

THE ROLE OF PSYCHOLOGICAL FACTORS IN CRIMINAL
BEHAVIOR: A STUDY OF THE CONVICTED
CRIMINAL, THE HIDDEN CRIMINAL,
AND THE NON-CRIMINAL

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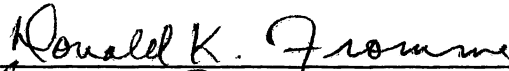
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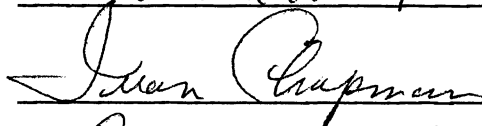
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PREFACE

Upon completion of a task of the magnitude of this research study, one cannot help but appreciate the fact that without significant help from those around him, this paper would undoubtedly not have been written. I would like to pay a special thank you to a select few of these individuals who have played significant roles in aiding me with the completion of this research.

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CHAPTER I

INTRODUCTION

History has given us a number of theories concerning criminal behavior. Some of these have emphasized the social determinants of criminal behavior, while others have emphasized the psychological make-up of the individual as being the primary determinant of criminal behavior. It is questioned whether either of these views is sufficient in itself to explain the complex problems one faces when viewing such behavior. An early effort, in attempting to explain crime, was that of Cesare Beccaria. He, along with Jeremy Bentham of England, developed the concepts that became known as the Classical School (Vold, 1958). It was felt by them, that all men acted rationally and deliberately in order to avoid pain and to encounter pleasure. It, therefore, followed that individuals engaging in criminal behavior were doing it on a rational basis and that the treatment of these individuals would be most efficient if it followed the hedonistic principle. Out of this grew a criminal code which carefully delineated different degrees of punishment. It was felt that punishment should be in line with the nature of the offense. Of specific concern was the amount of pain inflicted upon the offender, for it was felt that this would be a deterrent force, taking into account the rationality of the offender and his basic pleasure and pain orientation. A second major assumption was that the primary responsibility for criminal behavior lay within the individual

himself. Shortly after the contributions of Beccaria and Bentham, the cartographic or geographic school began making major contributions (Lindesmith and Levin, 1937). This school was interested primarily in the ecological factors involved in crime and the distribution of criminal forms among spatial areas. In England and France there began to be studies with regard to these variables. This method of analyzing criminal behavior was a forerunner of approaches that exist today. Of concern has been the age, sex, and race of the offender as well as his family and its make-up in numbers, kind, and location. In addition, education and the neighborhood from which the offender came were considered. Shortly after the emergence of the cartographic school of criminal behavior came the economic view of criminal behavior, most easily seen in the works of William A. Bonger (Veder, Koenig, and Clark, 1953). It was his feeling that the economic system embraced in capitalistic countries encourages what he termed egoism, and that this egoism led people to commit crimes.

One of the most popular of modern day concepts has been that of Differential Association as proposed by Sutherland (Sutherland and Cressey, 1960). Sutherland felt that criminal behavior was learned behavior, and that it was learned through communication between individuals. The major part of this communication was seen as taking place in small interpersonal groups. Learning of criminal behavior included such things as how to commit a crime as well as certain attitudes, rationalizations, and motives. When a person learned that the violation of a law or penal code reflected favorably upon him then he developed in the direction of delinquent or criminal behavior. The mechanisms involved in the learning of criminal behavior, through an

association with established criminals, were viewed as mechanisms found in any other kind of learning situation. Further, they were compared with the development of culture, in that certain modes or habits were handed down from one generation to another. Sutherland viewed the development of delinquent and criminal behavior as being dependent upon the associations an individual has and the definitions he makes of his behavior, whether they be anti-social or not. He viewed the development of crime as a cultural conflict and that each individual associates with both anti-criminal elements and criminal elements. It is the group that he associates with most that determines his behavior. A person associating with criminal groups and yet perceiving himself and behaving as a pro-social person would be viewed as a person whose greatest number of contacts are in the pro-social area.

Glasser (1956) opened the way for the concept of a reference group through his theory of differential identification. He stated, in effect, that a person engages in criminal behavior when he identifies with either a real or imaginary person whose criminal behavior seems acceptable. Sherif and Sherif (1956) considered that in the group there are values and norms which provide what they call "major anchorages" used by the individual to define himself. They made a distinction between the groups people belong to and the groups toward which people aspire. A similar distinction was made between positive reference groups and negative reference groups, the former a group which the person aspires to join and in which he is accepted and treated as a member, the latter, a group where he rejects the whole concept of the group and denies any wish to be a member. Groups were seen as being positive and negative

reinforcers, insulators against negative reference groups, and as a major source of motivation.

From a more social point of view, Merton (1957) advocated a means-end theory. He stated that society sets goals that all members should strive toward, and yet, for some members society fails to produce a social structure for achieving those goals, namely the means. Merton felt that criminal behavior was simply a situation in which culturally prescribed aspirations were realized by individuals who produced their own means. Nye (1958) criticized this position due to the great amount of criminal behavior found among middle and upper class groups. Colin (1955) pointed out that if the goals toward which the individuals were striving were so important that individuals would create new avenues or new means to attain them, they they should value those goals. This did not seem to be the case since goods obtained through illicit means were often badly abused or destroyed. Cloward and Olen (1960) stated that they felt there was a differential opportunity for individuals to pursue criminal behaviors, that there was a great deal of variation in the availability of illegitimate means.

All these theories related, to a degree, to the psychological functioning of the individual. Sutherland saw criminal behavior as learned behavior and tried to get away from viewing criminal behavior as biologically or even psychologically abnormal. Merton concerned himself with the pressures pushing in on the individual due to an inability to have the legitimate means to acquire prescribed cultural goals. He saw the cause of criminal behavior as being related to the perceived needs of the individual. Crime, therefore, has variously been viewed as being a legal concept, a social concept, and a behavior.

From this author's point of view, a much more acceptable position is that criminal behavior is the result of a number of factors, including those of a social and those of an individual nature. It is hypothesized that crime is behavior, that appears in all levels of society and is potentially in all individuals; that it is inherent in the makeup and structure of society, as well as in the makeup and structure of an individual. More specifically, crime as observed lies on a continuum from those individuals considered to be non-criminals, to those adjudicated by a regulatory body in society to be classified as criminal. Between these two poles, and helping to define this continuum, is a body of hidden criminals defined as those individuals who, even after engaging in felonious behavior, have not been brought to the attention of a regulatory body in the society in which they live. This category of people are those who have actively participated in acts in violation of statutes and laws, acts which could have led to their being processed by a criminal court and imprisoned.

Since crime is viewed as existing in all dimensions of society, the difference between criminal and non-criminal individuals then, is due more to circumstance than to fact. That circumstance is the arrest of the individual. Adopting the position that the explanation of criminal behavior lies between social theory and personality theory, the major area of interest of this paper has become the psychological functioning of the individual, especially with regard to comparing these three groups. It is hypothesized that psychological factors exist within the criminal population which lead the individual to create circumstances wherein he is more readily convicted of criminal behavior.

Of particular interest in this research are those psychological

factors having to do with motor inhibition, personal space, and field dependency. It is believed that such areas of concern will lead us to a greater understanding of criminal behavior than will a concern for the diverse classificatory schemes promulgated to this point. It will lead us to a greater understanding of why criminal behavior exists, rather than to a greater understanding of the diagnostic schemes.

Through the use of self report techniques, individuals were classified into three groups. The primary consideration in this classification was whether or not an individual had engaged in any type of felonious behavior as described in the common law and defined in Black's Law Dictionary. It was felt that simple and gross misdemeanors represent an area of investigation entirely separate and distinct from the concerns of this research; and, therefore, they were eliminated as criterion in the determination of these groups. The result was three groups to be referred to as Non-criminal, Hidden Criminal, and Convicted Criminal. Through the use of Analysis of Variance techniques, comparisons were drawn between these three groups and the previously mentioned psychological factors of motor inhibition, personal space, and field dependency. In addition, these results were compared to an approach typical of previous research concerning the psychology of the criminal. The MMPI was administered to all subjects and further Analysis of Variance techniques employed to detect if there was a distinct difference between these groups with regard to existing "personality structures". The results led to conclusions drawn with regard to these "personality structures" and the psychological makeup of an individual who involves himself in felonious behavior.

CHAPTER II

REVIEW OF LITERATURE

Historical Perspective

In reviewing the literature, of primary importance was not only the previous attempts to validate theoretical concerns but also the methodology employed. This was true not only of research dealing directly with criminal behavior but also research investigating the psychological factors of motor inhibition, personal space, and field dependency used in the study to help explain such behavior. Additionally, and in line with the belief that most criminal behavior is not reported, this review is concerned with what is termed hidden criminal behavior and the differing attempts utilized in its measurement.

Initially, investigations of criminal behavior were concerned with the incidence of such behavior and often were based upon such things as court records, police records, and probation and parole office records. The inadequacies of such approaches were glaring, leading Sophia Robinson (1936) to raise the logical question, "Can delinquency be measured?" She concerned herself with the deficiencies of such approaches. They included the gross discrepancies between the incidence of arrest and the incidence of conviction, as well as the biases that exist in arrest as well as conviction procedures. She noted the biased orientation of different police departments toward similar behaviors resulting in a difference in the labeling of the actual crime. She

pointed out that biasing comparisons of criminal behavior on such things as age, race, sex, and socioeconomic status frequently was an individual interpretation.

Murphy, Shirley, and Witmer (1946) approached this problem and began a series of investigations based upon hidden criminal behavior. The Cambridge Sommerville Youth Study led to the discovery that authorities actually took official action in less than 1.5% of infractions. Almost 1400 infractions never became court matters. Of the 4400 minor offenses that were listed, only .6% were prosecuted, and of the 616 serious offenses that were listed, 11% were prosecuted. Murphy, Shirley, and Witmer's (1946) comments of these findings led Short (1954) to investigate the incidence of various kinds of criminal behavior and the official treatment accorded such behavior. He administered a questionnaire to a population of college freshmen and state training school residents. The questionnaires dealt with 43 offenses and was based primarily on the self report technique. Short found that of prime concern was the relationship between the subject and the examiner. A good rapport in this relationship led to much more valid results. He found that sizeable proportions of the college students that he used in his study had committed serious offenses. This was especially true of the male college freshmen. He found that there was little difference between the college freshman group and the training school group regarding the number of times a serious offense was committed. Short said in his concluding statement, "This finding is relevant to the hypothesis of sociologists that delinquents are those who are caught while engaging in behavior relatively common among their age group" (p. 118).

In 1955, Short again tried to validate his methodological approach

to this problem and in addition get an idea of the extent of criminal behavior among high school students. He once again found support for his methodological approach and a significant involvement on the part of high school students in what was considered to be delinquent behavior.

In 1957, Short collaborated with Ivan Nye in approaching the problem of criminal behavior as being a continuous variable and again suggested that all the confusion relating to the measurement of crime could be handled through the self report technique. They approached the problem of studying processes such as emotional instability, strained family relations, and social maladjustment in this manner and questioned whether these were a result of delinquency or a result of institutionalization. They measured the relationship of delinquency to socioeconomic status utilizing institutionalization as one criterion of delinquency and reported behavior as a second. They encountered a number of methodological problems, one of which was response bias, due to the fact that they relied heavily upon volunteers. They reviewed W llin (1949) and Locke (1954) and pointed out that in their studies they also found that there was minimal response bias, though some variation was noted. Again Short and Nye stressed the relationship between subject and examiner, adding that the insurance of anonymity given to the subject was a prime contributor to response validity. The minimal difference between using institutional criteria and self report criteria led them to conclude that "categories of deviate behavior can be studied in a general population provided proper attention is given to public relations and provided the anonymity of the individual is protected" (p. 213).

In his research, Short has questioned the definition of crime and

delinquency. One of the positions taken by Tappan (1947) defines delinquency as a process, adjudicated by a court of law. Therefore, he believes that delinquency is a legal concept. A second position taken by people such as Porterfield (1946) deals with the issue of whether or not the individual gets caught. The argument that is put forth by Short is that criminal behavior exists far in excess of what we have seen through criminal court records as witnessed by the Somerville Cambridge Youth Studies.

The article by Wallerstein and Wiley (1947) very distinctly portrayed the problem that is faced in research in criminology. They pointed out that only educated guesses can be made as to the exact amount of criminal behavior in the United States. They made mention of the Somerville Cambridge Youth Study and the small percentage of individuals actually being brought to public attention. They further discuss Porterfield's studies (1946) to get at the social factors behind hidden delinquency. On 55 specific offenses, Porterfield found 237 students who had been incarcerated in either training schools or penitentiaries. He felt that both groups were expressing the same kind of fundamental wishes; wishes for a new experience, recognition, or material gain. Wallerstein and Wiley also went in this direction and sent out questionnaires concerning themselves with 49 offenses that were listed under the penal laws of the state of New York. They believed that the anonymity of the questionnaires would insure the frankness of the answers, and yet they specifically pointed out that their study was not a rigidly scientific one. For example, there was no report concerning how many questionnaires were initially sent out. They received replies from 1,698 individuals; 1,020 men and 678 women. These

responses were mainly from the New York and Long Island area. They also heard from Upper State New York, Pennsylvania, Ohio, and California. They found that 99% of all those questioned admitted to some kind of criminal behavior listed under the New York Penal Code. One of the weaknesses they found was in the definition of certain crimes, such as assault, which had a variety of meanings ascribed to it by different people and which, therefore, left some question as to what actually was being measured. When they turned their attention just to felonious behavior, that which is in violation of the code to such an extent that the individual can be prosecuted and incarcerated for an initial offense, they found that 64% of the men and 29% of the women admitted that they had committed such an act. They found further, that many of these acts had been perpetrated against individuals to whom the potential criminal was well known and, therefore, prosecution was either dropped or never initiated in the first place. In their summary they stated, "Whether a man becomes a confirmed criminal may well depend less on what he does to society than on what society does to him." They further point out that it may be less important to show that a good citizen can become a criminal than it is to show that an individual can commit a crime and continue to function effectively in the role of teacher, scientist, or any other vocation. They supported the position that crime may be a pervasive thing in our society and perhaps not as deviant as may be expected.

The works of Nye and Short and Wallerstein and Wiley encouraged a study by Dentler and Monroe (1961) which tried to find social correlates of adolescent theft as Porterfield (1946) had done earlier. They contended that while Nye and Short had proved the effectiveness of the

scaled self report technique, their point that delinquent behavior may be a variable rather than an attribute, put crime on a continuum from little to much. Dentler and Monroe's article reinforces the idea that one must study deviant acts and not delinquent acts because one never knows whether the behavior will be acted upon by authorities and, therefore, become delinquent by definition. Dentler and Monroe used a questionnaire testing all eighth grade subjects in three Kansas junior high schools; one in a middle class suburb, another a rural farm town, and the third in a rural non-farm community. They were interested specifically in five behaviors: whether an individual had taken small items worth less than two dollars, whether he had taken something of value between two dollars and fifty dollars, whether he had taken something of value over fifty dollars, whether he had taken a car for a ride without the owner's permission, or whether he had taken things from someone else's desk or locker. Of all the demographic data taken, they found only three categories to be significant. They were age, sex, and birth order. As in Nye's research (Nye, Short, and Olson, 1958), they found that socioeconomic status did not contain a positive relationship to crime. What they did find was that among students of high theft incidence, there was a lack of family structure and a feeling of not being handled equitably by the parent. The same students displayed a tendency to live outside the home, which they described as being unloving. There was little confiding in mothers or fathers and the kids tended to define themselves as disobedient. Dentler and Monroe found that the theft scale, which they had created, related highly to single items of deviation such as vandalism, illegal driving, running away from home, gang fighting, and breaking and entering.

