attending plays and concerts	80	64	64	68
Attending sports events	80	80	96	84
Badminton	60	44	68	64
Baseball	92	76	100	88
Basketball	96	80	96	84
Bicycling	96	92	96	92
Billiards or pool	88	76	80	80
Boating (power)	60	60	52	92
Bowling	56	68	68	92
Boxing	68	68	20	24
Breaking and entering	36	16	08	04
Bridge (cards)	28	8	24	28
Camping	84	84	76	92
Casting (fly or bait)	52	56	72	68
Checkers	80	72	64	68
Chess	56	60	40	48
Conditioning	56	52	68	60
Crafts	64	48	48	56
Crew/kyacking/rowing	44	48	36	44
Crossword puzzles	80	56	48	40

TABLE 13 (continued)

Activity	Delinquents		Non-Delinquents	
	Participation %	Preference %	Participation %	Preference %
Dancing	68	56	52	52
Dating	84	80	84	96
Destroying Property	48	28	16	24
Diving	60	68	48	60
Drag racing	32	68	28	56
Dramatics	28	28	20	28
Drinking (liquor)	48	48	36	28
Driving for pleasure	68	72	76	88
Fencing (foil/sabre/epee)	16	36	04	24
Field hockey	24	36	20	36
Fighting (street)	56	36	20	12
Figure skating	08	24	16	12
Fishing (salt or fresh)	76	76	84	80
Football (tag/flag/tackle)	96	80	92	92
Gambling for money	64	44	48	20
Golf	28	44	48	72
Gymnastics	56	52	44	44
Handball or squash	32	36	24	36
Hiking	56	64	68	72
Horseback riding	56	92	34	84
Hunting	56	88	64	76
Ice skating for pleasure	32	44	40	52
Jogging	68	52	64	56
Keeping late hours	80	56	72	68

TABLE 13 (continued)

Activity	Delinquents		Non-Delinquents	
	Participation %	Preference %	Participation %	Preference %
Lacrosse	16	16	00	20
Lotteries or raffles	20	20	12	12
Motorcycling	68	88	56	84
Mountain climbing	44	60	24	60
Painting or drawing	60	60	56	68
Parachuting	04	44	08	40
Picnicking	76	64	56	80
Ping pong	68	72	72	88
Playing a musical instrument	60	72	56	64
Pleasure shooting (target)	60	84	72	72
Poker	52	64	44	40
Problem solving games	72	52	44	48
Reading	80	72	92	64
Roller skating	44	52	44	60
Running away from home	28	16	04	04
Sailing	28	60	12	68
Scuba diving	04	56	08	56
Sex Participation	88	72	68	72
Shuffleboard	32	48	20	52
Skeet shooting	20	56	12	56
Ski jumping	04	52	08	52
Skin diving	16	56	04	60
Skiing (snow)	08	52	08	48
Skydiving	08	56	04	44
Sneaking into theaters	36	52	20	20

TABLE 13 (continued)

Activity	Delinquents		Non-Delinquents	
	Participation %	Preference %	Participation %	Preference %
Snowmobiling	20	60	08	76
Soccer	48	60	48	48
Softball	88	72	88	80
Surfing	24	56	16	56
Swimming (indoor/ outdoor)	92	92	84	96
Table games	88	80	64	64
Table tennis	64	68	72	84
Television	92	84	100	100
Tennis	60	76	60	92
Track and field	84	60	64	56
Truck hopping (stealing rides)	28	16	16	04
Tumbling	44	40	36	48
Using drugs	40	32	08	08
Volleyball	64	56	96	84
Water skiing	32	60	28	60
Weight training	60	72	60	68
Working around the house	88	60	96	64
Wrestling	88	80	72	56

puzzles, dating, football, keeping late hours, reading, sex participation, softball, swimming, table games, television, track and field, working around the house, wrestling) were found to attract 80% or more of the delinquents. According to the investigator's classification scheme, 12 activities were "conservative," 9 "middle of the road" and 1 "high risk."

Thirty-nine activities of the total 90 were designated as preferred rather than merely those in which the subjects participated. Comprising those 39 activities, 8 (horseback riding, parachuting, scuba diving, ski-jumping, skin diving, skiing, skydiving, and snowmobiling) were found to have at least 36% increase over participation. Seven of these activities were "high risk" and 1 "middle of the road" in nature. Scuba diving had the highest increase in percentage of increase over participation with 52%. The activities with the highest percent of preference were bicycling, horseback riding, and swimming with 92% preferring to participate. In conjunction with the ratings given the activities, it was found that those activities given a rating of 5 and labeled "high risk" attracted an average of 36% of the delinquents. Those activities rated 3 and labeled "middle of the road" attracted 55.2% of the delinquent subjects while 65.1% of the delinquents participated in those activities with a rating of 1 and labeled "conservative." The average preference for activities rated 5, 3 and 1 was 48.9%, 59.8% and 59.9% respectively.

Non-Delinquent

The leisure time activity participation and preference by the non-delinquent group may be found in Table 13. Responses have been interpreted in terms of percentage of the 25 subjects who made up the group.

It is interesting to note that three activities (attending art shows or museums, baseball, and television) received 100% participation. The non-delinquent group also had one activity (lacrosse) which received 0% participation. Fourteen activities (attending sports events, baseball, basketball, bicycling, billiards or pool, dating, fishing, football, reading, softball, swimming, television, volleyball and working around the house) were found to attract 80% or more of the non-delinquents. According to the investigator's classification scheme, 7 activities were rated "conservative," 6 "middle of the road" and 1 "high risk." Fifty-two activities of the total 90 were designated as preferred rather than those in which the subjects participated. Comprising those 52 activities, 13 (archery, boating, bowling, mountain climbing, sailing, scuba diving, skeet shooting, ski jumping, skin diving, skiing, skydiving, snowmobiling and surfing) proved to have an increase in preference over participation by at least 38%. Out of the 13 activities 7 were rated as "high risk," 3 "middle of the road," and 3 "conservative." Snowmobiling had the highest increase in percentage of increase over participation with 68%. The activities with the highest

percent of preference were bicycling, boating, bowling, camping, dating, football, swimming and television, with 92% or better preferring to participate.

In conjunction with the ratings given the activities it was found that those activities given a 5 rating and labeled "high risk" attracted an average of 21.9% of the non-delinquents. Those activities rated 3 and labeled "middle of the road" attracted 48.3% of the non-delinquents while 62.0% of the non-delinquents participated in those activities with a rating of 1 and labeled "conservative." It was found that the non-delinquents had an average preferred 37.2% on all "high risk" activities, an average preferred 60.0% on "middle of the road" activities and 63.2% on all "conservative" activities.

Summary of Findings

The following results are summarized from the frequency distribution of personal factors and leisure time activities of both the delinquent and non-delinquent groups.

It can be observed that the majority of the subjects in both groups are 16 years old.

It can be stated that the delinquents are a little taller than the non-delinquents. The delinquents' weights seem to reflect the reverse of the height, with the non-delinquents being slightly heavier than the delinquents.

The non-delinquent group has a few more whites than the delinquent group. While the delinquent group has a

greater percentage of its subjects above the average intelligence range.

One of the most interesting differences found between the two groups was the high percentage (40%) of delinquent boys who did not attend church.

The data concerning the age of friends suggest that delinquents can be found associating with friends who are older.

Sixteen percent more of the delinquents live in the city than non-delinquents. Also important was the fact that only 48% of the delinquents lived with their parents while 80% of the non-delinquents lived with their married parents and 8% more lived with married guardians. At no time does a delinquent boy live alone with his father. The non-delinquent group suggested that 4% of its subjects lived alone with their father.

The age of the parents was observed to be different between the two groups. The parents of the non-delinquent seem to be older than the parents of the delinquent. The mother of the delinquent is older than the father, while the father of the non-delinquent is older than the mother. The mother of the delinquent also has a higher employment record (76%) than the father (68%). The fathers of the non-delinquents show 100% employment while only 68% of the mothers work.

The income of the family differs in that the non-delinquent suggests 24% are above the average ($7,793-$14,379) while the delinquents' family income shows 32% below the average. In addition to the delinquent's family having a lower income it also has more children.

Structured athletic competition does not seem to attract the delinquent boy. It was found that 68% did not participate in school athletics, 72% did not participate in structured recreational programs and 80% did not participate in organized community programs.

The selection of leisure time activities suggests that the delinquent participates in more activities than the non-delinquents, but prefers not to, while the non-delinquent does not participate in as many activities, but would prefer to. It was also indicated that the non-delinquent prefers those activities which are rated as a high risk.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This study was exploratory in nature, seeking to describe (1) personal factors, (2) professed values, (3) risk taking propensities, and (4) leisure time activity pursuits among delinquent and non-delinquent boys. A total of 50 males, 25 delinquents and 25 non-delinquents from Guilford County, North Carolina, ranging in age from 15 to 17, served as subjects for the study. Subjects chose the time most suitable for each one for data collection. Administration of the test battery (VRTTB) took approximately one hour. Testing for the non-delinquent group was done at Smith and Ragsdale High Schools. Testing for the delinquent group was conducted in the Juvenile Court Counselors' section of the Guilford County Courthouse in Greensboro, North Carolina, and the office of the Juvenile Court Counselors in High Point, North Carolina. All data gathering was done individually or in small groups by the writer.

A Value-Risk Taking Test Battery (VRTTB) was used as the major instrument for this study. It was composed of: (1) Allport-Vernon-Lindzey Study of Values (AVL-SV); the AVL-SV was used because of its ability to discriminate between certain interest values. (2) Self Rating Risk Taking Scale (SRRTS); the SRRTS was developed by the writer

to determine the risk taking level where a person perceives himself to be. (3) Dice Bets-Gambling Situation (DB-GS); the DB-GS was used to determine the possible risk taking level of the subjects. (4) Leisure Time Activity Scale (LTAS); the LTAS was developed by the writer to determine those activities the subjects (A) participated in, or (B) preferred to participate in. (5) Personal Factors Scale (PFS); the PFS was developed by the writer in an effort to help determine those factors which may influence high or low individual risk or that may be dominant within the delinquent or non-delinquent group.

The Statistical Package for the Social Sciences (SPSS) was used to analyze the data for interpretation. Programs were run which provide (1) descriptive summaries--means and standard deviations of all value and risk taking variables, (2) factor analysis of all value and risk taking variables, and (3) cross tabulation-frequency distribution of all personal factors and leisure time activity variables.

Findings of the inquiry revealed the following:

1. "Value-risk taking" characteristics may be associated with both "high risk taking" and "low risk taking."

2. No specific personal factors were identified that can be associated with "high risk taking" or "low risk taking."

3. Personal factors can be identified that are associated with delinquent and non-delinquent groups. Factors such as height (taller), intelligence (above average),

church attendance (lack of), age of friends (older), residence (city), resided with married parents (48%), resided alone with father (0%), mother's age (older than father, but younger than the non-delinquent's mother), mother's employment (greater than the father by 8% and greater than the non-delinquent's mother by 8%), family income lower than non-delinquent), and siblings (more than non-delinquents) suggest having an influence on the behavior of the delinquent group.

Factors such as weight (heavier), race (more whites), age of friends (younger or the same), resided with married parents (80%), age of parents (older than delinquents' parents), employment of father (100%) and family income (higher than delinquents' families) seem to suggest those factors that influence the behavior of the non-delinquent group.

4. Although both the delinquent and non-delinquent groups fall close to the value norms of male high school students, the delinquent is higher in Theoretical, Aesthetic and Social values than the non-delinquent.

5. There is considerable similarity between a "high risk" delinquent and a "high risk" non-delinquent.

6. "Social" seems to be the value characteristic that is similar between a "low risk" delinquent and a "low risk" non-delinquent.

7. In terms of leisure time pursuits, delinquent boys reported frequent participation in 11 activities: attending

art shows or museums, attending plays or concerts, camping, checkers, crossword puzzles, fishing, keeping late hours, sex participation, table tennis, track and field, and wrestling. While non-delinquents identified the leisure time activities as their less frequent participation.

8. The delinquents reported that out of 90 leisure time activities, they would like to participate more in 39 of the activities than they are presently doing. The non-delinquents, however, indicated that out of the 90 leisure time activities they would like to participate more in 52 of the activities.

Conclusions

As a result of the statistical analysis of data collected, the following responses are offered to the eight questions proposed at the beginning of the study.

Question 1. Are there value-risk taking characteristics which may be associated with "high risk"?

Four variables, identified in this study, are associated with the "high-risk" teenage male. These are maximization of gain, long shot, conservative play and self rating risk taking score.

Question 2. Are there value-risk taking characteristics which may be associated with "low risk"?

One variable, high, positive social value, can be associated with "low risk."

Question 3. What are the personal factors which may be associated with "high risk?"

There are no specific personal factors which are typical of "high risk" teenage boys.

Question 4. What are the personal factors which may be associated with "low risk"?

There are no specific personal factors which are associated with "low risk."

Question 5. Are there value-risk taking characteristics which may be associated with "high risk" which are different for delinquent and non-delinquent boys?

Data suggest that delinquent teenage boys, who are associated with"high risk" also may be associated with a value structure comprised of four value variables--Theoretical, Economic, Political and Religious.

Question 6. Are there value-risk taking characteristics that may be associated with "low risk" which are different for delinquent and non-delinquent boys?

Theoretical and Economic values are associated with the delinquent teenage boy, while Political values and minimization of loss are characteristics of "low risk" non-delinquent boys.

Question 7. What leisure time activities are participated in by delinquent and non-delinquent boys?

The delinquent boy participates most often, 80% or more, in the following activities:

High risk	Middle of the road	Conservative
Football	Baseball	Attending art shows or museums
	Basketball	Attending plays and concerts
	Bicycling	Attending sports events
	Keeping late hours	Billiards or pool
	Sex Participation	Camping
	Softball	Checkers
	Swimming	
	Track and Field	
	Wrestling	

High risk	Middle of the road	Conservative
		Crossword puzzles
		Dating
		Reading
		Table games
		Television
		Working around the house

On the other hand the non-delinquent boy participates most often (80% or more) in the following activities:

High risk	Middle of the road	Conservative
Football	Baseball	Attending sports events
	Basketball	Billiards or pool
	Bicycling	Dating
	Softball	Fishing
	Swimming	Reading
	Volleyball	Television
		Working around the house

In terms of leisure time pursuits, delinquent boys reported more frequent participation in the following 11 activities than the non-delinquent group:

High risk	Middle of the road	Conservative
	Keeping late hours	Attending art shows or museums
	Sex participation	Attending plays and concerts
	Track and field	Camping
	Wrestling	Checkers
		Crossword puzzles
		Fishing
		Table Tennis

Lacrosse (high risk) is the only activity the non-delinquent boy did not participate in compared to the delinquent.

Question 8. What leisure time activities are preferred by delinquent and non-delinquent boys?

The following thirty-nine activities are preferred by delinquent boys:

High risk	Middle of the road	Conservative
Drag racing	Crew/kyacking/rowing	Bowling
Motorcycling	Diving	Casting (fly or bait
Mountain climbing	Driving for pleasure	Chess
Parachuting	Fencing (foil/sabre/epee)	Ice skating
Scuba diving	Field hockey	Ping pong
Ski jumping	Figure skating	Playing a musical instrument
Skin diving	Handball or squash	Shuffleboard
Skiing (snow)	Hiking	Skeetshooting
Sky diving	horseback riding	Table tennis
Sneaking into theaters	Hunting	
Surfing	Pleasure shooting	
	Poker	
	Roller skating	
	Sailing	
	Snowmobiling	
	Soccer	
	Tennis	
	Water skiing	
	Weight training	

For non-delinquents, preferences for leisure time activities include:

High risk	Middle of the road	Conservative
Boxing	Archery	Attending plays or concerts
Destroying property	Boating	Bowling
Drag racing	Crew/kyacking/rowing	Bridge
Lacrosse	Diving	Camping
Motorcycling	Driving for pleasure	Checkers
Mountain climbing	Fencing (foil/sabre/epee)	Chess
Parachuting	Field hockey	Crafts
Scuba diving	Handball or squash	Dating
Ski jumping	Hiking	Dramatics
Skin diving	Horseback riding	Golf
Skiing (snow)	Hunting	Ice skating
Skydiving	Roller skating	Painting
Surfing	Sailing	Picnicking
Tumbling	Sex Participation	Ping pong
	Snowmobiling	Playing a musical instrument
	Swimming	Problem solving
	Tennis	Shuffleboard
	Water skiing	Skeetshooting
	Weight training	Table tennis

Implications

On the basis of the findings from this study, several areas, because of their importance deserve additional discussion with possible implications.

The lack of church attendance by the delinquents and their low religious scores on the Allport-Vernon-Lindzey Study of Values suggest that this single religious factor may have a strong influence on the actions of a delinquent boy. This perhaps implies that a stronger emphasis should be placed on the religious aspects of the delinquent's life.

The fact that no delinquent boy lived with his father alone suggests that a lack of an older male's companionship may be an important influential factor in the delinquent's life.

The lack of participation by both groups, in structured athletic, recreational and community activities implies a strong conflict in the programs offered by organizations and agencies. The delinquent group participated in the same activities as the non-delinquent, but as leisure time activities, not as a structured organization. This perhaps indicates a rebellious attitude toward rules, regulations and authority. Participation in an activity by a delinquent did not necessarily indicate that he liked it, but that he was looking for something to occupy his time.

One activity that deserves discussion is that of destroying property. The delinquent group actually participated in this activity but the non-delinquent preferred more of this type activity than they were actually having. This suggests a change in the value structure of the non-delinquent and implies a lack of concern for one's own property as well as that of others.

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APPENDIX A

CHOICE DILEMMAS PROCEDURE*

Opinion Questionnaire II

Instructions. On the following pages, you will find a series of situations that are likely to occur in everyday life. The central person in each situation is faced with a choice between two alternative courses of action, which we might call X and Y. Alternative X is more desirable and attractive than alternative Y, but the probability of attaining or achieving X is less than that of attaining or achieving Y.

For each situation on the following pages, you will be asked to indicate the minimum odds of success you would demand before recommending that the more attractive or desirable alternative, X, be chosen.

Read each situation carefully before giving your judgment. Try to place yourself in the position of the central person in each of the situations. There are twelve situations in all. Please do not omit any of them.

1. Mr. A, an electrical engineer, who is married and has one child, has been working for a large electronics corporation since graduating from college five years ago. He is assured of a lifetime job with a modest, though adequate, salary, and liberal pension benefits upon retirement. On the other hand, it is very unlikely that his salary will increase much before he retires. While attending a convention, Mr. A is offered a job with a small, newly founded company which has a highly uncertain future. The new job would pay more to start and would offer the possibility of a share in the ownership if the company survived the competition of the larger firms.

Imagine that you are advising Mr. A. Listed below are several probabilities or odds of the new company's proving financially sound.

Please check the lowest probability that you would consider acceptable to make it worthwhile for Mr. A to take the new job.

___ The chances are 1 in 10 that the company will prove financially sound.

___ The chances are 3 in 10 that the company will prove financially sound.
___ The chances are 5 in 10 that the company will prove financially sound.
___ The chances are 7 in 10 that the company will prove financially sound.
___ The chances are 9 in 10 that the company will prove financially sound.
___ Place a check here if you think Mr. A should not take the new job no matter what the probabilities.

2. Mr. B, a 45-year-old accountant, has recently been informed by his physician that he has developed a severe heart ailment. The disease would be sufficiently serious to force Mr. B to change many of his strongest life habits--reducing his work load, drastically changing his diet, giving up favorite leisure-time pursuits. The physician suggests that a delicate medical operation could be attempted which, if successful, would completely relieve the heart condition. But its success could not be assured, and in fact, the operation might prove fatal.

Imagine that you are advising Mr. B. Listed below are several probabilities or odds that the operation will prove successful.

Please check the lowest probability that you would consider acceptable for the operation to be performed.

___ Place a check here if you think Mr. B should not have the operation no matter what the probabilities.
___ The chances are 9 in 10 that the operation will be a success.
___ The chances are 7 in 10 that the operation will be a success.
___ The chances are 5 in 10 that the operation will be a success.
___ The chances are 3 in 10 that the operation will be a success.
___ The chances are 1 in 10 that the operation will be a success.

3. Mr. C, a married man with two children, has a steady job that pays him about $6000 per year. He can

easily afford the necessities of life, but few of the luxuries. Mr. C's father, who died recently, carried a $4000 life insurance policy. Mr. C would like to invest this money in stocks. He is well aware of the secure "blue-chip" stocks and bonds that would pay approximately 6% on his investment. On the other hand, Mr. C has heard that the stocks of a relatively unknown Company X might double their present value if a new product currently in production is favorably received by the buying public. However, if the product is unfavorably received, the stocks would decline in value.

Imagine that you are advising Mr. C. Listed below are several probabilities or odds that Company X stocks will double their value.