In an earlier attempt to explain what motivated one child in a family to become delinquent while other children in the family did not, or why one area of a block could contain delinquent children and another area not, Murrey, DeNitz, and Reckless (1960) stated that a child who internalized positive feelings about himself, insulated himself against delinquent behavior. They felt that the child's favorable self concept was a critical variable in the containment of delinquency. Dentler and Monroe attempted to test this theory in their questionnaire by including such questions as "I like the way I look". In place of the self concept variable they found a more important variable which dealt specifically with the way the child felt toward his family. This may be reconciled by assuming that the child incorporates into his self concept what his family represents. The child who perceives his family positively perceives himself positively. This finding of Dentler and Monroe, therefore, would be in accord with the research of Murrey, DeNitz, and Reckless. Dentler and Monroe stated that the research they did proved little with regard to causal factors of crime. It did show that there was equal potential validity in using self report questionnaires across different communities or in different living situations.

Gold (1966) conducted research on undetected criminal behavior. He quoted Clark and Wenninger (1962) who, in line with Nye, Short, and Olson, and Dentler and Monroe, failed to detect any real differences among social classes with regard to criminal behavior. Gold attempted to test all boys and girls, ages 13 through 16, living in Flint, Michigan. He eventually interviewed 87% of his original list, 6% refusing to participate, and 7% moving from the area before the research was concluded. College students were trained to interview these

subjects on their behaviors. The subjects were driven from their homes to a localized testing center where they were appraised of the nature of the research, given an opportunity to leave, and told about the confidential nature of their responses. Gold used the technique of interview as opposed to questionnaire. Items related to delinquent behavior were placed on cards. Following a card sort technique, behaviors admitted to were used as the basis of an interview. Each individual was interviewed about offenses he had committed in the last three years. One of the methodological problems that Gold had was the extent of concealment by each subject. In order to combat this, an additional study was utilized in which the exact amount of delinquency was known before the interview. An individual was considered to be a truth teller if he in fact told what had been going on, elaborated on it, or admitted to things not previously known. The safeguard that he had built into the system was the interview itself, in which a detailed questioning of the nature of the act was gone into and a clear definition of the act made.

Erikson (1973) pointed out that most social scientists in the area of criminal behavior do not view official records as a sound basis upon which to conduct studies. Of particular concern to Erikson in his study was the assumption that delinquency in the lower socioeconomic classes is a group phenomenon as opposed to delinquency of other socioeconomic levels, where it is viewed as an individual phenomenon. Utilizing once again, self reported behavior techniques to detect the amount of criminal behavior involved, Erikson found little evidence to support the idea that group delinquent behavior is a phenomena of the lower socioeconomic class individual. On the other hand, he found quite a bit of evidence to support the belief that violations of the law or established

codes and statutes is evenly distributed across socioeconomic levels. What seems to be particular characteristic of the lower socioeconomic level is arrests. Based upon this, he seriously questioned whether socioeconomic status could be used as a viable explanation for delinquency. It was Erikson's feeling that by basing our assumptions solely upon sociological factors, one of which is the socioeconomic level of the individual, we may have discounted other important factors contributing to delinquency thereby limiting our vision or scope of investigation with regard to criminal behavior.

Research Utilizing Primarily the MMPI

Up to this point, this review has dealt with work that concerns itself with hidden criminal behavior primarily through either the interview or questionnaire method. Both these methods have attempted to objectify and measure data. An additional method used in trying to detect and understand the nature of criminal behavior is the work that has been done with the MMPI. The MMPI has been used in two specific ways. It has been used to compare and contrast certain groups on psychodynamic variables and it has been used to detect psychological variables between and within groups. In 1950, Ellio Monachesi studied personality characteristics of institutionalized and non-institutionalized male delinquents. The study was done through the comparison of such groups on sub-scales of the MMPI. He found that the PD scale of the MMPI sharply differentiated between delinquents and non-delinquents, as well as between institutionalized and non-institutionalized delinquent groups. Monachesi's findings of differences between non-delinquents and delinquents on the PD scale of the

MMPI led to a whole series of research papers concerning possible personality differences between these two groups as measured by the MMPI. His work set the tone for research that has lasted for almost 20 years.

Shortly after Monachesi's work, and in the same year, Blair (1950) conducted a study comparing disciplinary offenders and non-offenders in the Canadian Army. He found that through the use of item analysis the MMPI produced nineteen promising items that differentiated the offender from the non-offender. In addition to giving the MMPI, he also gave a biographical questionnaire. He found that such factors as age, health, mood, home background, marital status, and progress in school were related to military offenses. In addition, he found that among those who exhibited a "personality deviation" as measured by the MMPI there was an association between such personality deviations and incidents of military offenses such as AWOL, drunkenness, and insubordination. Again the MMPI was able to distinguish between groups primarily on the PD scale. Panton (1958) tried to draw an MMPI profile configuration from among different crime classification groups. He dealt with the mean differences between these groups and was unable to find any marked differences between the profiles of major crime classification groups. In the next year Panton (1959) took the MMPI records of 2,314 North Carolina State prison inmates and scored them on the following MMPI scales: prejudice, social status, responsibility, dominance, role playing, dependency, and ego-strength. He found, with the seven new MMPI scales, that there was a distinct tendency for the inmates to score significantly, especially on those scales dealing with prejudice, responsibility, dominance, dependency and ego-strength. After this he moved away from the crime classification approach to an approach of

understanding the criminal in terms of his psychology and the actual behaviors that he exhibits.

Leonard Kingsly (1960) through the use of the individual matching of subjects, attempted to distinguish between psychopathic prisoners and non-psychopathic prisoners. His specific area of interest was MMPI sub-scales with particular reference to the PD sub-scale and Welch's Anxiety Index and Internalization Ratio. He had twenty-five psychopathic offenders, twenty-five non-psychopathic offenders, and fifty non-incarcerated control subjects. He was not able to find a significant difference between the prisoner groups on any of the MMPI scales, The Anxiety Index, The Internalizational Ratio, or even the relationship of the elevation of PD with seven other MMPI subscales. These two groups were then combined into a general category due to their similarity and matched individually for age and education with fifty control subjects. Seven of the MMPI scales, F, Hs, Hy, Pd, Pa, Pt, and Sc, did significantly differentiate these two groups. However, The Anxiety Index and Internalization Ratio did not, nor did the elevation of PD in relation to other clinical scales.

In their "Personality Attributes of the Criminal and Analysis of Research Studies (1950-1965)", Waldo and DeNitz summated all the research that had been done with regard to criminal populations and specifically with regard to the use of the MMPI. They referred to a previous review of research done by Schuessler and Cressey (1950) in which only 42% of the studies were found to differentiate the two populations, criminal and non-criminal. In their study, Waldo and DeNitz found 81% of the studies since 1950 reported significant differences between criminals and non-criminals. To quote them, "The increase can

be explained primarily in terms of the differences in instruments employed during the two periods" (p. 188). Schuessler and Cressey had found thirty different instruments utilized before 1950 of which only four were used after 1950. In a similar vein, the MMPI was used only four times in the earlier period, in contrast to twenty-nine times in the later period. Peterson, Quay, and Anderson (1959) had used the MMPI not only to find differences between the delinquent and non-delinquent populations, but also to find differences between good citizens and disciplinary problems, between first offenders and recidivists. Of the twenty-nine testings that had been done since 1950 in the research cited by Waldo and DeNitz, twenty-eight had the PD sub-scale differentiating between the criminal and non-criminal group significantly.

Although the MMPI had reportedly been developed to test personality, no one has yet come forth with an exact definition of what personality is and the circular logic of personality being that which a personality test measures seems to apply to the use to which the MMPI had been placed. In many of these studies, the controlling for different variables such as age, sex, race, and the random sampling of delinquents and non-delinquents were not followed. It was often found that the differences within groups were greater than the differences between groups. Finally, Waldo and DeNitz pointed out that an instrument that has been used entirely for diagnostic purposes may be a very valid technique for scale development but it could certainly be questioned when its use is put toward hypothesis testing since success is virtually built into the instrument itself. They felt that the manner in which the PD scale was standardized insures that differences will exist between delinquents and normals, and that when the researcher applies

the MMPI and finds differences between criminal and non-criminal populations, there should be no surprise. To be surprised is to ignore completely the nature of the instrument that one is using. To not find a difference would be more enlightening in that the findings would run counter to the nature of the instrument. Finally, a comment initially made by Schuessler and Cressey (1950) would seem to be still pertinent today,

After all this research and the different methodologies employed, we still do not know whether or not behavior of an individual is the result of that individual's personality trait or whether the trait is the result of criminal experience (p. 484).

This gross confusion as to the application of the MMPI and research concerning criminology has led researchers to try to become more specific in the application of the MMPI and in the definition of their areas of inquiry. Gough and Peterson (1954) attempted the measurement of pre-dispositional factors in crime and delinquency. Out of an item pool, sixty-four items were selected which it was felt showed good differentiating power. They retained these for the creation of a delinquency scale. Items appears to have four distinct groupings. One dealt specifically with role taking deficiencies, that is, a person's inability to deal with a relationship, to pick up the subtleties of interactional cues or to be attuned to the sensitivities of others. The second dealt with family conflicts, the person tending to feel that as a child he was exploited and victimized by his parents. A third area was the feeling that the individual had of alienation from others, and a lack of confidence in himself. Finally, the fourth area that these sixty-four items dealt with, was scholastic adjustment. This was typically poor, and often a quality of rebelliousness was involved. The

entire piece of research was centered around watching social interactions and expectancies. It was felt that items used in the scale which dealt with role taking ability often had a lot to do with crime or delinquency. This gave an argument to viewing the psychopath from a role taking deficiency point of view. Of greater interest is probably the contribution of this study toward an understanding of the individual in terms of his deficiencies, his inability to relate, feelings of alienation, lack of confidence, resentment against family, and his feeling of being citimized and exploited.

Peterson, Quay, and Cameron (1959) attempted to discover a relationship between personality and background factors in juvenile delinquency as inferred from responses to currently existing delinquency scales such as Gough and Peterson's (1954). Schuessler and Cressey (1950) had stated that,

The doubtful validity of many of the obtained differences, as well as the lack of consistency in the combined results make it impossible to conclude from this data that criminality and personality elements are associated (p. 484).

It was felt by Peterson, Quay, and Cameron (1959) that the existence of negative results can be interpreted in at least two ways. One, as evidence for identity between offenders and non-offenders in respect to personality or, two, as a methodological failure. They tended to believe that the methodological explanation was more in line with what was happening. As a result, they proposed greater care be given to defining and measuring certain personality traits and that traits had to have empirical importance with regard to delinquency or criminality. Their study was an attempt to define constructs through the item analysis of previously mentioned scales. They felt that the progress in this area had been impeded due to the heterogeneous nature of the

delinquent population and the inadequacies of methodology. At the end of their factor analysis of these delinquency scales, they found what they called three personality dimensions and two background factors. The first of these was psychopathic qualities, the second, impulsive anti-social behavior which co-varied with expressions of regret, depression, and negative affect. The third was a general sense of incompetence and expression of inadequacy. The two background factors they related to were family dissension and a history of difficulty in school. The similarity here between the first and third groups, discovered by Gough and Peterson (1954) and what Peterson, Quay, and Cameron found in 1959 is noteworthy. In 1955, Harris and Lingo had come out with their sub-scales of the MMPI. Their breakdown of the PD scale alone was also very similar to the factors found by Gough and Peterson and later by Peterson, Quay, and Cameron. They called them PD I, familial discord; PD II, authority problems; PD III, social impeturbability; and PD IV-A, social alineation; and PD IV-B, self alienation. Peterson, Quay, and Tiffany (1961) administered four questionnaires to delinquents and non-delinquents. The results were very similar to the initial work done by Gough (1954) and Quay and Cameron (1959). They found a neuroticism factor which was in effect the same impulsive antisocial behavior that co-varied with regret, depression, and negative affect found by Peterson, Quay, and Cameron. They also found a factor called inadequacy and, in effect, once again validated previous research.

The use of MMPI sub-scales began to fall away and item analysis began to take over with the result being that conclusions which were drawn at the end of the research dealt with the dynamics of the individual, his feelings of inadequacy and alienation, his problems in

school, as well as his problem in relating to others. Accordingly, the psychological functioning of the person became much more important than the personality classification derived from an individual's MMPI responses.

Siegmán (1961) conducted a study investigating the relationship between anonymously admitted criminality and factors one, two, and three previously found in the factor analytic study of Peterson, Quay, and Cameron (1959). Fifty-four female and twenty-five male students at the Bar-Ilan University in Israel anonymously completed the Admitted Criminal Behavior Scale. They also completed the Gough Socialization Scale and the Quay and Peterson Delinquency Scale. High ACB Scale scorers were found to have higher factor two scores, namely those scores relating to impulsive antisocial behavior. They did not, however, find psychopathy and family dissension related to admitted criminality. The explanation given was that there is no causal relationship between these two variables in criminal behavior, and that their relationship to institutionalized delinquency was just a reflection of the association of all three of these according to socioeconomic status. It should be pointed out, however, that all the subjects in this study were of either middle or higher class income and, therefore, the population was not sufficiently represented with regard to these variables. Siegmán pointed out that often criminal behavior was related to whether a person is caught and convicted rather than the commission of the crime. He stated that the significant relationship between the ACB Scale and Gough's Socialization Scale was enough to point out that a relationship did exist and this was consistent with the belief that psychological variables are a significant source of variance in criminal behavior.

Application of the MMPI to College Populations

Murrey, Munley, and Gilbarth (1965) studied the PD scale of the MMPI for college students. It was pointed out that college students, both male and female, obtained PD scores above MMPI norms. They cited Black's (Black, 1956) review of fifteen studies of college women's MMPI profiles where a mean PD T score of fifty-four was attained, and Goodstein's (Goodstein, 1954) study of 5,035 college men, where a mean PD T score of 56.3 was obtained. Out of work such as this, the conclusion was developed that it was essential to have separate college norms. Using a sample of 375 college students comprised of 200 women and 175 men, means and standard deviations of the PD scale were calculated. The results were that both college males and females were significantly higher on the PD sub-scale than those of the respective Minnesota normative groups. College male's mean score on the PD sub-scale was fifty-eight, while college female's mean score equaled a T score of fifty-six. When the individual items of the PD scale were taken by themselves, significant differences were found in twenty-five of the fifty PD items for college males while twenty-nine of the fifty items were found significantly different for college females. Fifteen of the differentiating items in each group were significantly different in the direction of the keyed response which explained the higher PD scores. The final recommendation of Murrey, Munley, and Gilbarth was that separate norms for PD be used when considering college populations.