Please check the lowest probability that you would consider acceptable for Mr. C to invest in Company X stocks.

___ The chances are 1 in 10 that the stocks will double their value.
___ The chances are 3 in 10 that the stocks will double their value.
___ The chances are 5 in 10 that the stocks will double their value
___ The chances are 7 in 10 that the stocks will double their value.
___ The chances are 9 in 10 that the stocks will double their value.
___ Place a check here if you think Mr. C should not invest in Company X stocks, no matter what the probabilities.

4. Mr. D is the captain of College X's football team. College X is playing its traditional rival, College Y, in the final game of the season. The game is in its final seconds, and Mr. D's team, College X, is behind in the score. College X has time to run one more play. Mr. D, the captain, must decide whether it would be best to settle for a tie score with a play which would be almost certain to work or, on the other hand, should he try a more complicated and risky play which could bring victory if it succeeded, but defeat if not.

Imagine that you are advising Mr. D. Listed below are several probabilities or odds that the risky play will work.

Please check the lowest probability that you would consider acceptable for the risky play to be attempted.

___ Place a check here if you think Mr. D. should not attempt the risky play no matter what the probabilities.
___ The chances are 9 in 10 that the risky play will work.
___ The chances are 7 in 10 that the risky play will work.
___ The chances are 5 in 10 that the risky play will work.
___ The chances are 3 in 10 that the risky play will work.
___ The chances are 1 in 10 that the risky play will work.

5. Mr. E is president of a light metals corporation in the United States. The corporation is quite prosperous, and has strongly considered the possibilities of business expansion by building an additional plant in a new location. The choice is between building another plant in the U. S., where there would be a moderate return on the initial investment, or building a plant in a foreign country. Lower labor costs and easy access to raw materials in that country would mean a much higher return on the initial investment. On the other hand, there is a history of political instability and revolution in the foreign country under consideration. In fact, the leader of a small minority party is committed to nationalizing, that is, taking over, all foreign investments.

Imagine that you are advising Mr. E. Listed below are several probabilities or odds of continued political stability in the foreign country under consideration.

Please check the lowest probability that you would consider acceptable for Mr. E's corporation to build a plant in that country.

___ The chances are 1 in 10 that the foreign country will remain politically stable.
___ The chances are 3 in 10 that the foreign country will remain politically stable.
___ The chances are 5 in 10 that the foreign country will remain politically stable.
___ The chances are 7 in 10 that the foreign country will remain politically stable.
___ The chances are 9 in 10 that the foreign country will remain politically stable.
___ Place a check here if you think Mr. E's corporation should not build a plant in the foreign country, no matter what the probabilities.

6. Mr. F. is currently a college senior who is very eager to pursue graduate study in chemistry leading to the Doctor of Philosophy degree. He has been accepted by both University X and University Y. University X has a world-wide reputation for excellence in chemistry. While a degree from University X would signify outstanding training in this field, the standards are so very rigorous that only a fraction of the degree candidates actually receive the degree. University Y, on the other hand has much less of a reputation in chemistry, but almost everyone admitted is awarded the Doctor of Philosophy degree, though the degree has much less prestige than the corresponding degree from University X.

Imagine that you are advising Mr. F. Listed below are several probabilities or odds that Mr. F would be awarded a degree at University X, the one with the greater prestige.

Please check the lowest probability that you would consider acceptable to make it worthwhile for Mr. F to enroll in University X rather than University Y.

___ Place a check here if you think Mr. F should not enroll in University X, no matter what the probabilities.
___ The chances are 9 in 10 that Mr. F would receive a degree from University X.
___ The chances are 7 in 10 that Mr. F would receive a degree from University X.
___ The chances are 5 in 10 that Mr. F would receive a degree from University X.
___ The chances are 3 in 10 that Mr. F would receive a degree from University X.
___ The chances are 1 in 10 that Mr. F Would receive a degree from University X.

7. Mr. G, a competent chess player is participating in a national chess tournament. In an early match he draws the top-favored player in the tournament as his opponent. Mr. G has been given a relatively low ranking in view of his performance in previous tournaments. During the course of his play with the top-favored man, Mr. G notes the possibility of a deceptive though risky maneuver that might bring him a quick victory. At the same time, if the attempted maneuver should fail, Mr. G would be left in an exposed position and defeat would almost certainly follow.

Imagine that you are advising Mr. G. Listed below are several probabilities or odds that Mr. G's deceptive play would succeed.

Please check the lowest probability that you would consider acceptable for the risky play in question to be attempted.

___ The chances are 1 in 10 that the play would succeed.
___ The chances are 3 in 10 that the play would succeed.
___ The chances are 5 in 10 that the play would succeed.
___ The chances are 7 in 10 that the play would succeed.
___ The chances are 9 in 10 that the play would succeed.
___ Place a check here if you think Mr. G should not attempt the risky play, no matter what the probabilities.

8. Mr. H, a college senior, has studied the piano since childhood. He has won amateur prizes and given small recitals, suggesting that Mr. H has considerable musical talent. As graduation approaches, Mr. H has the choice of going to medical school to become a physician, a profession which would bring certain prestige and financial rewards; or entering a conservatory of music for advanced training with a well-known pianist. Mr. H realizes that even upon completion of his piano studies, which would take many more years and a lot of money, success as a concert pianist would not be assured.

Imagine that you are advising Mr. H. Listed below are several probabilities or odds that Mr. H would succeed as a concert pianist.

Please check the lowest probability that you would consider acceptable for Mr. H to continue with his musical training.

___ Place a check here if you think Mr. H should not pursue his musical training, no matter what the probabilities.
___ The chances are 9 in 10 that Mr. H would succeed as a concert pianist.
___ The chances are 7 in 10 that Mr. H would succeed as a concert pianist.
___ The chances are 5 in 10 that Mr. H would succeed as a concert pianist.
___ The chances are 3 in 10 that Mr. H would succeed as a concert pianist.
___ The chances are 1 in 10 that Mr. H would succeed as a concert pianist.

9. Mr. J is an American captured by the enemy in World War II and placed in a prisoner-of-war camp. Conditions in the camp are quite bad, with long hours of hard physical labor and a barely sufficient diet. After spending several months in this camp, Mr. J notes the possibility of escape by concealing himself in a supply truck that shuttles in and out of the camp. Of course, there is no guarantee that the escape would prove successful. Recapture by the enemy could well mean execution.

Imagine that you are advising Mr. J. Listed below are several probabilities or odds of a successful escape from the prisoner-of-war camp.

Please check the lowest probability that you would consider acceptable for an escape to be attempted.

___ The chances are 1 in 10 that the escape would succeed.
___ The chances are 3 in 10 that the escape would succeed.
___ The chances are 5 in 10 that the escape would succeed.
___ The chances are 7 in 10 that the escape would succeed.
___ The chances are 9 in 10 that the escape would succeed.
___ Place a check here if you think Mr. J should not try to escape no matter what the probabilities.

10. Mr. K is a successful businessman who has participated in a number of civic activities of considerable value to the community. Mr. K has been approached by the leaders of his political party as a possible congressional candidate in the next election. Mr. K's party is a minority party in the district, though the party has won occasional elections in the past. Mr. K would like to hold political office, but to do so would involve a serious financial sacrifice, since the party has insufficient campaign funds. He would also have to endure the attacks of his political opponents in a hot campaign.

Imagine that you are advising Mr. K. Listed below are several probabilities or odds of Mr. K's winning the election in his district.

Please check the lowest probability that you would consider acceptable to make it worthwhile for Mr. K to run for political office.

___ Place a check here if you think Mr. K should not run for political office no matter what the probabilities.

___ The chances are 9 in 10 that Mr. K would win the election.
___ The chances are 7 in 10 that Mr. K would win the election.
___ The chances are 5 in 10 that Mr. K would win the election.
___ The chances are 3 in 10 that Mr. K would win the election.
___ The chances are 1 in 10 that Mr. K would win the election.

11. Mr. L, a married 30-year-old research physicist, has been given a five-year appointment by a major university laboratory. As he contemplates the next five years, he realizes that he might work on a difficult, long-term problem which, if a solution could be found, would resolve basic scientific issues in the field and bring high scientific honors. If no solution were found, however, Mr. L would have little to show for his five years in the laboratory, and this would make it hard for him to get a good job afterwards. On the other hand, he could, as most of his professional associates are doing, work on a series of short-term problems where solutions would be easier to find, but where the problems are of lesser scientific importance.

Imagine that you are advising Mr. L. Listed below are several probabilities or odds that a solution would be found to the difficult, long-term problem that Mr. L has in mind.

Please check the lowest probability that you would consider acceptable to make it worthwhile for Mr. L to work on the more difficult long-term problem.

___ The chances are 1 in 10 that Mr. L would solve the long-term problem.
___ The chances are 3 in 10 that Mr. L would solve the long-term problem.
___ The chances are 5 in 10 that Mr. L would solve the long-term problem.
___ The chances are 7 in 10 that Mr. L would solve the long-term problem.
___ The chances are 9 in 10 that Mr. L would solve the long-term problem.
___ Place a check here if you think Mr. L should not choose the long-term, difficult problem, no matter what the probabilities.

12. Mr. M is contemplating marriage to Miss T, a girl whom he has known for a little more than a year. Recently, however, a number of arguments have occurred between them, suggesting some sharp differences of opinion in the way each views certain matters. Indeed, they decide to seek professional advice from a marriage counselor as to whether it would be wise for them to marry. On the basis of these meetings with a marriage counselor, they realize that a happy marriage, while possible, would not be assured.

Imagine that you are advising Mr. M and Miss T. Listed below are several probabilities or odds that their marriage would prove to be a happy and successful one.

Please check the lowest probability that you would consider acceptable for Mr. M and Miss T to get married.

___ Place a check here if you think Mr. M and Miss T should not marry, no matter what the probabilities.
___ The chances are 9 in 10 that the marriage would be happy and successful.
___ The chances are 7 in 10 that the marriage would be happy and successful.
___ The chances are 5 in 10 that the marriage would be happy and successful.
___ The chances are 3 in 10 that the marriage would be happy and successful.
___ The chances are 1 in 10 that the marriage would be happy and successful.