LeMay and Murphy (1965) attempted to develop MMPI patterns of college male disciplinary referrals. Two groups of seventy undergraduate male college students were used. The first was called the referred group and consisted of students who had been referred to the Dean of

Students or Dean of Men for misconduct. This was broken down into twenty-three students for alcohol misconduct, seventeen students for theft or burglary, twelve for minor misconduct, and eleven students for disorderly conduct. The remainder, a group of five, was referred to as the miscellaneous group. All groups were compared with a control group through the use of t tests. LeMay and Murphy compared the results of their testings, using Goodstein's Profile of the College Male (Goodstein, 1954), as well as Jackson and Clark's Norms for Theft Referrals (Jackson and Clark, 1958), and Kingsly's Norms for Psychopaths. They found statistically significant differences on the PA and MA sub-scales for the alcohol misconduct group and the disorderly misconduct groups and on the L sub-scale for the theft or burglary group. The inclusion of both male and female norms and the procedure with which the research was carried out could be questioned. The contribution of the study lies in using college norms and approaching criminal acts in terms of behaviors rather than legal classifications. This was quite different from the offender, non-offender type of categorization that had gone on before.

A similar study by Nyman and LeMay (1967) dealt with male college students who had been referred for disciplinary action. This group of students was then matched with controls and several of the sub-scales of the MMPI were found to differentiate. Notable among the scales that differentiated was the PD II sub-scale which dealt specifically with authority conflicts and the MA IV sub-scale which dealt with ego-inflation. Both of these sub-scales were under the heading of alcohol misconduct. Under disorderly conduct was again the PD II sub-scale, the MA I sub-scale which dealt with amorality, and the MA II sub-scale

which dealt with psycho-motor acceleration. The fact that authority conflict, psycho-motor acceleration and amorality were related to disorderly conduct is almost predictable.

Motor Inhibition, Personal Space,
Field Dependency

It has been seen through literature that research concerning personality and crime has gradually progressed from a simple comparison of criminal versus non-criminal populations to a rather intricate analysis of the psychology of individuals, as measured for example, by the MMPI. In essence, it is a progression from the concept of personality to a concept more in line with psychological functioning.

A review of the literature concerning areas of psychological functioning, especially motor inhibition, personal space, and field dependency reveals its relevancy to the study of criminal behavior.

Motor Inhibition

Following the work of LaShan (1952), Barndt and Johnson (1955) tested the hypothesis that delinquents in general would have a short time perspective. This was based upon the assumption that delinquents tended to live in the here and now, unconcerned about future rewards and punishments. In order to test out their hypothesis, they measured story telling time utilizing twenty-six delinquent boys as their experimental group, comparing them to a control group of twenty-six boys who had no court history. The experimental group ranged in age from fifteen years, seven months to seventeen years, eleven months, and had been committed to a state school for delinquents. The boys were

matched according to age, I.Q., and socioeconomic status. The stories that were told were recorded and then scored in six categories. The six categories dealt with the time span covered by the story and were listed as being under one hour; one hour or more but less than five hours; five hours or more but less than twelve hours; twelve hours or more but less than one week; one week or more but less than three months; and three months or more. When Barndt and Johnson analyzed their results, they found that delinquents told stories that had significantly shorter time spans than did non-delinquent boys. A year after this study, Singer, Wilensky, and McCraven (1956) studied delaying capacity, fantasy, and planning ability. Their study was concerned with what they termed "some basic ego functions". They had hypothesized that there was an association between fantasy tendencies and the control of motility in impulsive behavior. Motor inhibition was measured according to large M responses on the Rorschach, the Portius Maze Test Quotient, and motor inhibition time on behavioral tests. They found partial support for their hypothesis, but also found a linking between emotional surgency and a lack of introspection, as well as between motor inhibition and ambitiousness. A lack of clear results raised some question as to whether the length of time one takes to relate a story is connected to time orientation, impulsivity, fantasy, or introspection.

Twain (1957) factor analyzed the results of the administration of sixteen tests designed to measure aspects of behavioral control. His particular area of interest was that behavior which had been labeled impulsive behavior. The lack of clarity in this area led him to design a study in order to determine the nature of "impulsivity". The results of his factor analysis left him with six factors. Factor one dealt

with motor ability and the degree of control the individual has in directing his motor activity. Factor two was related to physical status and primarily depended on physical development. Factor three dealt with impulsive behavior that would be related to a happy-to-lucky person or a very active person who enjoys active competition or active situations. He labeled this factor positive progressiveness. Factor four, he saw as being a self-control factor that seemed to be involved with a holding in process, a conforming to the situation. Factor five, finally, was termed aggressive instability. It had a negative orientation to it and represented a desire for change. When contrasted to the happy-go-lucky category, factor five was looked at as representing a very aggressive, dangerous individual. Twain's sixth factor was neglected due to an inability to clearly define or interpret what was found. He pointed out, that up to this time impulsivity had been viewed as being a unitary kind of phenomenon and that this interpretation of impulsivity was contraindicated by his findings. He concluded by saying that the different measures of impulsivity are probably measuring several different things at once.

Siegmán (1961) took time perspective, time estimation, as well as motor inhibition and related them in terms of groups of young offenders. As in the work of Barndt and Johnson (1955), the hypothesis was that delinquents would have shorter time perspective, but more importantly it was Siegmán's belief that a relationship existed between time perspective and motor inhibition. LeShan (1952) had argued earlier that delinquents should have a relatively restricted time perspective. Siegmán pointed out that the findings of LeShan (1952) and Barndt and Johnson (1955) were not sufficiently clear to prove that future time

perspective is a function of impulse training. He felt that the differences observed in future time perspective may well be caused by a number of things. Siegman took thirty residents at a prison for young offenders in Israel, randomly selected from the total population. He determined a level of motor inhibition by means of the tracing of a 2½" circle; first at a regular speed, then as slowly as possible. This is a task that was similar to one that had been done by Singer, Wilensky, and Craven in 1956, wherein they had individuals write words as slowly as possible. Comparing his experimental group with a control group of non-delinquents, he found that in tasks related to time perspective and time estimation, the delinquent group was significantly different from the non-delinquent group. Within the delinquent group itself, there was a significant relationship between time perspective scores and motor inhibition task scores, where no such significant relationship existed in the non-delinquent group. There was no significant difference between the delinquent and non-delinquent groups in relation to their scores on the motor inhibition task and a positive correlation between the two groups on time estimation and time perspective. A lack of correlation between the two groups on motor inhibition indicated that it and future time perspective are not synonymous. It was felt that the former may have a good deal to do with the socioeconomic sub-culture that a person lives in and the training he encounters in growing up.

Following the work of Twain, Barratt (1965) found four factors related to impulsivity. These factors were the speed of a cognitive response, lack of impulse control, adventure seeking and introversion, and risk taking. The qualities of the factor and their description in Barratt's work were remarkably similar to the work that had been

previously done by Twain. Relating the findings of this study, to the theories of Hull and Spence, Barratt suggested, "that the impulsivity factor is in part a measure of oscillation of behavior, and further that oscillation of behavior partially has a basis in specific central nervous system centers" (p. 554). Barratt went on to hypothesize restraint and impulsivity as opposites, two ends of a polar situation. He stated that concepts put forth by such people as Dewey and Freud, who saw impulse control as being necessary for the socialization of the individual and lack of impulse control as being the cause of psychopathology, delinquency, and other forms of deviant behavior were supported by his research.

Time and again since the work done by Gough in 1952, the whole concept of impulsivity has been intricately tied to the concept of delinquency or deviant behavior. Its importance in understanding the psychological functioning of the person involved in the criminal act could not be ignored.

Personal Space

Of prime concern when dealing with man's psychological functioning, is the issue of man's response to his physical environment. Personal space has been defined as being the area around an individual which intruders may not invade (Sommers, 1959). That distance concept has led to a number of spatial studies concerning crowding. In his book, The Hidden Dimension, Hall deals with the concept of overcrowding as related to city or urban dwellings and quotes a French husband and wife team, the Chombard de Lauwes (Hall, 1966). They developed an index with which to measure overcrowding based on the number of square meters per

person, per unit dwelling. The results of studies studies was that when space available was below eight to ten square meters, social, and physical pathologies doubled. These pathologies included physical illness, crime, and mental illness. They also found that when the number of square meters per person, per unit dwelling exceeded 14, the same pathologies increased, but not to such a great degree.

Duke and Nowicki (1972) attempted to define and explain such distancing according to a social learning model patterned after Rotter (1954). They noted that many previous measures of personal space left much to be desired, not only from a methodological point of view, but also from a theoretic point of view. It was their intention to try to correct approaches to personal space measurements in both of these areas. Attempting to replicate real life measures as used by Frankol and Barratt (1971) and Duff and Straton (1964), they developed the Comfortable Inter-personal Distance Scale, a paper and pencil measure that was actually derived from the body boundary rooms used by Rawls, Trego, and McGaffey (1969) and Frankol and Barratt (1971). The subjects they used were all middle or upper middle class individuals as defined by Hollingshead and Redlich (1953). Their hypothesis was that one's orientation to his environment is learned and follows observable rules. They also felt that locus of control served as a mediator in the inter-personal distancing process. Finally, they felt that the prior history of an individual, as well as the context in which he finds himself, influences his distancing. Although many individuals could argue with Duke and Nowicki with regard to their theoretical orientation, their contribution lies in their attempt to provide a framework within which to better define the nature of personal space. It goes without saying

that this whole area has for some time definitely demonstrated a need for a theoretical framework as well as for more rigidly defined methodological approaches, and it is in these areas that Duke and Nowicki have contributed.

In a study by Duke and Mullins (1973) it was found that the application of the Comfortable Interpersonal Distance Scale developed by Duke and Nowicki in 1972 applied to schizophrenic and non-schizophrenic population resulted in the discovery that chronic schizophrenics preferred greater distances between themselves and other humans. In addition, the social learning model initially proposed by Duke and Nowicki was viewed as being supported. Finally, the concept of locus of control, of externality-internality, how the person views the source of controlling agents with regard to himself, was viewed as being associated with distancing decisions.

Evans and Howard (1973) agreed with Duke and Nowicki (1972) that there was a great need for theoretical development in the study of personal space. They noted Booraem and Flowers (1972), Horowitz (1968), Horowitz, Duff, and Straton (1970), Luft (1966) and Wolowitz (1965) had concerned themselves with personal abnormalities of individuals and their subsequent need for more personal space. They also noted that Blumenthal and Meltzoff (1967), Dosey and Meisels (1969), and Meisels and Canter (1970) came to the conclusion that personal space did not relate to the subject's mental health. They pointed out the different attempts to find relationships between personality and personal space. These included Leipold (1963), Patterson and Holmes (1966), Patterson and Sechrest (1970), Meals and Cantor (1970) and Porter, Argyle, and Salter (1970). Evans and Howard stated finally that all of these

studies led to somewhat mixed results in that in some research studies there were significant findings between personal space and personality types, while in others there was no relationships observed. Such was the conclusion of Klukken (1972) who stated that personal factors were not related to personal distance. It was upon all these findings that Evans and Howard based their need for further investigation, increased sophistication in methodological approaches as well as the need for personal space studies to be based upon a theoretical foundation. It should also be noted that their review of the literature generally was in terms of research concerning itself with personality types, and not with personal space needs of individuals in relation to their psychological functioning. In attempting to develop a theory of personal space, Evans and Howard (1973, p. 344) stated that they viewed personal space as being:

. . . a mediating cognitive construct which allows the human organism to operate at acceptable stress levels and aids in the control of interspecies aggression. Human beings, by maintaining a minimum distance from their fellows may be exhibiting adaptive stress reducing behavior which has been selected out by the evolutionary process.

It was upon this evolutionary theory of personal space that Evans and Howard based their concepts and directed their questions concerning future areas of study with regard to personal space. They did not agree with Ardrey (1969) that human territorial behavior is instinctual, or with Sheskin (1971) that it would be premature to conceptualize personal space as a unitary concept because of its considerable complexities. They simply stated that these are as yet unanswered questions that certainly need research directed toward them.

Bailey, Hartnet, and Glover (1973) revealed a relationship between

personal space needs and modeling behavior. Utilizing a male peer as a model and an adult female as the object person, they set up situations of Model-Close, Model-Far, and No Model Control conditions. They observed in general that the subject tended to follow the pattern established by the model with regard to distance to the object person. The only distance differences observed was in the No Model condition where girls tended to use more space than boys. It was concluded, that modeling theory was a viable concept in understanding personal space dynamics. This then, was a third theoretical orientation to personal space research joining the social learning theory of Rotter initiated by Duke and Nowicki and the evolutionary model described by Evans and Howard.

Theories have similarly been proposed concerning the feelings of discomfort and the defensive behavior observed when people approach too close to one another. In the Hidden Dimension, Hall goes into some detail about the four distances in man. He states that in the intimate distance, the distance typically related to reproduction, such things as visual distortion occur. Here, the individual cannot fully perceive his partner and is forced to rely much more upon assumptions as to what is going on in his environment. As members of a non-contact species, human beings have developed social mores which prohibit social contact among persons of opposite sexes at intimate distances. When forced into contact, such as on a crowded elevator, people deny the existence of such contact by keeping up rigid defenses, they stare straight ahead, grasp a railing or move a hand away when it is touched. As pointed out by Sommer (1969), prolonged exposure to such contact, in violation of their

cultural norms, creates a good deal of anxiety and tension within the individual.

Draper (1973), in studying the personal space needs of the !Kung Bushmen in Southwest Africa noted that they live, by choice, in a very crowded situation and that this crowding has not resulted in any biological indicators of stress commonly observed in crowding situations (Christian, 1960). It was the belief of Draper that residential crowding alone did not result in a pathological stress, but what we may be observing, with regard to pathological stress, is a psychological crowding of the individual, that his perceived needs with regard to space are being violated rather than any well-defined physical space needs. Several differences between the living conditions of the !Kung Bushmen and urban ghetto dwellers included the fact that the high degree of mobility in these tribesmen allowed them to move from camp to camp freely, according to their needs for food and other subsistence items. Such mobility is not observed in urban ghettos. Similarly, the distance between tribal encampments was quite large and the concept of this distance in terms of the tribe as opposed to the terms of the individual may lead an individual to perceive himself as having adequate space. Finally, the ability of the individual to move from one camp to another allows him the freedom to escape from any social tensions and, thereby, effect changes which would reduce stress upon him. It is that inability to deal with stress or to reduce it that leads to biological changes within the organism and it is for that reason that such biological pathology was not observed in these individuals. Of importance became psychological stress experienced by individuals due to the nature of their environment. It is this psychological stress, under conditions of

overcrowding, creating tension and anxiety that leads us specifically to the subject of criminal behavior. That is, an acting out on those elements in the environment which are violating the individual's personal space.