*From Nathan Kogan and Michael A. Wallach, Risk Taking (New York: Holt, Rinehart and Winston, 1964), Appendix E, pp. 256-261

APPENDIX B

Allport-Vernon-Lindzey Test Results

Subjects	Theoretical	Economic	Aesthetic	Social	Political	Religious
1	37	48	35	50	48	22
2	30	53	33	46	37	41
3	37	43	52	37	33	38
4	25	41	38	49	36	51
5	29	36	41	44	28	62
6	24	45	39	47	31	54
7	40	39	46	37	39	39
8	46	40	40	41	36	37
9	38	30	47	44	29	52
10	41	28	49	45	40	37
11	51	37	52	33	37	30
12	40	45	48	43	42	22
13	38	59	22	37	44	40
14	31	51	42	37	50	29
15	37	49	39	42	51	22
16	28	41	44	39	40	44
17	36	46	41	44	39	34
18	37	36	53	34	37	43
19	58	38	47	47	29	21
20	44	37	41	36	53	29
21	36	31	30	50	39	54
22	50	32	38	33	32	55
23	28	48	27	35	38	54
24	38	52	33	29	51	37
25	40	38	46	43	36	37

N = 25

APPENDIX C

SELF RATING RISK TAKING SCALE

Code Number _____

Using the Self Rating Risk Taking Scale below please rate YOURSELF (perception of yourself) as being a risk taker in any situation.

Please place a check by the level (1--very conservative through 10--high risk taker) that you feel best represents you as a risk taker.

A risk taker is one who is willing to take a chance to achieve a goal even when there is the possibility of a penalty, if not successful.

_____	10	High Risk Taker
_____	9	
_____	8	
_____	7	
_____	6	
_____	5	Middle of the Roader
_____	4	
_____	3	
_____	2	
_____	1	Very Conservative

APPENDIX D

Chance Bets Instrument

DICE BETS

Instructions. In this task you will be shown pairs of dice bets that vary in terms of the chances of winning and losing, and the amounts of money that can be won or lost. I would like you to choose, in each pair, the bet that you would prefer to play. Indicate your decision by making a check in the box[1] under the bet that you prefer to play. Consider each pair separately--do not let your decision in one case influence your decision in another. Later you will have the opportunity to actually play the bets that you now choose. You will play them in a dice game for the amounts of money described in the bets. So be sure that you choose now the bets that you actually will want to play, because you will be held to them.

The chances of winning and losing are written as fractions: Thus, 1/4 means 1 chance in 4, 1/2 means 1 chance in 2, 1/9 means 1 chance in 9, etc.

1.	1/9 to win \$1.20 8/9 to lose \$.15	vs.	1/2 to win \$.60 1/2 to lose \$.60
2.	1/4 to win \$.90 3/4 to lose \$.30	vs.	3/4 to win \$.10 1/4 to lose \$.30
3.	1/4 to win \$.45 3/4 to lose \$.15	vs.	1/9 to win \$1.20 8/9 to lose \$.15
4.	1/9 to win \$2.40 8/9 to lose \$.30	vs.	3/4 to win \$.20 1/4 to lose \$.60
5.	3/4 to win \$.05 1/4 to lose \$.15	vs.	1/2 to win \$.15 1/2 to lose \$.15
6.	1/2 to win \$.60 1/2 to lose \$.60	vs.	3/4 to win \$.20 1/4 to lose \$.60
7.	3/4 to win \$.20 1/4 to lose \$.60	vs	1/9 to win \$4.80 8/9 to lose \$.60

*The boxes have been omitted here, to save space.

8.	1/9 to win $1.20 8/9 to lose $.15	vs.	3/4 to win $.10 1/4 to lose $.30
9.	1/2 to win $.60 1/2 to lose $.60	vs.	3/4 to win $.05 1/4 to lose $.15
10.	1/9 to win $1.20 8/9 to lose $.15	vs.	1/2 to win $.30 1/2 to lose $.30
11.	1/2 to win $.30 1/2 to lose $.30	vs.	1/9 to win $2.40 8/9 to lose $.30
12.	3/4 to win $.10 1/4 to lose $.30	vs.	1/9 to win $4.80 8/9 to lose $.60
13.	1/4 to win $1.80 3/4 to lose $.60	vs.	1/9 to win $2.40 8/9 to lose $.30
14.	1/2 to win $.15 1/2 to lose $.15	vs.	1/9 to win $4.80 8/9 to lose $.60
15.	1/4 to win $1.80 3/4 to lose $.60	vs.	3/4 to win $.05 1/4 to lose $.15
16.	1/2 to win $.30 1/2 to lose $.30	vs	3/4 to win $.20 1/4 to lose $.60
17.	1/2 to win $.60 1/2 to lose $.60	vs	1/4 to win $.45 3/4 to lose $.15
18.	3/4 to win $.10 1/4 to lose $.30	vs	3/4 to win $.20 1/4 to lose $.60
19.	1/4 to win $1.80 3/4 to lose $.60	vs	3/4 to win $.10 1/4 to lose $.30
20.	1/9 to win $2.40 8/9 to lose $.30	vs.	1/4 to win $.90 3/4 to lose $.30
21.	1/2 to win $.60 1/2 to lose $.60	vs.	1/9 to win $2.40 8/9 to lose $.30
22.	1/9 to win $4.80 8/9 to lose $.60	vs.	1/2 to win $.60 1/2 to lose $.60
23.	3/4 to win $.05 1/4 to lose $.15	vs.	1/4 to win $.45 3/4 to lose $.15
24.	1/4 to win $.45 3/4 to lose $.15	vs.	1/9 to win $4.80 8/9 to lose $.60

25.	1/4 to win \$.90 3/4 to lose \$.30	vs.	1/2 to win \$.15 1/2 to lose \$.15
26.	3/4 to win \$.05 1/4 to lose \$.15	vs.	1/9 to win \$2.40 8/9 to lose \$.30
27.	3/4 to win \$.20 1/4 to lose \$.60	vs.	1/2 to win \$.15 1/2 to lose \$.15
28.	1/9 to win \$1.20 8/9 to lose \$.15	vs.	1/9 to win \$4.80 8/9 to lose \$.60
29.	1/4 to win \$1.80 3/4 to lose \$.60	vs.	1/2 to win \$.15 1/2 to lose \$.15
30.	1/4 to win \$.90 3/4 to lose \$.30	vs.	3/4 to win \$.20 1/4 to lose \$.60
31.	3/4 to win \$.20 1/4 to lose \$.60	vs.	1/9 to win \$1.20 8/9 to lose \$.15
32.	1/2 to win \$.30 1/2 to lose \$.30	vs	1/4 to win \$1.80 3/4 to lose \$.60
33.	1/9 to win \$2.40 8/9 to lose \$.30	vs.	1/2 to win \$.15 1/2 to lose \$.15
34.	1/4 to win \$.90 3/4 to lose \$.30	vs.	1/2 to win \$.30 1/2 to lose \$.30
35.	3/4 to win \$.20 1/4 to lose \$.60	vs.	1/4 to win \$.45 3/4 to lose \$.15
36.	1/4 to win \$1.80 3/4 to lose \$.60	vs.	1/2 to win \$.60 1/2 to lose \$.60
37.	1/2 to win \$.30 1/2 to lose \$.30	vs.	1/4 to win \$.45 3/4 to lose \$.15
38.	1/9 to win \$1.20 8/9 to lose \$.15	vs.	1/9 to win \$2.40 8/9 to lose \$.30
39.	1/4 to win \$.90 3/4 to lose \$.30	vs.	3/4 to win \$.05 1/4 to lose \$.15
40.	1/9 to win \$2.40 8/9 to lose \$.30	vs.	1/9 to win \$4.80 8/9 to lose \$.60

41.	1/2 to win $.60 1/2 to lose $.60	vs.	1/2 to win $.30 1/2 to lose $.30
42.	3/4 to win $.10 1/4 to lose $.30	vs.	1/2 to win $.60 1/2 to lose $.60
43.	1/4 to win $1.80 3/4 to lose $.60	vs.	1/4 to win $.90 3/4 to lose $.30
44.	3/4 to win $.05 1/4 to lose	vs.	1/9 to win $4.80 8/9 to lose $.60
45.	3/4 to win $.10 1/4 to lose $.30	vs.	1/4 to win $.45 3/4 to lose $.15
46.	1/2 to win $.15 1/2 to lose $.15	vs.	1/2 to win $.60 1/2 to lose $.60
47.	1/9 to win $4.80 8/9 to lose $.60	vs.	1/4 to win $.90 3/4 to lose $.30
48.	1/2 to win $.30 1/2 to lose $.30	vs.	3/4 to win $.10 1/4 to lose $.30
49.	3/4 to win $.10 1/4 to lose $.30	vs.	3/4 to win $.05 1/4 to lose $.15
50.	1/2 to win $.15 1/2 to lose $.15	vs.	1/9 to win $4.80 8/9 to lose $.60
51.	1/2 to win $.60 1/2 to lose $.60	vs.	1/4 to win $.90 3/4 to lose $.30
52.	1/2 to win $.15 1/2 to lose $.15	vs.	3/4 to win $.10 1/4 to lose $.30
53.	3/4 to win $.20 1/4 to lose $.60	vs.	1/4 to win $1.80 3/4 to lose $.60
54.	1/9 to win $1.20 8/9 to lose $.15	vs.	1/2 to win $.15 1/2 to lose $.15
55.	1/4 to win $1.80 3/4 to lose $.60	vs.	1/9 to win $4.80 8/9 to lose $.60
56.	1/4 to win $.45 3/4 to lose $.15	vs.	1/2 to win $.15 1/2 to lose $.15
57.	1/4 to win $.90 3/4 to lose $.30	vs.	1/4 to win $.45 3/4 to lose $.15

58	1/9 to win $2.40 8/9 to lose $.30	vs.	3/4 to win $.10 1/4 to lose $.30
59.	1/4 to win $.90 3/4 to lose $.30	vs.	1/9 to win $1.20 8/9 to lose $.15
60.	1/4 to win $.45 3/4 to lose $.15	vs.	1/9 to win $2.40 8/9 to lose $.30
61	1/4 to win $1.80 3/4 to lose $.60	vs.	1/4 to win $.45 3/4 to lose $.15
62.	3/4 to win $.05 1/4 to lose $.15	vs.	1/9 to win $1.20 8/9 to lose $.15
64.	3/4 to win $.20 1/4 to lose $.60	vs.	3/4 to win $.05 1/4 to lose $.15
65.	1/2 to win $.30 1/2 to lose $.30	vs.	1/2 to win $.15 1/2 to lose $.15
66.	1/9 to win $1.20 8/9 to lose $.15	vs.	1/4 to win $1.80 3/4 to lose $.60

APPENDIX E

Dice Bet--Gambling Situations
Key to Four Strategy Indexes*

	Situation A				Situation B			
Number	MG	ML	LS	CP	MG	ML	LS	CP
1	✓	✓	✓					✓
3				✓	✓		✓	
5				✓	✓			
7				✓	✓		✓	
9	✓					✓		✓
11				✓	✓		✓	
13				✓	✓	✓	✓	
15	✓					✓		
17	✓			✓		✓		
19	✓					✓		✓
21				✓	✓	✓	✓	
23				✓	✓			
25	✓					✓		✓
27	✓					✓		✓
29	✓					✓		✓
31				✓	✓	✓	✓	
33	✓		✓			✓		✓
35				✓	✓	✓		
37				✓	✓	✓		
39	✓					✓		✓
41	✓					✓		
43	✓					✓		✓
45				✓	✓	✓		
47	✓		✓			✓		✓
49	✓					✓		✓
51				✓	✓	✓		
53				✓	✓		✓	
55				✓	✓		✓	
57	✓					✓		✓
59				✓	✓	✓	✓	
61	✓					✓		✓
63				✓	✓		✓	
65	✓					✓		✓

MG = 33 LS = 13
ML = 25 CP = 31

*Only the old number situations used in the study are shown here.

APPENDIX F

Leisure Time Activity Scale

Instructions. Using the Leisure Time Activities listed below please rank them, in order of active participation, according to the following scale: 5 = often, 3 = sometimes, 1 = seldom, and 0 = never.

5--often--Your participation in the activity is daily.
3--sometimes--Your participation in the activity is weekly.
1--seldom--Your participation in the activity is monthly.
0--never--You never participate in the activity.

**** If an activity is seasonal, your answer should be given according to your participation during the season.

1 adult education class
3 archery
1 attend art shows or museums
1 attend plays and concerts
1 attend sports events
1 badminton
3 baseball
3 basketball
3 bicycling

1 billiards or pool
3 boating (power)
1 bowling
5 boxing
1 bridge
5 camping
1 casting (fly or bait)
1 checkers
1 chess
3 conditioning

1 crafts
3 crew/kyacking/rowing
1 crossword puzzles
3 dancing
1 dice games
5 diving
1 dramatics
3 driving for pleasure
3 fencing (foil/sabre/epee)
5 field hockey

3 figure skating
3 fishing (salt or fresh)
5 football
3 golf
5 gymnastics
3 handball or squash
5 hiking
3 horseback riding
5 hunting
3 ice skating

3 jogging
5 lacrosse
1 lotteries or raffles
5 motorcycling
5 mountain climbing
1 painting or drawing
5 parachuting
1 picnicking
1 ping pong
1 playing a musical instrument

1 poker
1 problem solving games
1 reading
3 roller skating
5 sailing
5 scuba diving
1 shuffleboard
3 skeet shooting
5 ski jumping
5 skin diving

5 skiing (snow)
5 skydiving
5 snowmobiling
5 soccer/speedball
3 softball
5 surfing
5 swimming (indoor/outdoor)
1 table games
1 table tennis

1 television
3 tennis
5 touch football
3 track and field
3 volleyball
5 water skiing
3 weight training
3 work around house
5 wrestling

APPENDIX G

STATEMENT OF CONSENT

I hereby give permission, as legal guardian, for

_____ to participate in a Doctoral
name of participant

Dissertation Study (A Study of Personal Factors, Professed Values, Risk Taking Propensities, and Leisure Time Activities Among Delinquent and Non-delinquent Boys in North Carolina) conducted by Howard Braxton, Doctoral Candidate, University of North Carolina at Greensboro.

This permission is also given with the understanding that the name of the participant will not appear in the study.

_____
Parent or Guardian

APPENDIX H

DICE BET SITUATION

Instructions. In this task, you will be shown pairs of dice bets that vary in terms of chances of winning or losing, and the amounts of money that can be won or lost. I would like you to choose, in each pair, the bet that you would prefer to play. Indicate your decision by printing an (A) or (B) in the box provided at the end of each betting situation. Consider each pair separately--do not let your decision in one case influence your decision in another. Later you may have the opportunity to actually play the bet that you now choose. You may play them in a dice game for the amounts of money described in the bets. So be sure that you choose now the bets that you actually will want to play, because you will be held to them.

Example Number 1.

(A) 1 chance in 9 to win $1.20.
and
8 chances in 9 to lose $.15.

vs

(B) 1 chance in 2 to win $.15.
and
1 chance in 2 to lose $.15.

Which do you want to bet? (A) or (B) _____

DICE BET SITUATIONS

Code Number _____

No. 1.

(A) 1 chance in 9 to win $1.20.
and
8 chances in 9 to lose $.15.

vs

(B) 1 chance in 2 to win $.60
and
1 chance in 2 to lose $.60. _____

Which do you want to bet? (A) or (B) _____

No. 2.

(A) 1 chance in 4 to win $.56.
and
3 chances in 4 to lose $.15.

vs

(B) 1 chance in 9 to win $1.20.
and
8 chances in 9 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 3.

(A) 3 chances in 4 to win $.05.
and
1 chance in 4 to lose $.15.

vs

(B) 1 chance in 2 to win $.15
and
1 chance in 2 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 4.

(A) 3 chances in 4 to win $.20.
and
1 chance in 4 to lose $.60.

vs

(B) 1 chance in 9 to win $4.80.
and
8 chances in 9 to lose $.60. _____

Which do you want to bet? (A) or (B) _____

No. 5.

(A) 1 chance in 2 to win $.60
and
1 chance in 2 to lose $.60.

vs

(B) 3 chances in 4 to win $.05.
and
1 chance in 4 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 6.

(A) 1 chance in 2 to win $.30.
and
1 chance in 2 to lose $.30.

vs

(B) 1 chance in 9 to win $2.40.
and
8 chances in 9 to lose $.30. _____

Which do you want to bet? (A) or (B) _____

No. 7.

(A) 1 chance in 4 to win $1.80.
and
3 chances in 4 to lose $.60.

vs

(B) 1 chance in 9 to win $2.40.
and
8 chances in 9 to lose $.30. _____

Which do you want to bet? (A) or (B) _____

No. 8.

(A) 1 chance in 4 to win $1.80.
and
3 chances in 4 to lose $.60.

vs

(B) 3 chances in 4 to win $.05.
and
1 chance in 4 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 9.

(A) 1 chance in 2 to win $.60.
and
1 chance in 2 to lose $.60.

vs

(B) 1 chance in 4 to win $.45.
and
3 chances in 4 to lose $.15. ____

Which do you want to bet? (A) or (B) ____

No. 10.

(A) 1 chance in 4 to win $1.80.
and
3 chances in 4 to lose $.60.

vs

(B) 3 chances in 4 to win $.10.
and
1 chance in 4 to lose $.30. ____

Which do you want to bet? (A) or (B) ____

No. 11.

(A) 1 chance in 2 to win $.60.
and
1 chance in 2 to lose $.60.

vs

(B) 1 chance in 9 to win $2.40.
and
8 chances in 9 to lose $.30. ____

Which do you want to bet? (A) or (B) ____

No. 12.

(A) 3 chances in 4 to win $.05.
and
1 chance in 4 to lose $.15.

vs

(B) 1 chance in 4 to win $.45.
and
3 chances in 4 to lose $.15. ____

Which do you want to bet? (A) or (B) ____

No. 13.

(A) 1 chance in 4 to win $.90.
and
3 chances in 4 to lose $.30.

vs

(B) 1 chance in 2 to win $.15.
and
1 chance in 2 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 14.

(A) 3 chances in 4 to win $.20.
and
1 chance in 4 to lose $.60.

vs

(B) 1 chance in 2 to win $.15
and
1 chance in 2 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 15.

(A) 1 chance in 4 to win $1.80.
and
3 chances in 4 to lose $.60.

vs

(B) 1 chance in 2 to win $.15.
and
1 chance in 2 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 16.

(A) 3 chances in 4 to win $.20.
and
1 chance in 4 to lose $.30.

vs

(B) 1 chance in 9 to win $1.80.
and
8 chances in 9 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 17.

(A) 1 chance in 9 to win $2.40.
and
8 chances in 9 to lose $.30.

vs

(B) 1 chance in 2 to win $.15.
and
1 chance in 2 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 18.

(A) 3 chances in 4 to win $.20.
and
1 chance in 4 to lose $.60.

vs

(B) 1 chance in 4 to win $.45.
and
3 chances in 4 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 19.

(A) 1 chance in 2 to win $.30.
and
1 chance in 2 to lose $.30.

vs

(B) 1 chance in 4 to win $.45.
and
3 chances in 4 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 20.

(A) 1 chance in 4 to win $.90.
and
3 chances in 4 to lose $.30.

vs

(B) 3 chances in 4 to win $.05.
and
1 chance in 4 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 21.

(A) 1 chance in 2 to win $.60.
and
1 chance in 2 to lose $. 60.

vs

(B) 1 chance in 2 to win $.30.
and
1 chance in 2 to lose $.30. _____

Which do you want to bet? (A) or (B) _____

No. 22.

(A) 1 chance in 4 to win $1.80.
and
3 chances in 4 to lose $.60.

vs

(B) 1 chance in 4 to win $.90.
and
3 chances in 4 to lose $.30. _____

Which do you want to bet? (A) or (B) _____

No. 23.

(A) 3 chances in 4 to win $.10.
and
1 chance in 4 to lose $.30.

vs

(B) 1 chance in 4 to win $.45.
and
3 chances in 4 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 24.

(A) 1 chance in 9 to win $4.80.
and
8 chances in 9 to lose $.60.

vs

(B) 1 chance in 4 to win $.90.
and
3 chances in 4 to lose $.30. _____

Which do you want to bet? (A) or (B) _____

No. 25.

(A) 3 chances in 4 to win $.10.
and
1 chance in 4 to lose $.30.

vs

(B) 3 chances in 4 to win $.05.
and
1 chance in 4 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 26.

(A) 1 chance in 2 to win $.60.
and
1 chance in 2 to lose $.60.

vs

(B) 1 chance in 4 to win $.90.
and
3 chances in 4 to lose $.30. _____

Which do you want to bet? (A) or (B) _____

No. 27.

(A) 3 chances in 4 to win $.20.
and
1 chance in 4 to lose $.60.

vs

(B) 1 chance in 4 to win $1.80.
and
3 chances in 4 to lose $.60. _____

Which do you want to bet? (A) or (B) _____

No. 28.

(A) 1 chance in 4 to win $1.80.
and
3 chances in 4 to lose $.60.

vs

(B) 1 chance in 9 to win $4.80.
and
8 chances in 9 to lose $.60. _____

Which do you want to bet? (A) or (B) _____

No. 29.