Agustus F. Kinsel, M.D. (1970) compared what he termed the Body Buffer Zones of eight violent and six non-violent prisoners. It was his finding that those individuals termed to be violent prisoners needed approximately four times the area as the non-violent prisoners. He further noted that greater space was needed to the rear of the individual in the violent group, whereas greater space was needed in front of the individual in the non-violent group. He concluded that this may indicate a pathological body image state and could be utilized in the detection of individuals predisposed to violent behavior. Hildreth, Derogatis, and McCusker (1971) set out to replicate Kinsel's study. It was their attempt to remedy some of the methodological deficiencies in Kinsel's research by employing a double blind technique as well as utilization of a random sample. They found in line with Kinsel that aggressive inmates possess disproportionately larger body buffer zones than non-aggressive inmates. The major difference between the two studies was that in the latter, they found that both aggressive and non-aggressive groups were sensitive to approach from the rear. A logical outgrowth of these studies was the comparison of non-violent, or non-aggressive inmates, and normals with regard to the amount of personal space needed.

Patterson (1973) found that subjects who defined themselves as needing less personal space tended to be less aggressive, more tolerant, more self acceptant, and possessed a higher ideal self. This indirectly

supported findings of Kinsel who observed that aggressive or violent individuals needed greater personal space. It also brought into perspective the functioning of the individual and his psychology with regard to personal space.

Felipe and Sommer (1966) concerned themselves with the invasions of personal space. They questioned what happened when these distances are not allowed to be created by the individual but instead, violated. Initially what they perceived were attempts at accommodation on the part of the victim. The reaction to the situation seemed to be influenced by a concept of territoriality, the dominant submissive relationship between the invader and victim, where the invasion took place, and whether sexual motives could be attributed to the invasion. It was ultimately found that if this accommodation could not be maintained, then the victim would flee. What was not dealt with, or further investigated, was if the victim were not allowed to flee, what his behavior would be. In other words, would the individual turn from flight to fight, consistent with the concept of critical distance.

Studies by individuals, such as McClintok (1963), indicate that the greater the density of population in an urban area, the greater the incidence of criminal behavior. He felt that the area need not be characterized as being a slum area, but that the incidence of crime is more related to the density of population. Barer (1946) found that when there was a relocation of people the incidence of crime dropped approximately 50% even though the crime rate in the area from which the individuals were relocated was increasing. Bagot (1941) observed the same thing in London.

A poem by Auden from his "Prologue", The Birth of Architecture

effectively summates the results of the invasion of personal space. It is as follows:

Some thirty inches from my nose,
the frontier of my person goes,
and all the unstilled air between
is private pagus or demeane.

Stranger, unless with bedroom eyes,
I beckon you to fraternize,
beware of rudely crossing it.
I have no gun, but I can spit.

The implications involved in the concepts of personal space with regard to behavior of individuals as seen in the work of Calhoun (1962) and Christian, Flyger, and Davis (1964) have led to the conclusion that personal space is indeed an important psychological function of the individual as related to a crime.

Field Dependency-Independancy

A third area related to psychological functioning, is the concept of field dependency-field independancy. In defining field independent and field dependent behaviors, Witkin (1962) described the field independent person as being one whose mode of perceiving was characterized by the ability to perceive the discrete aspects of a situation and differentiate a focal aspect from the organized background. In contrast to this, he described the field dependent mode of perceiving as perception that was strongly dominated by the organization of the total field. The relationship of this to the manner in which a person functions was pointed out earlier by Witkin (1954). People that are more articulated, are able to see the different segments of their personality. They are people who are able to move from one frame of reference to another within themselves, depending upon the situation that faces them. They

are aware of their needs and feelings separate from those around them and independent from the influences of their environment. In contrast to this, individuals who approach their environment in a more global perceptual sense are not as capable of separating from their environment, and are not as aware of the distinction between their own internal needs and feelings and those of the environment in which they live. They often rely a great deal upon external sources for the definition of their attitudes and sentiments and even their views of themselves.

In his work, "Psychological Differentiation and Forms of Pathology", Witkin (1965) stated that an adequate adjustment to a situation may be found at any level of differentiation. He felt that what constitutes an adequate adjustment would be particular to a given situation. He stated, in a similar vein, that pathology also occurs at all levels of differentiation. In much the same way that the original overcrowding studies of the Chombard de Lauwes found that pathology existed below one point as well as above another per meter, per unit, Witkin found that pathology existed at both extremes of the differentiation continuum. For example, pathology associated with the extreme global perceptual approach tended to involve severe identity problems and a struggle for maintainance of identity. The symptoms were poor attention, poor controls, passivity, and helplessness. Alcoholics, ulcer patients, obese individuals, and asthmatic individuals were often found in this area. Also found in this area were the hysterical character and the character disorder, individuals having a difficult time coping with the problems of living.

Elliot (1961) predicted that behavior dependency would be seen in

the positive correlation to perceptual or field dependence as well as to uncertainty and/or performance deficit in unstructured situations. He found that the Embedded Figures Test performance correlated highly with ability scores. He concluded that his findings indicated that field dependency can be viewed directly as a measure of "higher order internalized autonomous intellectual processes", and only indirectly as "measures of personality traits or motives" (p. 3163). This is definitely in line with the view of studying the psychological functioning of the individual as the major area of research interest, as opposed to studying the "personality" of the individual.

Little research has been conducted in the area of applying the concepts of field dependency - field independency to criminal behavior. Of the research that has been done, one of the better representations is that done by Eskin (1961). Dichotomizing his population into criminals and non-criminals, Eskin administered the Rod and Frame Test developed by Witkin. It was his feeling that persons who had a global field approach need not necessarily be passive in their behaviors. He divided his criminal group according to crime classifications, however, the result of his analysis was that he found primarily two groups. The first of these groups was composed of individuals who were criminals from what he called a "sense of guilt". These people were characterized as being pro-social individuals in that they aligned themselves with the social values of the society in which they lived and strove for the goals of that society. However, their poor impulse control and dependency needs kept them from having the self discipline necessary to gain these goals. A second group was called the paranoid group and was composed of anti-social individuals who had not internalized the goals,

standards, or values of the society in which they lived. They were seen as being chronically guilty, torn between a need for punishment and a satisfaction of dependency needs. They rejected authority, as well as the restraints necessary for group living. They denied dependency needs through a chronic acting out, even though they may actually have had greater needs than the first group. It was felt that this research was significant in that those criminals who had defined themselves as aggressive and rebellious though their behaviors were, in effect, seen as being field dependent. They were easily influenced by field forces, had poor impulse control, poor body image, and low self esteem. Even though the criminal group was not seen as a homogeneous one, it was felt that within this group there were individuals who reacted to their feelings of dependency by acting them out in a manner similar to the one adopted by the ulcer patients studied by Gordon. Gordon (1953) found his ulcer patients to be markedly field dependent people who viewed themselves as being quite independent. They were commonly viewed as people of an overstriving nature who were seeking to compensate for their feelings of passivity and dependency. They tried to make other individuals see them as being more active and dominant than they actually were and able to function as people, independent of external support. Eskin hypothesized that the same quality existed among criminal groups. Those individuals with passive criminal behaviors, such as forgery or other fraudulent acts reflected a dependent nature, while those involving themselves in burglary and assault were reacting to their dependency needs and asserting themselves to cover up an underlying passivity and need for external support.

This, then, presents a survey of the literature relevant to this

dissertation. The tying together of the concepts of hidden criminal behavior, objective measurement of behavior by the use of the MMPI, measures of personal space, motor inhibition, and field dependency is brought about by explaining criminal behavior, not in terms of abnormal behavior or nosological categories, but in terms of the psychological functioning of the individual. Criminal behavior then becomes behavior engaged in terms of the needs of the individual, the press from his environment, and the ability of the individual to handle both ends of this continuum.

In conclusion it can be stated that the point has been reached where factors such as an individual's relationship to his environment, his ability to control his own motor responses, and his personal orientation play a major part in the types of behaviors in which he chooses to engage. This review has suggested that there is a relationship between concepts such as personal space, field dependency, motor inhibition, and criminal behavior. The question to be asked now is what role these factors play, are they of significant enough importance to be able to discriminate between those individuals who are caught committing criminal acts and those who do not commit them and, in addition, are they able to discriminate that finer line between those individuals engaging in criminal behavior and are caught and those who engage in it but are not caught. It is believed that this research is a logical consequence of that which has gone on before. It does not confine itself to the nosological categories defined by personality theory nor does it confine itself to categories defined by legal concepts. Rather it defined itself in terms of behaviors in which individuals engage. With a respect for methodology it addresses itself to questioning

whether or not criminal behavior may not be behavior in the repertoire of all individuals actively engaged in by the majority, and on that basis capable of being viewed as being normal behavior. Likewise it questions whether arrest and conviction could not be the resultant of situational pressures and/or the individual's inadequacies. From this review it is believed that crime is neither "abnormal" nor "deviant", in the popular sense, but rather simply an expression by the individual of the manner in which he has come to function psychologically.

CHAPTER III

PROBLEM AND HYPOTHESES

In reviewing the literature, one notes the gradual transition from explaining criminal behavior solely in terms of personality structure or the sociological factors involved, such as age, education, neighborhood, family background, and ethnic origin, to an attempt to explain it in terms of the psychological functioning of the individual. One is aware that the differences observed on the MMPI, between different crime classification groups, or between criminals and non-criminals, is insufficient to explain the existence of criminal behavior on all levels of society and among all groups at each level. A review of the literature revealed that among the psychological factors which were felt to be contributory to criminal behavior were such factors as personal space needs, motor inhibition ability, and field dependency. It is felt that an investigation of these factors will lead to a more accurate explanation of the causal relationships in criminal behavior and will, in addition, explain previously observed differences between groups such as those observed with the administration of the MMPI. One may not actually have differences between the personalities of the criminal and the non-criminal, in a classical sense, as much as one does differences in motor inhibition ability, personal space needs, and the field dependency-independency orientation of these individuals. It is felt that people who have poor impulse control, and who depend on their environment to

define their circumstance will become easily threatened when that environment invades them. It is further felt that when such an invasion does not allow them to escape from a situation, they will resort to aggressive or anti-social behavior of such severity so as to warrant attention by some regulatory body in society. It is believed that crime crosses all socioeconomic levels and is inherently tied to the social structure of society. It is further believed that it should be viewed in terms of being a variable rather than an attribute and, therefore, placed on a continuum from little to much. Psychological functions should similarly be viewed as being a variable and, therefore, existing on a continuum. It is felt that they represent qualities variously present in each individual. It is hypothesized that these continua exist within populations and can be measured by an individual's ability to accommodate to situations. Specifically, this attempt to explain criminal behavior in terms of psychological functioning hypothesizes that non-criminal populations will have greater impulse control, less field dependency and a greater ability to handle invasions of personal space. Closely allied to the non-criminal population will be what is termed the "hidden criminal" population. Where the non-criminal population may be defined as individuals who do not admit to having been involved in any kind of felonious behavior and whose testing does not reveal such involvement, the hidden criminal population is composed of people who have engaged in felonious behavior, but have not been brought to the attention of any regulatory body in society. It is hypothesized that this is due to their similarity to non-criminals in that they have greater ability to control their impulses, that they are not field dependent individuals, thereby demanding attention from their

environment, and that they do not overreact to situations when their personal space is invaded. At the end of this continuum are the convicted criminals. These are individuals who have also engaged in felonious behavior, but, in addition, have been brought to the attention of some regulatory body in society. It is felt that they have been brought to the attention of this body due to their inability to deal with the pressures pushing in upon them. This inability is brought about by their low degree of impulse control, the dependencies they have on their environment, and their inability to handle invasions of personal space. It should be noted here that the definition of the convicted criminal as indicated earlier, is one of the process of arrest and adjudication. However, simple adjudication was not felt to be enough to define criminal behavior (Tappan, 1947). In addition, verification of the exact behavior engaged in was employed consistent with the concepts of Short (1954) and Porterfield (1946). The definition of the hidden criminal was also consistent with Short and Porterfield's concepts and dealt specifically with behavior. The distinction between the two groups is not done so much according to the nature of the action taken by a court or a regulatory body, but rather by the fact that any kind of action was taken. This eliminates the whole area of differential treatment of the offender in the sense of the individual who has superior legal counsel or the individual who plea bargains and, therefore, receives a fine as opposed to a jail sentence. The manner in which the convicted criminal is handled is not the issue in this research. The fact that he was arrested and tried, is relevant and is the basis for defining the third group.

It is hypothesized that known criminal behavior exists more in

terms of the psychological functioning of the individual, as opposed to previously held contention that there is some inherent difference between the criminal and the non-criminal on either the sociological continuum or that continuum measured by existing "Personality" tests. It is hypothesized that these differences in psychological functioning are, in fact, that which gives rise to the perceived differences in personality between the non-criminal and criminal populations. Finally, it is suggested that in finding differences based upon the psychological functioning of the individual, one is confronted with definite ramifications as to the treatment of the offender. Of primary concern may not be the restructuring of the attitudes of the individual, or the correction of any social defects in the background of the individual so as to make him more "prosocial", but rather the enhancement of the control of the individual, his development as an independent, self-reliant person as well as his enhancement as an individual capable of interacting more competently and to a greater degree with those around him, so as to reduce his involvement in criminal behavior.

Specific Hypotheses

It is hypothesized:

1. There will be statistically significant differences between the three groups of convicted, hidden, and non-criminals as measured by the MMPI.
2. The three groups will be on a continuum with regard to the measures of personal space, motor inhibition, and field dependency.
 - (a) The convicted criminal group will have less motor

inhibition than the hidden criminal group who, in turn, will have less than the non-criminal group.

- (b) The convicted criminal group will need more personal space than the hidden criminal group who, in turn, will need more than the non-criminal group.
- (c) The convicted criminal group will be more field dependent than the hidden criminal group which will in turn be more field dependent than the non-criminal group.

CHAPTER IV

METHODOLOGY

The most efficient approaches to the study of criminal behavior have been those that have carefully defined the exact behavior studied. The method used in this study in defining the three groups was, therefore, of great importance. Of primary concern was the fact that often a behavior, when viewed by different individuals, leads to different classifications. Felonious behavior then was defined as being any behavior engaged in by the individual which could lead to his imprisonment, even though it was an initial offense. This was determined by reviewing the legal code of the State of Pennsylvania with references to specific behaviors and the sanctions which would be imposed as a result of finding the individual guilty of engaging in those specific behaviors. This procedure eliminated any behavior commonly referred to as a misdemeanor. Instead only those behaviors felt to be serious violations of an established legal code were included. These behaviors are defined specifically in Appendix A according to the English code as defined in Black's Law Dictionary.