(A) 1 chance in 4 to win $.90.
and
3 chances in 4 to lose $.30.

vs

(B) 1 chance in 9 to win $4.80.
and
8 chances in 9 to lose $.60. _____

Which do you want to bet? (A) or (B) _____

No. 30.

(A) 1 chance in 4 to win $.90.
and
3 chances in 4 to lose $.30.

vs

(B) 1 chance in 9 to win $1.20.
and
8 chances in 9 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 31

(A) 1 chance in 4 to win $1.80.
and
3 chances in 4 to lose $.60.

vs

(B) 1 chance in 4 to win $.45.
and
3 chances in 4 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 32.

(A) 3 chances in 4 to win $.05.
and
1 chance in 4 to lose $.15.

vs

(B) 1 chance in 9 to win $1.20.
and
8 chances in 9 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

No. 33.

(A) 1 chance in 2 to win $.30.
and
1 chance in 2 to lose $.30.

vs

(B) 1 chance in 2 to win $.15.
and
1 chance in 2 to lose $.15. _____

Which do you want to bet? (A) or (B) _____

APPENDIX I

LEISURE TIME ACTIVITY SCALE

Code Number _____

INSTRUCTIONS

Column I--using the Leisure Time Activities listed below please rate them in order of active participation, according to the following scale: 5 = often, 3 = sometime, 1 = seldom, and 0 = never.

5 = often--Your participation in the activity is daily.
3 = sometimes--Your participation in the activity is weekly .
1 = seldom--Your participation in the activity is monthly.
0 = never--You never participate in the activity.

Column II--using the Leisure Time Activities listed below please place an (0) beside the activity you would prefer to participate in and an (x) beside the activity you would prefer not to participate in.

0 - Preferred activity.
X - Activity not preferred.

****If an activity is seasonal, your answer should be given according to your participation during the season.

****

COLUMN I		COLUMN II
_____	Archery	_____
_____	Attending art shows or museums	_____
_____	Attending plays and concerts	_____
_____	Attending sports events	_____
_____	Badminton	_____
_____	Baseball	_____
_____	Basketball	_____
_____	Bicycling	_____
_____	Billiards or pool	_____
_____	Boating (power)	_____
_____	Bowling	_____
_____	Boxing	_____
_____	Breaking and entering	_____
_____	Bridge (cards)	_____
_____	Camping	_____
_____	Casting (fly or bait)	_____
_____	Checkers	_____
_____	Chess	_____
_____	Conditioning	_____

COLUMN I.		COLUMN II.
_____	Crafts	_____
_____	Crew/kyacking/rowing	_____
_____	Crossword puzzles	_____
_____	Dancing	_____
_____	Dating	_____
_____	Destroying property	_____
_____	Dice games	_____
_____	Diving	_____
_____	Drag racing	_____
_____	Dramatics	_____
_____	Drinking (liquor)	_____
_____	Driving for pleasure	_____
_____	Fencing (foil/sabre/epee)	_____
_____	Field hockey	_____
_____	Fighting (street)	_____
_____	Figure skating	_____
_____	Fishing (salt or fresh)	_____
_____	Football (tag/flag/tackle)	_____
_____	Gambling for money	_____
_____	Golf	_____
_____	Gymnastics	_____
_____	Handball or squash	_____
_____	Hiking	_____
_____	Horseback riding	_____
_____	Hunting	_____
_____	Ice skating for pleasure	_____
_____	Jogging	_____
_____	Keeping late hours	_____
_____	Lacrosse	_____
_____	Lotteries or raffles	_____
_____	Motorcycling	_____
_____	Mountain climbing	_____
_____	Painting or drawing	_____
_____	Parachuting	_____
_____	Picnicking	_____
_____	Ping pong	_____
_____	Playing a musical instrument	_____
_____	Pleasure shooting (target)	_____
_____	Poker	_____
_____	Problem solving games	_____
_____	Reading	_____
_____	Roller skating	_____
_____	Running away from home	_____

COLUMN I.		COLUMN II.
_____	Sailing	_____
_____	Scuba diving	_____
_____	Sex participation	_____
_____	Shuffleboard	_____
_____	Skeet shooting	_____
_____	Ski jumping	_____
_____	Skin diving	_____
_____	Skiing (snow)	_____
_____	Skydiving	_____
_____	Sneaking into theaters	_____
_____	Snowmobiling	_____
_____	Soccer/speedball	_____
_____	Softball	_____
_____	Surfing	_____
_____	Swimming (indoor/outdoor)	_____
_____	Table games	_____
_____	Table tennis	_____
_____	Television	_____
_____	Tennis	_____
_____	Track and field	_____
_____	Truck hopping (stealing rides)	_____
_____	Tumbling	_____
_____	Using drugs	_____
_____	Volleyball	_____
_____	Water skiing	_____
_____	Weight training	_____
_____	Working around the house	_____
_____	Wrestling	_____

APPENDIX J

LEISURE TIME ACTIVITIES JUDGES AND LITERATURE

ACTIVITY RATINGS

Activity	1st Rating Judges 1	2	3	4	2nd Rating Judges 1	2	3	4	Literature* A	B	C	D	E	F	G	H	I	J	K	L	M
Archery	3	3	1	5	3	3	1	5													
Attending art shows or museums	1	1	1	1	1	1	1	1													
Attending plays and concerts	1	1	1	1	1	1	1	1													
Attending sports events	1	1	1	3	1	1	1	3													
Badminton	1	1	3	1	3	1	3	1													
Baseball	3	3	3	3	3	3	3	3							3						3
Basketball	3	3	3	3	3	3	3	3							3						3
Bicycling	3	3	3	3	3	3	3	3				3									
Billiards or pool	1	1	1	1	1	1	1	1													
Boating (power)	3	3	5	5	3	3	5	5				3									
Bowling	1	1	1	3	1	1	1	3													
Boxing	3	5	5	5	5	5	5	5													
Breaking and entering	5	5	5	5	5	5	5	5							5						
Bridge (cards)	1	1	1	1	1	1	1	1													
Camping	1	1	1	3	3	1	3	3													

APPENDIX J (continued)

Activities	1st Rating Judges				2nd Rating Judges				Literature*														
	1	2	3	4	1	2	3	4	A	B	C	D	E	F	G	H	I	J	K	L	M
Casting (fly or bait)	1	1	1	3	3	1	1	3													
Checkers	1	1	1	1	1	1	1	1													
Conditioning	1	1	1	3	3	1	1	3													
Crafts	1	1	1	3	1	1	1	1													
Crew/kyacking/rowing	3	1	3	5	3	3	3	5													
Crossword puzzles	1	1	1	1	1	1	1	1													
Dancing	1	1	1	1	1	1	1	3													
Dating	1	1	1	1	1	1	1	1													
Destroying property	5	5	5	5	5	5	5	5						5							
Dice games	3	3	5	1	3	3	5	1													
Diving	3	1	3	5	3	3	3	5	3											3	
Drag racing	5	5	5	5	5	5	5	5			5	5									
Dramatics	1	1	1	1	1	1	1	1													
Drinking (liquor)	5	3	3	3	3	3	3	5							5						
Driving for pleasure	3	3	3	3	3	3	3	3	3												
Fencing (foil/sabre/epee)	3	3	3	3	3	3	3	5													
Field hockey	3	3	3	3	3	3	3	5													
Fighting (street)	5	5	5	5	5	5	5	3													
Figure skating	3	1	3	3	3	1	3	3													

APPENDIX J (continued)

Activities	1st Rating Judges				2nd Rating Judges				Literature*													
	1	2	3	4	1	2	3	4	A	B	C	D	E	F	G	H	I	J	K	L	M
Fishing (salt or fresh)	1	1	1	3	3	1	1	3													
Football (tag/flag/tackle)	5	5	5	5	5	3	3	5				3			3		5				3
Gambling for money	5	5	5	3	3	5	5	3							5						
Golf	3	1	1	1	3	1	1	1													
Gymnastics	3	5	5	5	3	5	5	5													
Handball or squash	3	1	3	3	3	1	3	3													
Hiking	3	1	1	3	3	1	3	3													
Horseback riding	3	3	3	5	3	1	3	3												3	
Hunting	3	1	3	3	3	1	3	3													
Ice skating for pleasure	3	1	1	5	3	1	1	3													
Jogging	1	1	1	3	3	1	3	3													
Keeping late hours	3	1	3	1	3	1	3	3							5						
Lacrosse	3	5	1	5	3	3	5	5													
Lotteries or raffles	1	3	5	1	3	5	5	1													
Motorcycling	3	5	5	5	5	5	5	5			5	3									
Mountain Climbing	3	5	5	5	3	1	1	5	5		5							5			
Painting or drawing	1	1	1	1	1	1	1	1													
Parachuting	5	5	5	5	5	5	5	5			5			5							

APPENDIX J (continued)

Activity	1st Rating Judges				2nd Rating Judges				Literature*														
	1	2	3	4	1	2	3	4	A	B	C	D	E	F	G	H	I	J	K	L	M
Picnicking	1	1	1	1	1	1	1	1													
Ping pong	1	1	1	1	1	1	1	1													
Playing a musical instrument	1	1	1	1	1	1	1	1							1						
Pleasure shooting	1	1	1	3	3	3	1	3													
Poker	3	3	5	1	3	5	5	3													
Problem solving games	1	1	1	1	1	1	1	1													
Reading	1	1	1	1	1	1	1	1							1						
Roller Skating	3	1	1	3	3	3	3	3							3						
Running away from home	3	3	5	3	5	3	5	3							5						
Sailing	3	3	3	3	3	3	3	3								5					
Scuba diving	3	5	3	5	3	3	5	5		5	3								5		
Sex participation	3	3	1	3	1	3	5	1							5						
Shuffleboard	1	1	1	1	1	1	1	1													
Skeet shooting	1	1	1	3	3	1	1	3													
Ski jumping	5	5	5	5	5	5	5	5	3											3	
Skin diving	3	3	5	5	3	3	5	5			5	3									
Skiing (snow)	3	5	3	5	3	5	3	5					5								
Skydiving	5	5	5	5	5	5	5	5	3	5										3	
Sneaking into theaters	3	3	3	5	3	5	3	5							5						

APPENDIX J (continued)