Subjects

Sixty-two adult males, ranging in age from 17 to 45 years, participated in this study. Individuals comprising the hidden criminal group, as well as the non-criminal group, were obtained from the campus of a

large university, while those comprising the convicted criminal group were obtained from a county prison specifically geared for the young, first time offender. All subjects were volunteers obtained through the publicity of the project without the aid of special inducements. No promises were made except that after the testing period the results would be available to them. All prisoners were minimum custody and classified as non-violent. The age range for the convicted criminal group was from 18 to 45 years, as was the age range for the hidden criminal group. The non-criminal group ranged in age from 17 to 43 years. All three groups were skewed toward the early 20's in the age distributions. All groups were matched in terms of race, sex, age, academic level, socioeconomic status, and community size (Appendix B). Finally, all subjects were naive to the experimental procedure.

Method

Data collection was conducted in two parts. First was the administration, in group form, of the MMPI. By pre-arranged announcement, volunteers met in groups of ten and the MMPI was administered. Upon completion of the MMPI and after the subject's understanding of the anonymity of all responses, individual interview times were arranged for all participating subjects. These individual interview sessions, initiated on the day after group testing, were again divided into two parts. The first part concerned itself solely with the administration of the short form of Witkin's Embedded Figures Test, two motor inhibition tasks adopted from Siegman and Singer, Wilensky, and McCraven, and the Personal Space Measure adopted from Rawls, Trego, and McGaffey. All tasks were counterbalanced in terms of their random administration. The

latter phase of the session concerned itself with an admitted criminal behavior technique utilized by Gold (1966). Up until the last phase of the interview, subjects were told that they were simply participating in a psychological research project. In the last phase, they were told that they were about to engage in a task concerned with criminal behavior. Emphasis was placed upon the fact that of prime interest was the phenomena of crime, not the individual. It was also pointed out that an individual's answers were anonymous. Answer sheets were shown to the subjects that contained no room for identifying the respondent or recording the material in any way that could be later used to track the respondent down. Each individual was told that no further follow-up, or checking of any kind, would be made with regard to his responses, and that the responses would be utilized solely in the research project and would bear no relationship to any activity outside the research project. Finally, it was pointed out to the subjects that only by assuring their anonymity could the research project be sure of honest answers and, therefore, valid results. To violate their anonymity would be to jeopardize the research. At this time, subjects were afforded the opportunity to discontinue but none chose to do so. It was felt that this opportunity along with the fact that no deception had been perpetrated insured the credibility of the project. Any reference to crime or criminal behavior was limited so that the individual subject would not be given a particular set by which he could perceive the project. All interviews were conducted according to an established schedule (Appendix C) and by the same individual. As with the research done by Gold (1966), the subjects were asked to sort cards pertaining to criminal behavior (Appendix A) into categories labeled, "never", "more than

three years ago", and "in the last three years". In this latter category a further division was made according to the sub-headings "once", "twice", and "three or more times". Such sorting was accomplished by placing the card in a box measuring 10 x 20 inches and containing slots labeled with the above named categories. After the card sorting, it was easy for the experimenter to extract those cards which pertained to felonious criminal behavior occurring only within the last three years. This limitation was instituted so as to preserve the memory of the incident and limit activities to those engaged in common to an adult population. The individual was then interviewed over these behaviors, each incident being handled separately. The interview was used to determine whether an individual fell into the convicted criminal or hidden criminal category. If an individual failed to admit to criminal behavior, he was interviewed to determine whether or not he could be considered to be a non-criminal. Conviction for a crime was defined as any action taken against the individual as the result of an awareness on the part of a specific extra-familial regulatory body of that individual's involvement in some specific illegal activity. A regulatory body was defined as being an agent empowered to regulate behavior and to impose sanctions. Hidden criminal behavior was defined as behavior in violation of some existing law or code that had not come to the attention of such a body. This meant that a criminal would be considered to be hidden no matter how many individuals knew about his illegal behavior, so long as no action had been taken toward the individual by a regulatory body. The design of the research took into account the existence of hidden criminals in the non-criminal population through an analysis of behaviors in which people engage. In a like manner, it took

into account the existence of non-criminals in a criminal population by carefully defining criminal behavior. Specifically, this would refer to those individuals who may have been assigned to the convicted criminal category only as a result of their arrest, and not their behavior. In this manner then, individuals were assigned to one of the three experimental groups, thereby providing the basis for comparing the results of the testing that had gone on prior to the assignment of a respondent to his appropriate group.

Procedure

Of extreme concern during this entire testing period were the instructions used. As this research followed the designs set down by Gold (1966), and Short (1957), in insuring anonymity and objective assignment of individuals to their respective groups, so it also provided for standardized test instructions for the administration of all tests. All instructions for standardized tests were either those provided by the authors of the test (see Appendix E) or paraphrasing consistent with the intent of the authors.

Administration of the MMPI

Subjects were informed that the project they had agreed to participate in was composed of two parts. They were told that first they would be asked to fill out the Minnesota Multi-Phasic Personality Inventory. Upon completion of that questionnaire a second session would then be scheduled with them for further testing so that they would be able to speak personally with the experimenter concerning the exact nature of the project. Test instructions were gone over in detail

with all subjects during this group testing period, with the experimenter answering all questions relevant to the administration of the MMPI. Any questions that were asked during this initial testing period with regard to the total experiment were deferred for answering until the second session of testing. Only those questions pertaining directly to the administration of the MMPI were answered. The nine major clinical scales were scored by utilizing the template scoring method. From this procedure, T scores for these scale were developed for each subject. Analysis of variance techniques were then employed in order to determine if there were significant differences between the groups being studied or between the different scales being used to study them. Upon finding significance in the value obtained from this analysis, t tests were then administered comparing groupings.

Administration of the Motor Inhibition

Task No. 1

This task was a replication of that done by Siegman (1961). Subjects were asked to trace a circle thereby establishing a base rate. They were then asked to trace a circle as slowly as possible without stopping the motion of the pencil. The difference between these two scores was the measure utilized in determining the degree of motor inhibition possessed by each individual. Similarly, it was this score that was utilized in the administration of analysis of variance techniques. As in the administration of the MMPI, upon finding significant F values appropriate mean comparisons were conducted to determine the exact differences that existed between these groups.

Administration of the Motor Inhibition

Task No. 2

This task was a measure of motor inhibition adopted from Singer, Wilensky, and McCraven (1956). The individual was asked to write a phrase, in this case Stillwater Chamber of Commerce. This once again established a base rate and was compared with his writing of the same phrase as slowly as possible, thereby producing a difference score. Once again analysis of variance techniques were utilized as well as mean comparisons in determining possible significant differences among groups.

Administration of the Personal Space

Test No. 1

In this procedure, individuals were asked to stand at a mark, indicated by a white strip on the floor, facing the experimenter. They were then asked to walk toward the experimenter until they reached a distance from him at which they felt most comfortable. The floor upon which this test was run was composed of nine inch tiles, each of these tiles having been carefully inspected and pre-tested so that the experimenter could, at any given moment, know the exact distance between the subject and himself to within an inch. This was done by first estimating the distance utilizing these nine inch tiles and then measuring actual distance so as to determine and improve accuracy. It was this determination that was used as a measure in the first part of the personal space test and followed the procedure laid down by Rawls, Trego, and McGaffey (Rawls, Trego, and McGaffey, 1968).

Administration of the Personal Space

Test No. 2

After the individual had stopped at the distance from the experimenter at which he felt most comfortable, he was asked to estimate the distance he was from the experimenter. This second measurement was simply an estimation on the part of the subject concerning his perception of this distance. Once again in both of these personal space tests the procedure was to subject the data collected to analysis of variance techniques and upon finding significant F's to conduct mean comparisons utilizing a t statistic.

Administration of the Embedded Figures Test

In this test, subjects were told that they would be shown a series of colored designs. Each time they were shown one they were asked to describe it in any way they wished. They were further told that they would be shown a simple form which would be contained in the larger design. Upon receiving the larger design for a second time, it then became their job to locate the simple form. A practice trial was initiated so as to acquaint the subjects with the procedure involved and the expectations of the experimenter. Subjects were asked to indicate when they had found the simple design and trace it with a stylus provided by the experimenter. This was done so as to assure a correct response on the part of the subject. Finally, subjects were informed that there may be several simple forms in a particular design but that they were to find and trace only the one in which the experimenter was interested. Subjects were asked to work as quickly as possible since

it was a timed test, making sure that the form they found was exactly the same as the original simple form in shape, size, and proportion. As part of this procedure, should the subject forget what the nature of the simple form was that he was looking for, he was allowed to ask to see that simple form again and could do so as often as he liked. Time to solution for each card of the twelve card series was recorded and total time was utilized as the measure of field dependency. Analysis of variance techniques and mean comparisons were run to determine possible differences among groups.

Administration Accompanying the Interview

Subjects were asked to sort a pack of cards; on each card was a statement concerning something a person might have done. The cards were sorted by placing them in a slot that most closely agreed with what the individual had done. The task concerned itself with behaviors that people engaged in and not with the people themselves. It was for that reason that individuals were told after the testing period there would be no follow-up or other attempts to contact them. They were further told that the study was dependent upon them realizing their answers were anonymous and that it was only in that manner that honest answers could be obtained and, consequently, valid results. It should be noted that although all three groups were not run in the same location the approximate room size and method of measurement utilized were identical. Similarly, all groups experienced a random administration of tasks so as to counterbalance for possible effects due to the order of presentation.

CHAPTER V

RESULTS AND DISCUSSION

Previous approaches, utilizing the MMPI in the study of criminal behavior, have attempted to detect differences between criminal and non-criminal populations, Kingsly (1960), Panton (1959), as well as between crime classification groups and non-criminal populations (Panton, 1958). The unique quality of the study under discussion here is that it introduces the concept of the Hidden Criminal. That individual who, after violating the laws and statutes established by society, remains undetected and, therefore, unacted upon by that society. It has been hypothesized in this research that, as in previous research, differences would be detected between the Criminal and the Non-Criminal. Further, it has been hypothesized that differences would be detected between the Hidden Criminal and the Non-Criminal as well as between the Hidden Criminal and the Convicted Criminal.

In Waldo and DeNitz' (1965) review of the literature, it was noted that differences between criminal and non-criminal populations were found primarily on the Pd scale of the MMPI. Several researchers have, in addition, found significant differences on almost all of the other major scales of the MMPI. However, these results were often viewed as being an artifact of methodology and not reflective of true differences in personality. In the current research, statistical analysis detected significant differences between the criminal and non-criminal

populations on eight of the nine major clinical scales of the MMPI. Table I contains the means, standard deviations, resultant t ratios and associated levels of significance.

TABLE I
SIGNIFICANCE OF DIFFERENCES BETWEEN MEAN MMPI
SCORES OF THE CONVICTED CRIMINAL AND
NON-CRIMINAL GROUPS

Scale	Groups	Means	S.D.	Mean Difference	Corrected Degrees of Freedom	t-Ratio
Hs	Convicted	56.8	8.18	7.5	23.91	3.19**
	Non	49.3	5.58			
D	Convicted	64.3	11.85	7.3	25.53	2.07*
	Non	57.0	8.81			
Hy	Convicted	60.8	9.14	1.9	29.46	.67
	Non	58.9	8.08			
Pd	Convicted	79.7	13.76	27.9	20.82	7.26**
	Non	51.8	7.57			
Mf	Convicted	53.4	9.16	-12.1	29.34	2.04*
	Non	65.5	8.05			
Pa	Convicted	67.9	15.76	15.0	19.99	3.43**
	Non	52.9	8.03			
Pt	Convicted	59.9	11.44	8.6	26.08	2.54**
	Non	51.3	8.74			
Sc	Convicted	66.6	15.83	17.1	19.62	3.93**
	Non	49.5	7.76			
Ma	Convicted	68.1	12.26	13.3	25.43	3.69**
	Non	54.8	9.07			

**Significant at 0.01 level.

*Significant at 0.05 level.

Introducing the group termed "Hidden Criminal", and comparing it with the Convicted Criminal group led to the finding that on four scales

of the MMPI, significant differences were observed. Those scales were the Pd, Mf, Pa, and Ma scales. Table II presents these two groups with their means, standard deviations, t ratios, and the levels of significance associated with the observed differences.

TABLE II
SIGNIFICANCE OF DIFFERENCES BETWEEN MEAN MMPI
SCORES OF THE HIDDEN CRIMINAL AND
CONVICTED CRIMINAL GROUPS

Scale	Groups	Means	S.D.	Mean Difference	Corrected Degrees of Freedom	t-Ratio
Hs	Convicted	56.8	8.18			
	Hidden	54.8	10.42	2.0	33.47	.6010
D	Convicted	64.3	11.85			
	Hidden	63.8	9.65	.5	30.70	.1091
Hy	Convicted	60.8	9.14			
	Hidden	57.2	8.90	3.6	33.25	1.122
Pd	Convicted	79.7	13.76			
	Hidden	62.1	11.41	17.6	31.01	3.904**
Mf	Convicted	53.4	9.16			
	Hidden	68.2	8.60	-14.8	32.87	2.69**
Pa	Convicted	67.9	15.76			
	Hidden	54.3	8.53	13.6	23.41	2.98**
Pt	Convicted	59.9	11.44			
	Hidden	56.1	9.44	3.8	30.93	1.02
Sc	Convicted	66.6	15.83			
	Hidden	59.3	8.24	7.3	22.84	1.62
Ma	Convicted	68.1	12.26			
	Hidden	58.3	10.04	9.8	30.80	2.45*

**Significant at 0.01 level.

*Significant at 0.05 level.

From this finding came the conclusion that as measured by the MMPI,

there were significant differences between these two groups, and that the Hidden Criminal group did, in fact, present themselves as being a completely unique entity when compared with the Convicted Criminal group. In comparing the Hidden Criminal group with the Non-criminal group, once again significant differences were found. As with the two previous comparisons, the Pd scales of the MMPI showed a statistically significant difference, but in addition, these two groups differed significantly on the D and Sc scales. Table III presents the means and standard deviations, t ratios and level of significance of these differences.

TABLE III
SIGNIFICANCE OF DIFFERENCES BETWEEN MEAN MMPI
SCORES OF THE HIDDEN CRIMINAL AND
NON-CRIMINAL GROUPS

Scale	Groups	Means	S.D.	Mean Difference	Corrected Degrees of Freedom	t-Ratio
Hs	Hidden	54.8	10.42			
	Non	49.3	5.58	5.5	23.93	2.03
D	Hidden	63.8	9.65			
	Non	57.0	8.81	6.8	35.43	2.36*
Hy	Hidden	57.2	8.90			
	Non	58.9	8.08	-1.7	35.25	.62
Pd	Hidden	62.1	11.41			
	Non	51.8	7.57	10.3	27.52	3.30**
Mf	Hidden	68.2	8.61			
	Non	65.5	8.05	2.7	36.12	1.04
Pa	Hidden	54.3	8.53			
	Non	52.9	8.03	1.4	36.30	.52
Pt	Hidden	56.1	9.44			
	Non	51.3	8.74	4.8	35.83	1.69
Sc	Hidden	59.3	8.24			
	Non	49.5	7.76	9.8	36.31	3.90**
Ma	Hidden	58.3	10.04			
	Non	54.8	9.07	3.5	35.13	1.81

**Significant at 0.01 level.

*Significant at 0.05 level.