Activity	1st Rating Judges				2nd Rating Judges				Literature*														
	1	2	3	4	1	2	3	4	A	B	C	D	E	F	G	H	I	J	K	L	M
Snowmobiling	3	3	3	5	3	5	3	5			5										
Soccer/speedball	3	3	3	5	3	3	3	5													
Softball	3	1	3	3	3	3	1	3													
Surfing	3	5	5	3	3	5	5	5													
Swimming, indoor/outdoor	3	3	1	3	3	5	1	3			5	3									
Table games	1	1	1	1	1	1	1	1													
Table tennis	1	1	1	1	1	1	1	1													
Television	1	1	1	1	1	1	1	1							1						
Tennis	3	3	3	3	3	3	1	3							3						
Track and field	3	3	3	3	3	3	3	3							3						
Truck hopping(stealing rides)	5	3	5	5	5	5	5	5							5						
Tumbling	3	3	3	3	3	3	3	5							3						
Using drugs	5	5	5	5	5	5	5	5							5						
Volleyball	3	1	3	3	3	1	3	3													
Water skiing	3	3	3	5	3	3	3	5	3											3	
Weight training	3	3	1	3	3	1	1	3													
Working around the house	1	1	1	3	3	1	1	3													
Wrestling	3	3	5	3	3	3	5	3							3						

*Literature

A = Carls

B = Huberman

C = Metropolitan Life Insurance Company

D = Accident Facts

E = Knight, James

F = Klausner

G = Brademas

H = Monroe

I = Stone

J = Houston

K = Parker

L = Wyrick

M = Jones

APPENDIX K

PERSONAL FACTORS SHEET

NAME _____ DATE _____

CODE NUMBER _____ GROUP _____

FACTORS

AGE ---------- _____

*HEIGHT ---------- _____

below average ---------- _____
average ---------- _____
above average ---------- _____

**WEIGHT ---------- _____

below average ---------- _____
average ---------- _____
above average ---------- _____

RACE
Caucasian ---------- _____
Negroid ---------- _____
Others ---------- _____

RELIGIOUS AFFILIATION
Catholic ---------- _____
Jewish ---------- _____
Baptist ---------- _____
Episcopalian ---------- _____
Lutheran ---------- _____
Methodist ---------- _____
Presbyterian ---------- _____
Others ---------- _____
Non-affiliated ---------- _____

***INTELLIGENCE ---------- _____

below average ---------- _____
average ---------- _____
above average ---------- _____

AGE OF FRIENDS ---------- _____

younger ---------- _____
same ---------- _____
older ---------- _____

RESIDENT	city	_____
	rural	_____
MARITAL STATUS OF PARENTS	married	_____
	separated	_____
	divorced	_____
	other	_____
RESIDES WITH	family	_____
	mother	_____
	father	_____
	others	_____
AGE OF PARENTS	father	_____
	mother	_____
FATHER EMPLOYED	yes	_____
	no	_____
MOTHER EMPLOYED	yes	_____
	no	_____
****INCOME OF FAMILY	low (0-7,792)	_____
	average (7,793-14,379)	_____
	high (14,380-over)	_____
NUMBER OF BROTHERS	younger	_____
	older	_____
NUMBER OF SISTERS	younger	_____
	older	_____
NUMBER OF SIBLINGS IN FAMILY		_____
ATHLETIC COMPETITION	school	_____
	community	_____
	recreation	_____

*Anderson, C. L. (1972). Table 3-2, p. 37.
**Anderson, C. L. (1972). Table 3-3, p. 38.
***Figures were not used because of the inconsistent use of the same I Q test. (Only above average, average, and below average were used according to each test given.)
****"North Carolina, Guilford County: Percentage Household by Cash Income Groups," p. D-80.

APPENDIX L

RAW DATA--DELINQUENTS

Subjects	Variables											
	1	2	3	4	5	6	7	8	9	10	11	12
1	16	72	3	175	3	1	2	6	16	2	1	1
2	16	71	3	170	3	2	3	3	18	3	1	2
3	16	71	2	150	2	1	3	5	16	2	1	1
4	16	70	2	140	2	1	3	9	16	2	1	3
5	16	70	2	160	2	1	2	3	15	1	2	3
6	16	70	2	147	2	1	2	7	16	2	1	1
7	16	73	3	148	2	1	3	3	18	3	1	1
8	16	62	1	120	1	2	2	9	16	2	1	3
9	16	71	2	130	2	1	2	9	18	3	1	3
10	17	67	1	141	2	1	1	8	17	2	1	2
11	16	69	2	150	2	2	2	3	18	3	1	4
12	16	62	1	115	1	2	2	9	16	2	1	3
13	16	70	2	125	2	1	2	1	16	2	1	1
14	15	72	3	175	3	2	1	3	18	3	2	1
15	16	69	2	164	3	2	1	9	14	1	1	3
16	16	69	2	138	2	1	2	3	19	3	1	1
17	16	66	1	128	2	1	1	3	16	2	1	1
18	15	72	3	160	3	2	2	3	16	3	1	2
19	16	64	1	125	2	2	3	9	16	2	1	1
20	17	72	3	153	2	2	2	9	16	1	1	1
21	16	72	3	128	2	1	2	9	18	3	1	2
22	16	69	2	150	2	1	3	9	16	2	1	1
23	16	70	2	145	2	1	3	3	18	3	1	1
24	16	62	1	100	1	1	3	3	18	3	1	1
25	16	68	2	125	2	1	1	9	16	2	1	4

APPENDIX L (continued)

Subjects	Variables										
	13	14	15	16	17	18	19	20	21	22	23
1	1	48	41	1	1	3	3	1	1	0	0
2	2	38	36	2	1	1	4	2	0	1	0
3	1	50	49	1	1	3	3	0	0	0	2
4	2	40	40	1	1	2	2	1	0	0	0
5	2	40	42	1	1	2	3	1	0	1	0
6	1	42	38	1	2	2	2	0	1	0	0
7	1	40	33	1	1	3	3	2	0	0	0
8	2	40	36	2	1	1	1	0	0	0	0
9	2	45	43	2	1	2	3	0	0	0	2
10	2	50	50	2	1	1	3	0	2	0	0
11	4	28	28	1	1	2	6	0	3	0	2
12	2	55	55	2	2	1	8	1	2	1	3
13	1	41	40	1	1	2	4	2	1	0	0
14	3	38	35	2	1	1	4	1	0	1	1
15	4	34	33	1	1	2	4	2	0	1	0
16	1	40	37	1	1	2	4	1	1	1	0
17	1	58	54	1	2	2	3	0	1	0	1
18	2	35	32	2	1	1	5	0	1	3	0
19	1	32	31	1	1	2	7	5	0	1	0
20	1	40	38	1	1	2	6	4	0	0	1
21	2	47	43	2	1	2	5	0	2	0	2
22	1	48	47	1	2	2	4	0	1	2	0
23	1	49	38	1	2	1	4	0	3	0	0
24	1	53	49	1	2	1	11	2	5	2	1
25	4	38	36	1	1	2	1	0	0	0	0

APPENDIX L (continued)

Subjects	Variables											
	24	25	26	27	28	29	30	31	32	33	34	35
1	1	1	2	10	41	43	33	39	43	37	2	2
2	2	2	2	5	45	40	26	52	49	38	2	2
3	1	2	2	8	56	46	32	37	43	25	3	2
4	2	2	2	4	34	42	27	43	44	38	1	2
5	2	2	2	5	37	38	46	38	46	35	1	2
6	1	2	2	6	49	39	42	40	36	33	3	2
7	2	1	2	5	41	41	36	41	49	32	2	2
8	2	2	2	7	47	36	39	41	40	37	2	1
9	2	2	2	9	32	34	52	51	38	32	1	1
10	2	2	2	5	46	47	35	43	39	40	2	2
11	2	2	2	10	34	48	34	40	57	27	1	2
12	2	1	2	5	44	39	36	47	44	30	2	2
13	1	1	2	5	40	45	29	42	39	37	2	2
14	2	2	2	1	47	42	36	39	48	28	2	2
15	2	2	2	4	42	38	41	38	46	35	2	2
16	2	2	2	10	36	37	30	51	43	43	1	1
17	2	2	2	7	44	38	46	36	41	35	2	2
18	1	2	1	7	46	39	30	44	46	35	2	2
19	2	2	1	5	48	34	38	37	33	50	2	1
20	1	1	2	4	41	44	32	39	41	45	2	2
21	2	2	2	3	51	45	38	27	34	45	3	2
22	1	2	1	5	45	30	35	52	34	44	2	1
23	2	1	1	10	55	29	24	35	44	46	3	1
24	1	1	1	10	42	37	46	38	43	34	2	1
25	2	2	2	8	41	46	43	31	43	36	2	2

APPENDIX L (continued)

Subjects	Variables											
	36	37	38	39	40	41	42	43	44	45	46	47
1	2	2	2	2	24	8	7	10	2	2	2	2
2	1	3	3	2	5	10	0	28	1	2	1	3
3	2	2	2	1	15	14	5	18	2	2	2	2
4	1	3	2	2	24	13	10	9	2	2	2	2
5	3	2	2	2	27	15	13	7	3	3	3	1
6	3	2	1	2	19	8	3	16	2	2	1	2
7	2	2	3	2	13	9	3	20	2	2	1	2
8	2	2	2	2	11	18	5	21	1	3	2	3
9	3	3	1	2	24	14	10	7	2	2	2	1
10	2	3	2	2	15	16	8	17	2	3	2	2
11	2	2	3	1	28	13	13	7	3	2	3	1
12	2	3	2	1	22	13	11	11	2	2	3	2
13	1	3	2	2	24	17	10	13	2	3	2	2
14	2	2	2	1	11	15	7	19	1	3	2	2
15	3	2	2	2	12	15	7	18	1	3	2	2
16	2	3	2	2	8	11	1	25	1	2	1	3
17	3	2	2	2	20	11	8	13	2	2	2	2
18	2	3	2	2	6	12	1	26	1	2	1	3
19	2	2	1	3	24	13	9	8	2	2	2	2
20	2	2	2	2	12	9	0	21	1	2	1	3
21	2	1	1	3	6	12	1	26	1	2	1	3
22	2	3	1	2	22	19	12	9	2	3	3	2
23	1	2	2	3	29	13	13	3	3	2	3	1
24	3	2	2	2	25	11	11	8	2	2	2	2
25	3	1	2	2	21	10	9	10	2	2	2	2