Prior to the administration of these selected t tests, an Analysis of Variance had been conducted on all nine clinical scales. Those analyses, contained in Tables IV through XII, indicate that there is a significant difference among groups as measured by the MMPI.

TABLE IV
ANALYSIS OF VARIANCE OF Hs SUBSCALE OF MMPI
SCORES FOR THE CONVICTED CRIMINAL,
HIDDEN CRIMINAL, AND
NON-CRIMINAL GROUPS

Source of Variance	SS	df	MS	F
Between	692.062	2	346.031	5.54835**
Within	3679.62	59	62.3665	
Total	4371.68	61		

**Significant at .01 level.

TABLE V
ANALYSIS OF VARIANCE OF D SUBSCALE OF MMPI
SCORES FOR THE CONVICTED CRIMINAL,
HIDDEN CRIMINAL, AND
NON-CRIMINAL GROUPS

Source of Variance	SS	df	MS	F
Between	760.187	2	380.094	3.8775*
Within	5783.5	59	98.0254	
Total	6543.69	61		

*Significant at .05 level.

TABLE VI

ANALYSIS OF VARIANCE OF Hy SUBSCALE OF MMPI
 SCORES FOR THE CONVICTED CRIMINAL,
 HIDDEN CRIMINAL, AND
 NON-CRIMINAL GROUPS

Source of Variance	SS	df	MS	F
Between	109.187	2	54.5937	.738726
Within	4360.25	59	73.9025	
Total	4469.43	61		

TABLE VII

ANALYSIS OF VARIANCE OF Pd SUBSCALE OF MMPI
 SCORES FOR THE CONVICTED CRIMINAL,
 HIDDEN CRIMINAL, AND
 NON-CRIMINAL GROUPS

Source of Variance	SS	df	MS	F
Between	7927.12	2	3963.56	35.4325**
Within	6599.87	59	111.862	
Total	14527	61		

**Significant at .01 level.

TABLE VIII

ANALYSIS OF VARIANCE OF Mf SUBSCALE OF MMPI
 SCORES FOR THE CONVICTED CRIMINAL,
 HIDDEN CRIMINAL, AND
 NON-CRIMINAL GROUPS

Source of Variance	SS	df	MS	F
Between	634.437	2	317.219	4.38838*
Within	4264.87	59	72.286	
Total	4899.31	61		

*Significant at .05 level.

TABLE IX

ANALYSIS OF VARIANCE OF Pa SUBSCALE OF MMPI
 SCORES FOR THE CONVICTED CRIMINAL,
 HIDDEN CRIMINAL, AND
 NON-CRIMINAL GROUPS

Source of Variance	SS	df	MS	F
Between	2487.81	2	1243.91	10.942**
Within	6707.25	59	113.682	
Total	9195.06	61		

**Significant at .01 level.

TABLE X

ANALYSIS OF VARIANCE OF Pt SUBSCALE OF MMPI
 SCORES FOR THE CONVICTED CRIMINAL,
 HIDDEN CRIMINAL, AND
 NON-CRIMINAL GROUPS

Source of Variance	SS	df	MS	F
Between	800.25	2	400.125	4.24636*
Within	5559.44	59	94.2278	
Total	6359.69	61		

*Significant at .05 level.

TABLE XI

ANALYSIS OF VARIANCE OF Sc SUBSCALE OF MMPI
 SCORES FOR THE CONVICTED CRIMINAL,
 HIDDEN CRIMINAL, AND
 NON-CRIMINAL GROUPS

Source of Variance	SS	df	MS	F
Between	3132.5	2	1566.25	14.1248**
Within	6542.31	59	110.887	
Total	9674.81	61		

**Significant at .01 level.

TABLE XII

ANALYSIS OF VARIANCE OF Ma SUBSCALE OF MMPI
SCORES FOR THE CONVICTED CRIMINAL,
HIDDEN CRIMINAL, AND
NON-CRIMINAL GROUPS

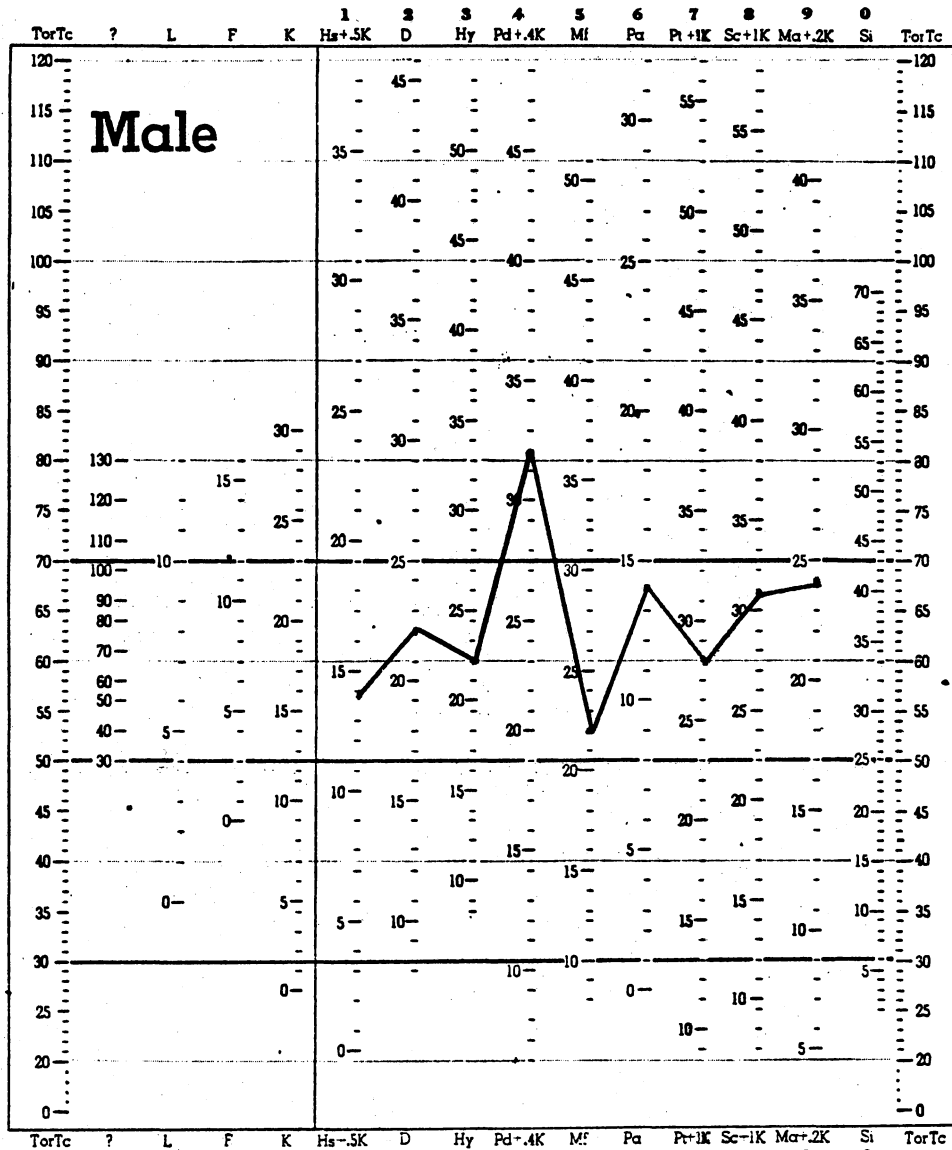
Source of Variance	SS	df	MS	F
Between	1833.44	2	916.719	8.73709**
Within	6190.44	59	104.923	
Total	8023.87	61		

**Significant at .01 level.

Figures 1, 2, and 3 present the standard MMPI profiles for the Convicted Criminal group, the Hidden Criminal group and the Non-criminal group, respectively.

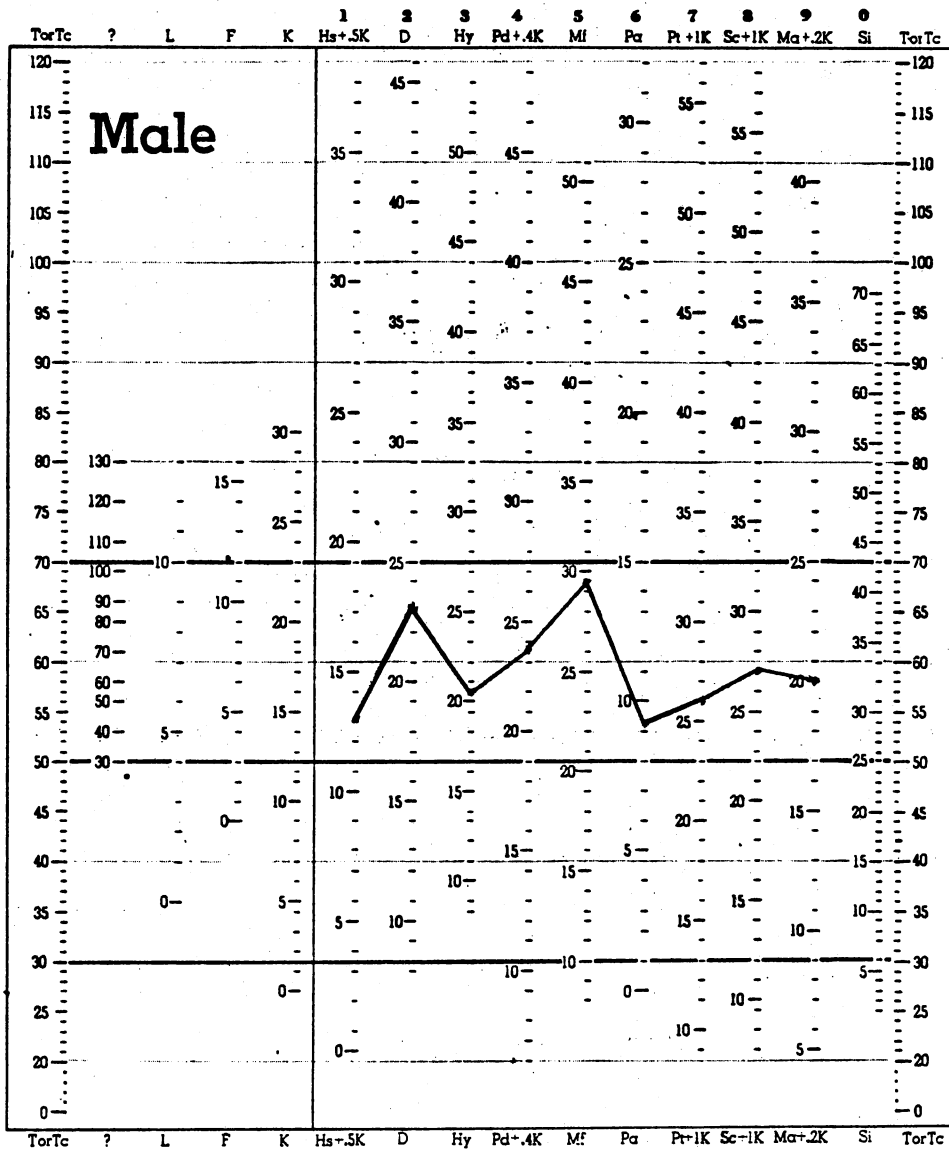
It can be seen by an inspection of this graphic display of T scores that these three groups do, in fact, present themselves as differing populations with respect to the MMPI. The Simple Analysis of Variance techniques were conducted on each of the nine clinical subscales to determine if the observed differences were of statistical significance.

These results are interpreted as supporting previous research in the sense that the MMPI is able to detect differences between a criminal and non-criminal population. This ability is not surprising taking into account the populations used in the creation of the MMPI, especially the Pd scale. More importantly, however, is the MMPI's ability to detect differences concerning a third group. This group, composed of individuals who are similar to the Convicted Criminal group in the sense that



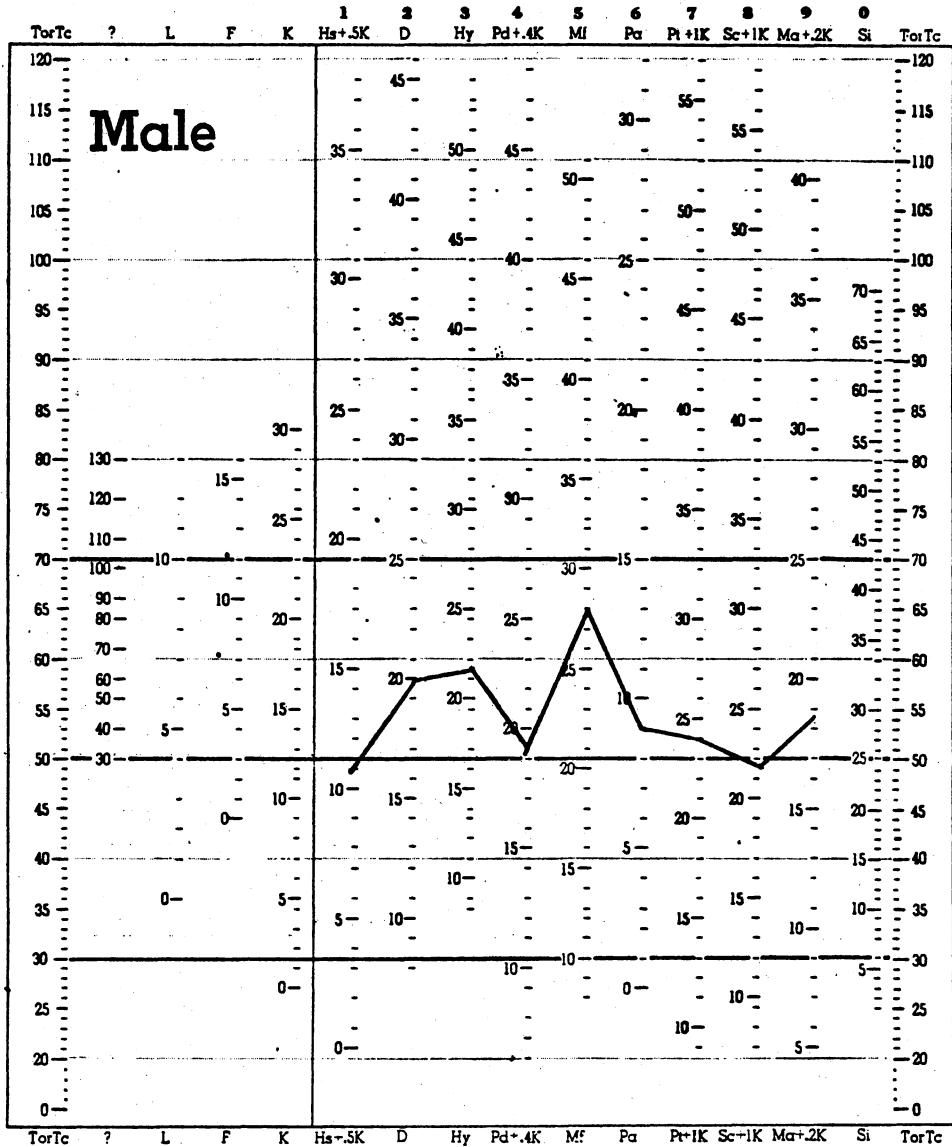
Raw Score _____
56.8 60.8 53.4 59.9 68.1
64.3 79.7 67.9 66.6

Figure 1. MMPI Profile for the Convicted Criminal Group



Raw Score _____ 54.8 63.8 57.2 62.1 68.2 54.3 56.1 59.3 58.3 _____

Figure 2. MMPI Profile for the Hidden Criminal Group



Raw Score — — — — 49.3 — 57.0 — 58.9 — 51.8 — 65.5 — 52.9 — 51.3 — 49.5 — 54.8 —

Figure 3. MMPI Profile for the Non-Criminal Group

they have engaged in the same behaviors, Table XIII, and similar to the Non-criminal group in the sense that they have been treated by society similarly is, in fact, a unique group, quite different from either the Convicted or Non-criminal groups.

TABLE XIII
NATURE OF CRIMINAL BEHAVIORS

Felonies	Groups	
	Hidden Criminal	Convicted Criminal
Theft	6	4
Burglary	0	6
Robberty	0	3
Receiving Stolen Goods	6	1
Auto Theft	0	2
Forgery	1	2
Embezzlement	1	0
Vandalism	1	0
Illegal Sale of a Controlled Substance	3	0
Possession of a Concealed Weapon	2	0
Income Tax Evasion	1	0
Accessory to a Felony	1	2
Drunk Driving	0	4
Fraud	2	0
Conspiracy	0	1
Total Felonies:	24	25
Number of Subjects:	18	16

The findings on the MMPI led the study of psychological functioning to take on even more importance for the question became greater than why do Criminal and Non-criminal populations differ on the MMPI? Instead,

it became why does this third group, the hidden criminal group, present itself as separate and distinct.

Through an inspection of the data, the following conclusions can be arrived at to explain the perceived differences between these groups. First of all, the convicted criminal group presents itself as being, overall, a much more pathological group. A group of individuals with significant internal conflicts. People with a great deal of energy who are rebellious, non-conforming, shallow in their feelings and loyalties, and characterized by poor social relationships. The hidden criminal group does not present the same degree of distress. Instead, they primarily present a depressed picture characterized by overt pessimism. Of greatest note is that the two most prominent scales, scales 2 (D) and 5 (Mf) in the hidden criminal group were viewed by Hathaway and Monachesi (1953) as inhibitors of manifest delinquent behavior, thereby indicating a process at work in this group not found in the convicted criminal group. Since both groups have engaged in criminal activity what we may have actually being measured are those factors leading to arrest rather than the individual's propensity to crime. The Non-criminal group is viewed as primarily neurotic. The quality of rebelliousness and estrangement is absent and there is a mixture of optimism and pessimism. In general, it most closely approximates established norms and due to the lack of a high degree of distress differs the most from the convicted criminal group.

In the study of Personal Space, an Analysis of Variance was run comparing the three groups with respect to the two personal space measures conducted.

TABLE XIV
ANALYSIS OF VARIANCE OF SCORES ON
PERSONAL SPACE MEASURES #1

Source of Variation	SS	df	MS	F
Between	77.9453	2	38.9727	.18077
Within	12768.9	59	216.422	
Total	12846.8	61		

TABLE XV
ANALYSIS OF VARIANCE OF SCORES ON
PERSONAL SPACE MEASURES #2

Source of Variation	SS	df	MS	F
Between	23.6445	2	11.8223	.0313789
Within	22228.7	59	376.758	
Total	22252.4	61		

It should be noted at this time that the methodology of the research played a key role in the results observed. Previous research had been concerned with the concept of how close individuals would allow others to them before becoming uncomfortable. In this research, the question asked was, "How close would individuals allow themselves to their fellow beings before becoming uncomfortable?" It was with that question in mind that the whole nature of the research was designed.

With the subject approaching the experimenter and estimating the distance from the experimenter, the results of the Analysis of Variance techniques employed showed no differences between groups with respect to the continuum of personal space. It further indicated that there was no difference with respect to the measures employed, whether that be the actual measurement in terms of inches between the experimenter and the subject, or whether it be the subject's estimation of that distance. This may be seen most easily in the graphic display of group means in Figure 4.

There may be as many as three conclusions from this data. First of all, when an individual such as a convicted criminal has control of the situation (i.e., when he is approaching another individual), he is not viewing the situation as a violation of his personal space due to his control of it. He, therefore, views the situation as being non-threatening. He is, as a result, able to more closely approximate the norm established in our society for interpersonal communication. Of specific interest is the fact that this conclusion is based upon the methodology employed. It should be noted at this time that previous research such as that of Kinsel in 1970 and Hildreth, Derogatis, and McCusker (1971) was conducted with regard to the violent or aggressive prisoner and his need for personal space. The area of interest in this present study was whether or not significant differences could be found between the non-violent offender and matched groups of hidden and non-criminals. Secondly, since there were no discernible differences between either of the measures employed, or the groups studied, it can also be contended that non-violent prisoners demonstrate no greater personal space needs than either the hidden criminal population or the

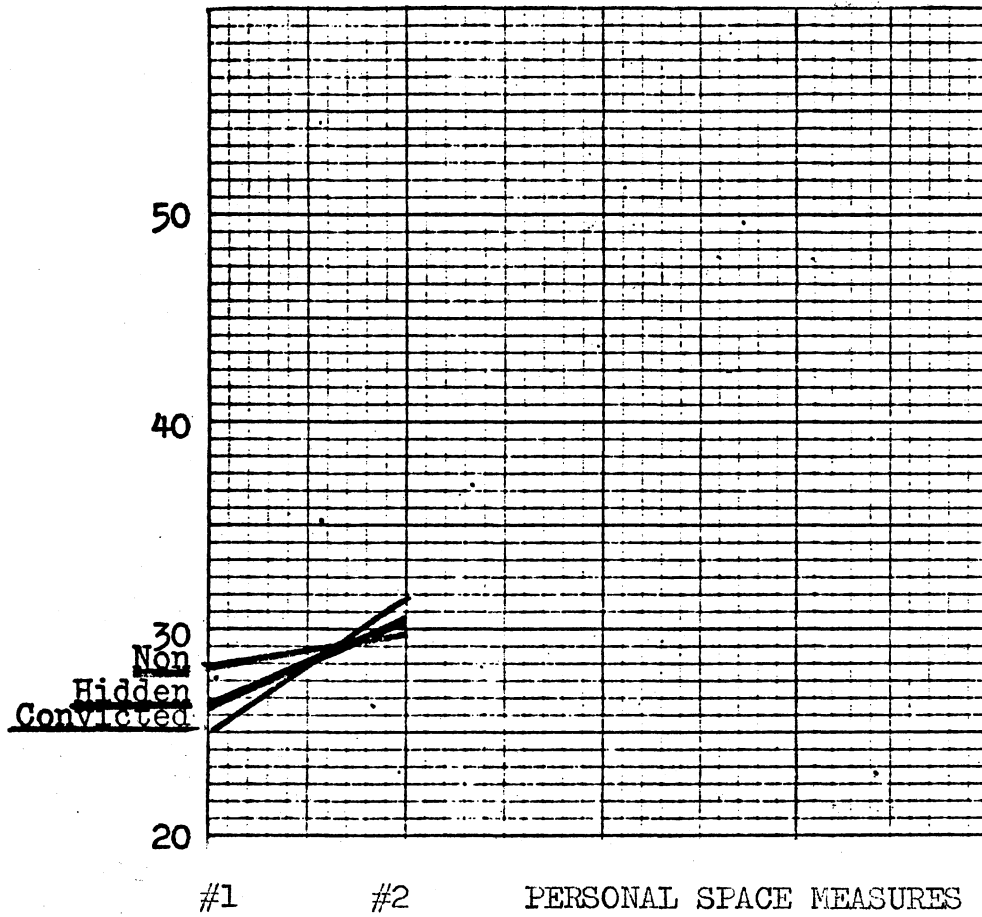


Figure 4. Mean Scores on Personal Space Measures

non-criminal population. This is in effect an acceptance of the null hypothesis. Thirdly is the obvious conclusion that personal space may not be a relevant factor in the study of criminal behavior.

Rawls, Trego, and McGaffey (1968) found that taking measurements from more than one point was somewhat redundant. In addition, they found that no differences were observed between the subject approaching the object person versus the object person approaching the subject. Based upon this it would appear that the non-significant finding concerning personal space needs would be reflective of no differences existing between populations and that the factor of violent behavior must be introduced to create a greater need for personal space in the convicted criminal.

Quite different results were found in the study of motor inhibition. Two measures were used in this research, that of tracing a 2½" circle developed by Siegman (1961), and that of writing a phrase developed by Singer, Wilensky, and McGraven (1956). Separate Analysis of Variances, Tables XVI and XVII, indicated that significant differences existed between the three groups studied.

Tables XVIII, XIX, and XX list the standard deviations, t ratios and levels of significance for selected t tests utilized to obtain a greater understanding of the observed differences.

This type of means comparison revealed that differences between the Hidden Criminal and the Convicted Criminal were significant on both motor inhibition tasks while the differences between the Non-criminal and the Convicted Criminal were significant on only the second task employed, that developed by Singer, Wilensky, and McCraven. Of particular note is that fact that there was no significant difference between

TABLE XVI
ANALYSIS OF VARIANCE OF SCORES ON
MOTOR INHIBITION TASKS #1

Source of Variation	SS	df	MS	F
Between	11941.7	2	5975.87	4.75849*
Within	74094.2	59	1255.83	
Total	86045.9	61		

*Significant at the .05 level.

TABLE XVII
ANALYSIS OF VARIANCE OF SCORES ON
MOTOR INHIBITION TASKS #2

Source of Variation	SS	df	MS	F
Between	77268.9	2	38634.5	3.76411*
Within	605570	59	10263.9	
Total	682839	61		

*Significant at the .05 level.

TABLE XVIII

SIGNIFICANCE OF DIFFERENCES BETWEEN MEAN MOTOR
INHIBITION SCORES OF THE NON-CRIMINAL AND
CONVICTED CRIMINAL GROUPS

Motor Tasks	Groups	Means	S.D.	Mean Difference	Corrected Degrees of Freedom	t-Ratio
#1	Non	32.11	28.81			
	Convicted	22.19	29.30	9.92	32.36	1.06
#2	Non	78.21	113.15			
	Convicted	18.63	25.69	59.58	32.13	2.62**

**Significant at 0.01 level.

TABLE XIX

SIGNIFICANCE OF DIFFERENCES BETWEEN MEAN MOTOR
INHIBITION SCORES OF THE HIDDEN CRIMINAL
AND NON-CRIMINAL GROUPS

Motor Tasks	Groups	Means	S.D.	Mean Difference	Corrected Degrees of Freedom	t-Ratio
#1	Hidden	57.78	47.77			
	Non	32.11	38.81	25.67	25.75	1.998
#2	Hidden	113.28	121.26			
	Non	78.21	113.15	35.07	36.05	.9581

TABLE XX

SIGNIFICANCE OF DIFFERENCE BETWEEN MEAN MOTOR
INHIBITION SCORES OF THE HIDDEN CRIMINAL
AND CONVICTED CRIMINAL GROUPS

Motor Tasks	Groups	Means	S.D.	Mean Difference	Corrected Degrees of Freedom	t-Ratio
#1	Hidden	57.78	47.79			
	Convicted	22.19	29.30	35.59	30.13	2.57**
#2	Hidden	113.28	121.262			
	Convicted	18.63	25.69	94.65	18.92	3.14**

**Significant at 0.01 level.

the Hidden Criminal group and the Non-criminal group on either of the motor inhibition tasks. The Hidden Criminal group tended to approximate the Non-criminal group more so than it did the Convicted Criminal Group. Tables XIX and XX compare the Convicted Criminal group with the Non-convicted Criminal group and the Hidden Criminal with the Convicted Criminal, respectively. What can be said with regard to motor inhibition or control of motor movement is that the Hidden Criminal group on both measures utilized, demonstrated a greater degree of control than either of the other two groups studied. The differences between the two measures employed in the study of motor inhibition can best be seen in Figure 5 where the means of the two groups are graphically represented.

Further, it can be seen, with regard to these particular tasks, that the hypothesis concerning a continuum with the Convicted Criminal group demonstrating the least motor inhibition and the Non-Criminal

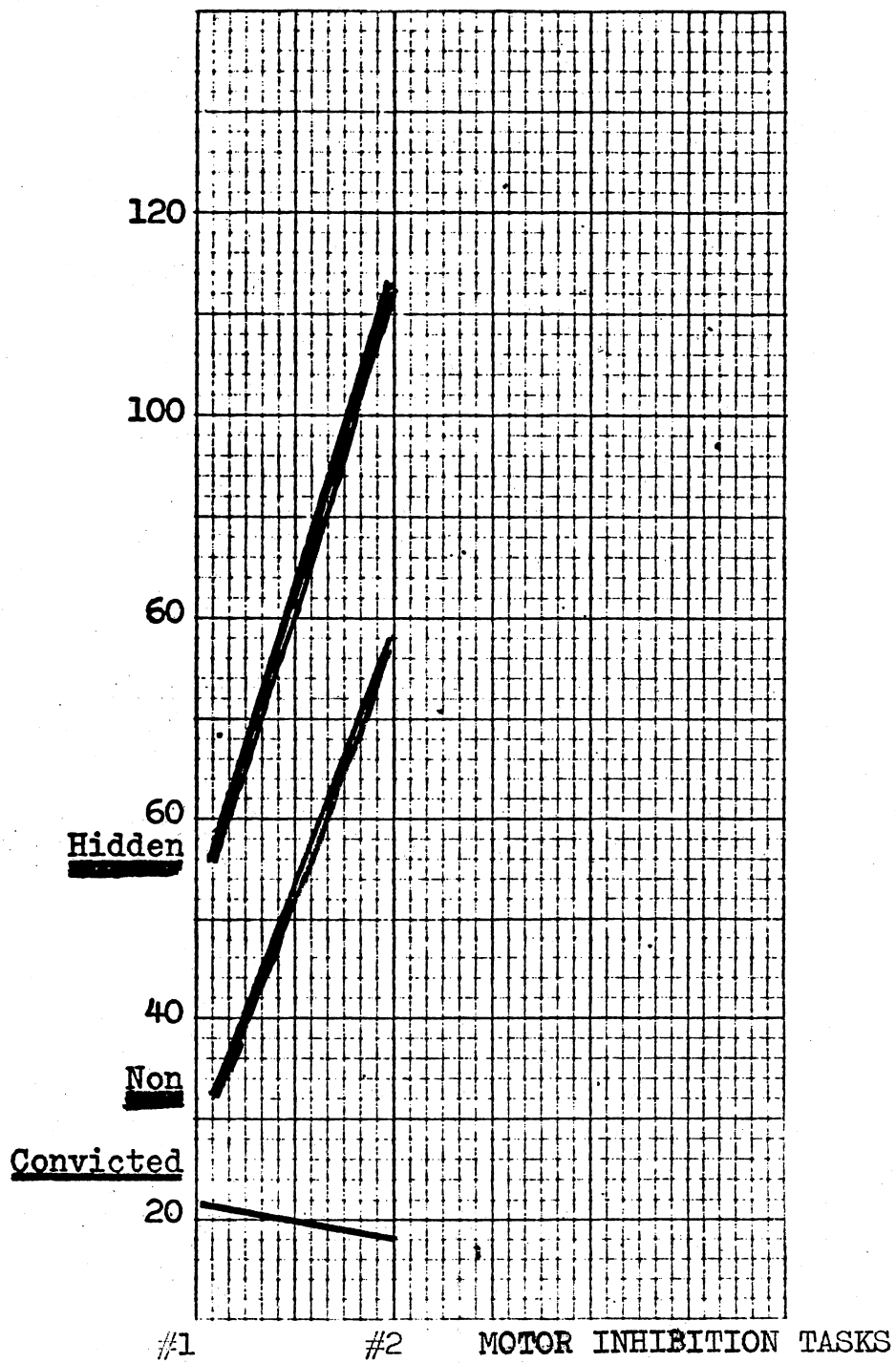


Figure 5. Mean Scores on Motor Inhibition Tasks

group the most was not supported. The Convicted Criminal group did show the least amount of motor inhibition. This was, in fact, substantiated on both measures. However, the hypothesis that the non-criminal element would contain the greatest amount of motor inhibition was not substantiated on either of the measures utilized. Instead, even though not statistically significant, the Hidden Criminal group proved to be that group capable of the greatest amount of motor inhibition. It may at this point be hypothesized that this may be the very reason why the hidden criminal is able to elude detection in that with a greater degree of motor inhibition he is capable of controlling himself in distressful situations and not divulging his involvement in illegal acts. Even though this research deals with motor inhibition as only one aspect of the more broad term of "impulsivity" consistent with Twain (1957) and O'Keefe (1973), it would appear that it bears significance with respect to the field of criminal behavior.