APPENDIX M

RAW DATA--NON-DELINQUENTS

Subjects	Variables							
	1	2	3	4	5	6	7	8
26	17	73	3	180	3	1	2	3
27	16	65	1	122	2	1	2	6
28	16	74	3	160	2	1	1	5
29	17	72	3	200	3	1	1	6
30	16	66	1	145	2	1	2	7
31	16	68	2	165	3	1	2	6
32	16	72	3	150	2	1	3	3
33	16	69	2	121	1	2	2	6
34	17	66	1	146	2	2	1	8
35	16	68	2	150	2	1	2	5
36	16	66	1	110	1	1	2	3
37	16	68	2	160	2	1	1	3
38	17	68	2	150	2	1	3	9
39	17	71	2	147	2	1	3	6
40	16	71	2	130	2	1	2	6
41	16	66	1	108	1	1	1	9
42	16	61	1	89	1	1	2	6
43	16	71	2	160	2	1	2	3
44	16	74	3	190	3	1	2	6
45	17	71	2	145	2	2	1	5
46	16	60	1	92	1	1	2	3
47	16	70	2	160	2	2	2	3
48	16	67	2	147	2	2	2	6
49	16	71	2	150	2	2	3	7
50	16	71	2	150	2	2	1	3

APPENDIX M (continued)

Subjects	Variables							
	9	10	11	12	13	14	15	16
26	16	1	1	1	1	39	41	1
27	16	2	2	1	1	52	51	1
28	16	2	1	1	1	52	49	1
29	17	2	2	2	2	50	47	1
30	16	2	1	1	1	45	44	1
31	18	3	1	3	3	45	42	1
32	17	3	2	1	1	44	42	1
33	16	2	2	1	1	39	38	1
34	16	1	2	1	1	43	39	1
35	16	2	1	1	1	39	35	1
36	16	2	1	1	1	48	48	1
37	15	1	1	1	1	49	44	1
38	16	1	1	1	1	43	42	1
39	16	1	1	1	1	36	40	1
40	16	2	1	1	1	52	45	1
41	15	1	1	1	1	48	37	1
42	15	1	1	1	1	45	40	1
43	16	2	1	1	1	40	35	1
44	16	2	1	1	1	41	40	1
45	15	1	1	1	1	40	36	1
46	14	1	1	4	4	35	30	1
47	16	2	1	1	1	40	38	1
48	16	2	1	1	1	36	39	1
49	16	2	1	1	1	42	40	1
50	16	2	1	1	1	37	34	1

APPENDIX M (continued)

Subjects	Variables						
	17	18	19	20	21	22	23
26	2	2	2	0	0	1	0
27	1	3	4	0	1	0	2
28	1	2	1	0	0	0	0
29	1	3	5	0	2	0	2
30	2	2	2	1	0	0	0
31	1	2	1	0	0	0	0
32	2	2	1	0	0	0	0
33	1	2	2	1	0	0	0
34	1	2	6	1	0	3	1
35	1	2	3	0	0	1	1
36	1	2	4	0	2	0	1
37	1	2	4	1	0	0	2
38	1	3	2	0	0	0	1
39	1	3	2	0	0	1	0
40	2	2	3	0	0	1	1
41	2	1	5	0	3	1	0
42	2	2	4	0	1	1	1
43	1	3	2	1	0	0	0
44	1	2	1	0	0	0	0
45	2	1	8	3	0	2	2
46	2	2	5	0	2	0	2
47	1	2	3	1	0	1	0
48	1	2	5	2	1	1	0
49	1	3	1	0	0	0	0
50	1	2	6	4	1	0	0

APPENDIX M (continued)

Subjects	Variables							
	24	25	26	27	28	29	30	31
26	1	1	2	9	41	45	32	42
27	1	1	1	7	49	39	43	36
28	2	1	1	2	45	32	32	41
29	2	1	2	4	48	49	28	35
30	2	1	2	5	34	43	42	48
31	2	2	1	7	41	41	25	47
32	2	2	2	4	41	41	27	40
33	2	1	1	5	41	43	31	45
34	2	1	2	7	36	36	40	40
35	2	2	1	7	39	40	36	35
36	2	1	1	3	38	40	44	33
37	2	2	2	7	48	43	33	28
38	1	1	2	7	34	36	37	44
39	1	2	1	6	37	46	31	38
40	2	2	2	5	42	43	40	32
41	2	1	2	6	35	52	27	36
42	2	2	1	6	39	45	33	29
43	1	2	1	5	50	48	32	35
44	2	2	2	6	54	47	33	31
45	1	1	2	7	36	40	42	34
46	2	2	1	6	48	45	49	34
47	1	2	1	8	33	45	26	41
48	2	1	1	6	47	40	40	44
49	1	2	1	7	41	53	27	43
50	1	2	2	8	38	42	35	43

APPENDIX M (continued)

Subjects	Variables							
	32	33	34	35	36	37	38	39
26	41	39	2	2	2	2	3	2
27	40	33	3	2	3	2	2	2
28	45	45	2	1	2	2	2	3
29	37	43	2	3	1	2	1	2
30	37	36	1	2	3	3	1	2
31	41	49	2	2	1	3	2	3
32	40	51	2	2	1	2	2	3
33	42	38	2	2	2	3	2	2
34	51	29	1	1	2	2	3	1
35	50	40	2	2	2	2	3	2
36	50	35	1	2	3	2	3	2
37	52	36	2	2	2	1	3	2
38	43	46	1	1	2	3	2	3
39	44	40	1	2	2	2	2	2
40	43	36	2	2	2	1	2	2
41	41	37	1	3	1	2	2	2
42	48	47	2	2	2	1	3	3
43	45	30	3	2	2	2	2	1
44	40	35	3	2	2	1	2	2
45	52	36	1	2	3	2	3	2
46	36	28	2	2	3	2	1	1
47	45	50	1	2	1	2	2	3
48	39	30	2	2	2	3	2	1
49	47	29	2	3	1	3	2	1
50	39	43	1	2	2	3	2	2

APPENDIX M (continued)

Subjects	Variables							
	40	41	42	43	44	45	46	47
26	28	11	11	4	3	2	3	1
27	22	15	8	7	2	3	2	1
28	5	14	0	27	1	2	1	3
29	8	14	2	24	1	2	1	3
30	5	14	1	25	1	2	1	3
31	24	18	13	9	2	3	3	2
32	21	17	11	12	2	3	3	2
33	20	14	8	13	2	2	2	2
34	8	10	1	24	1	2	1	3
35	26	9	7	8	2	2	2	2
36	9	12	2	21	1	2	1	3
37	30	12	13	2	3	2	3	1
38	27	11	13	7	3	2	3	1
39	30	12	13	2	3	2	3	1
40	25	13	11	6	2	2	3	1
41	15	17	8	17	2	3	2	2
42	14	6	2	20	2	2	1	2
43	6	12	0	25	1	2	1	3
44	15	13	6	17	2	2	2	2
45	21	16	10	11	2	3	2	2
46	17	14	8	16	2	2	2	2
47	16	18	7	15	2	3	2	2
48	11	17	4	19	1	3	2	2
49	13	10	5	21	2	2	2	2
50	29	13	13	2	3	2	3	1

APPENDIX N

VARIABLE LIST

Variables	Descriptions
001	Age
002	Height
003	Height (coded)
004	Weight
005	Weight (coded)
006	Race
007	Intelligence Score
008	Religious Affiliation
009	Age of Friends
010	Age of Friends (coded)
011	Residence
012	Marital Status of Parents or Guardians
013	Resides with at the Time of Study
014	Age of Father or Male Guardian
015	Age of Mother or Female Guardian
016	Employment--Father or Guardian (Yes or No)
017	Employment--Mother or Guardian (Yes or No)
018	Income of Family
019	Number of Siblings in the Family (Including Subject)
020	Number of Younger Brothers
021	Number of Older Brothers
022	Number of Younger Sisters
023	Number of Older Sisters
024	School--Athletic Participation (Structured)
025	Recreation--Athletic Participation (Structured)
026	Community--Athletic Participation (Structured)
027	Self Rating Risk Taking Score
028	Theoretical Items Raw Score (AVL-SV
029	Economic Items Raw Score (AVL-SV)
030	Aesthetic Items Raw Score (AVL-SV)
031	Social Items Raw Score (AVL-SV)
032	Political Items Raw Score (AVL-SV)
033	Religious Items Raw Score (AVL-SV)
034	Theoretical (coded)*
035	Economic (coded)*
036	Aesthetic (coded)*
037	Social (coded)*
038	Political (coded)*
039	Religious (coded)*

APPENDIX N (continued)

Variables	Description
040	Maximization of Gain (MG) Raw Score
041	Minimization of Loss (ML) Raw Score
042	Long Shot (LS) Raw Score
043	Conservative Play (CP) Raw Score
044	Maximization of Gain (Coded)*
045	Minimization of Loss (Coded)*
046	Long Shot (Coded)*
047	Conservative Play (Coded)*
048-227	Leisure Time Activities (A list of these activities may be found in Appendix I in the correct order of variable listing 48 to 227.

*1 = Below average, 2 = average, 3 = above average.

APPENDIX O

Identifiable Factors--Delinquents
Quartimax Rotated Factor Matrix

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
VAR027	0.39083	-0.04230	0.17942	-0.73505	0.09640
VAR028	-0.22291	-0.36192	-0.64229	0.13879	0.31269
VAR029	-0.24643	0.74066	-0.34974	0.02834	0.01516
VAR030	0.20425	-0.00402	-0.01304	-0.00642	-0.94486
VAR031	-0.10414	-0.10333	0.92146	0.09278	0.15579
VAR032	0.06917	0.77666	0.21740	-0.18535	0.34622
VAR033	-0.01488	-0.83411	-0.09048	-0.01584	0.20145
VAR040	0.95980	-0.01951	-0.02401	-0.12024	-0.06961
VAR041	0.29981	-0.17100	0.18478	0.82404	0.09527
VAR042	0.96495	0.01626	0.04509	0.21168	-0.03103
VAR043	-0.97177	0.07644	0.02350	0.07039	0.10920

APPENDIX P

Identifiable Factors--Non-Delinquents
Quartimax Rotated Factor Matrix

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
VAR027	0.67019	-0.12423	0.38567	-0.24906	0.36526
VAR028	-0.12051	0.23799	-0.82204	-0.21642	0.12756
VAR029	-0.01986	0.04258	-0.15195	0.03039	0.94119
VAR030	-0.02781	-0.07832	-0.09127	-0.80224	-0.49597
VAR031	-0.04806	0.53177	0.75594	0.05973	-0.05989
VAR032	0.01140	-0.87150	0.06577	0.06966	-0.17378
VAR033	0.20452	0.09138	0.16494	0.87525	-0.21454
VAR040	0.98170	-0.06530	-0.02428	0.10144	-0.04052
VAR041	0.03948	0.78163	0.02640	0.17988	-0.10892
VAR042	0.94839	0.16152	0.01847	0.15049	-0.02212
VAR043	-0.98288	0.00999	0.04078	-0.04442	0.07416