The third area of investigation was that of Field Dependency. Utilizing Jackson's short form of Witkin's Embedded Figures Test (Jackson, 1956), an Analysis of Variance technique was employed comparing the three groups under study. The results of that analysis in Table XXI indicates that there were minimal differences with respect to these three groups and Field Dependency.

Since the primary concern was the manner in which the groups differed from one another, selected t tests were utilized to exactly point out how these differences were being manifested.

Figure 6 graphically represents the means of these three groups in comparison with one another.

TABLE XXI
ANALYSIS OF VARIANCE OF FIELD DEPENDENCY SCORES
ON WITKIN'S EMBEDDED FIGURES TEST

Source of Variation	SS	df	MS	F
Between	561936	2	280968	2.53955*
Within	6527560	59	110637	
Total	7089500	61		

*Significant at the .10 level.

TABLE XXII
SIGNIFICANCE OF DIFFERENCES BETWEEN MEAN FIELD
DEPENDENCY SCORES OF THE CONVICTED
AND HIDDEN CRIMINAL GROUPS

Groups	Means	S.D.	Mean Difference	Corrected Degrees of Freedom	t-Ratio
Convicted	765.625	419.14			
Hidden	629.944	280.448	135.681	32	1.1456

TABLE XXIII

SIGNIFICANCE OF DIFFERENCES BETWEEN MEAN FIELD
DEPENDENCY SCORES OF THE CONVICTED
AND NON-CRIMINAL GROUPS

Groups	Means	S.D.	Mean Difference	Corrected Degrees of Freedom	t-Ratio
Convicted	765.625	419.14			
Non	531.964	308.996	233.661	42	2.11629

TABLE XXIV

SIGNIFICANCE OF DIFFERENCES BETWEEN MEAN FIELD
DEPENDENCY SCORES OF THE HIDDEN AND
NON-CRIMINAL GROUPS

Groups	Means	S.D.	Mean Difference	Corrected Degrees of Freedom	t-Ratio
Hidden	626.944	280.448			
Non	531.000	307.64	95.944	44	1.06776

The overall means demonstrated were in line with the hypothesized direction in that the Non-criminal group took the least amount of time to solve all 12 cards with the Hidden Criminal group taking more, but less than the Convicted Criminal group, which required the greatest amount of time. Although the predicted level of significance was not achieved, the direction was consistent with what had been previously

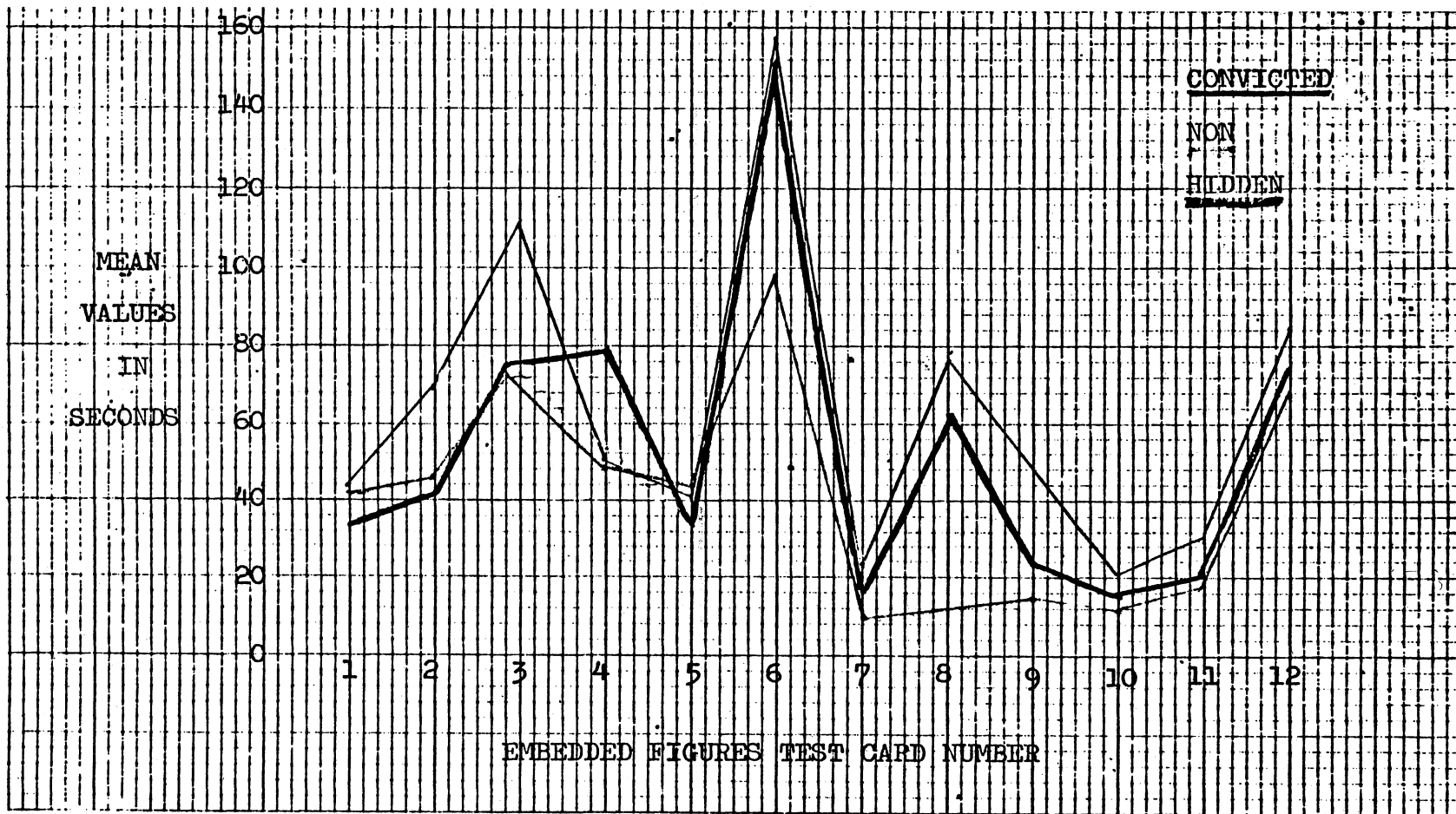


Figure 6. Mean Scores for All Groups on Witkin's Embedded Figures Test

hypothesized. A survey of these findings indicates that we have a convicted criminal population with the greatest amount of field dependency and a non-criminal population showing the greatest amount of independency. Between these two poles or extremes lies the hidden criminal population with a greater degree of independency than the Convicted Criminal group, but less than the Non-criminal group. Taking this into account along with the greater motor inhibition on the part of the Hidden Criminal group than either the Non-criminal or the Convicted Criminal, we may begin to get an understanding of existing differences. The results just presented with respect to the administration of the MMPI, the personal space measures, the field dependency measures, and the motor inhibition measures, indicate that, in fact, a separate group does exist, a distinct population of people typified by engaging in hidden criminal behavior. Similarly, it is indicated that this population differs not only with respect to the manner in which we view them with regard to personality but with respect to the manner in which they function psychologically. In investigating such things as motor inhibition, the question arises as to whether or not a person possesses significant control over his own motor functions. We find with the Hidden Criminal group that they above all others possess such control. In investigating such things as field dependency, we are talking about whether or not an individual is easily swayed by his environment or tends more to rely upon himself. We find here again that the hidden criminal is significantly better or more adept at functioning independently in this kind of situation than the convicted criminal.

Taking a slightly different tack, it is believed that the results of this study indicate areas of real concern that practitioners in the

field of Corrections should be made aware of with respect to dealing with the criminal. He is an individual who does not possess the motor inhibition that those around him do. He is an individual who is easily swayed by his environment and subject to it. Finally, he is an individual who, if non-violent in nature, may not differ all that much from those around him with respect to his needs for personal space or "elbow room". What influences the non-criminal or the hidden criminal in this sphere will undoubtedly influence him and, therefore, with regard to this, he can be expected to be demonstrating the kinds of needs that all people possess. All of this weighs heavily upon the manner in which the convicted criminal is perceived as needing to be "treated".

CHAPTER VI

SUMMARY

The purpose of this research was to present an area of study as yet somewhat untapped. It is an area of study characterized by looking upon criminal behavior as being somewhat normal in that it is behavior commonly engaged in by a wide variety of individuals. It is an area of study emphasizing not the nosological categories with which we have come to look upon behavior, but rather emphasizing the performance aspects of psychological functioning, those easily demonstrable behaviors that people engage in on a day-to-day basis that seemingly are simple in nature and yet exceedingly relevant with regard to the individual's needs and his ability to gratify them. In reviewing the literature, one notes many diverse attempts to come to grips with the causal factors involved in criminal behavior. Dating back some 200 years, the Lombrosian school of thought held that certain individual characteristics were instrumental in the perpetration of criminal acts. Since that time, different schools of thought have emerged, giving rise most recently to sociological theories emphasizing factors outside the individual as being the major determinants of criminal behavior. It is the contention in this research that the truth lies not at either extreme, but somewhere between. That an individual is a product of his environment and, therefore, demonstrates not only the individual characteristics peculiar to himself that he brings to his environment, but also the

idiosyncrasies of his environment that having impressed him which he later incorporates and demonstrates through his personality.

Psychological functioning is seen as being learned behavior. It has been demonstrated that the need for personal space can be manipulated, that the domestication of animals is, in fact, the control and manipulation of personal space needs, and that there are many dimensions to personal space whether they be olfactory, auditory, or visual. Sommer's studies in architecture are no more than the manipulation of these personal space needs. Further, Mischel's studies of delay of gratification have indicated that components such as motor inhibition or impulsivity can be influenced by learning and, therefore, are subject to revision in the individual. Finally, an individual's field orientation, whether well articulated or not in terms presented by Witkin, is something that is certainly subject to the effects of learning. It is, therefore, concluded that not only does the explanation of criminal behavior lie between the extremes often presented in behavioral research, but that it also presents itself as behavior, behavior amenable to change.

Criminal behavior and the psychological functions associated with it have always been held in awe waiting for some grand theory to come along and explain it. It may be that the "professionals" in the field have been suffering from the proverbial "paralysis by analysis", that our solutions may be just as simple as the problem itself, that we may need to go no further than to teach an individual to postpone gratification or that we need go no further than to teach a person to look into himself for the answers. It is not the purpose of this research to claim heuristic value and urge everyone to center on psychological

functioning, but it should be pointed out that the three functions studied in this research are only three of many, and that there are many aspects to people, of equally simple design, to which attention should be paid. It is felt that their relationship to criminal behavior should be investigated and that relationship to behavior in general should be carefully explored. The rewards for such applied research are obvious. With respect to this particular study, it can be seen that the ability to train an individual in the delay of gratification is in accord with concepts involved in treatment itself. Treatment functions with respect to long term gains rather than short term ones. The failure of individuals to maintain themselves in a treatment setting is many times attributable to the fact that they are not receiving the short term rewards they feel they need and possess an inability to delay gratification so that they can ultimately receive long term ones. In addition, a goal of treatment is the creation of independence in an individual, or developing within him an ability to relate positively to his environment utilizing those resources he perceives himself as having. Its goal is not in having him perceive himself as being helpless or vulnerable, but as being an active participant in the determination of his own destiny.

Finally, it should be pointed out that the hidden criminal population as presented in this study is not just a collection of individuals that have happened to avoid getting caught. It is a body of individuals who present themselves as being a distinct and separate group of persons with their own skills and abilities. It is because of these differing skills and abilities that it is hypothesized that they are capable of evading detection. It is not the intent of this research to advocate

training convicted criminals in the evasion of detection through the development of psychological functions. Rather, it is to accept the judicial system that we have and note that those people who have committed crimes and been caught represent but a small percentage whose basic distinction lies in the fact that they were caught. The problem with regard to criminal behavior is not that it exists, for it has always existed, but rather the disruption it produces within society. If this disruptive influence can be reduced by teaching people how to delay their need for gratification or by teaching them how to live independently and with other people, then truly we will have been dealing with the real problem associated with crime.

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APPENDIX A

CRIMINAL BEHAVIOR-DEFINITIONS

The following definitions of felonious behavior are in accordance with the definitions presented in Black's Law Dictionary (Black, 1951).

1. Larceny - The fraudulent taking and carrying away of a thing without claim of right with intention of converting it to a use other than that of the owner without his consent. Commonly referred to as theft and defined as the fraudulent taking of corporeal personal property belonging to another from his possession or from the possession of some person holding the same for him without his consent with intent to deprive the owner of the value of the same or to appropriate to the use or benefit of the person taking it. In the widest of terms, larceny embraces such things as swindling and embezzlement.
2. Burglary - The breaking and entering the house of another in the nighttime with intent to commit a felony therein whether the felony be actually committed or not.
3. Robbery - The felonious taking of personal property in the possession of another from his person or immediate presence and against his will, accomplished by means of force or fear. Where a person either with violence or threats of injury and putting the person robbed in fear, takes and carries away a thing which is on the body or in the immediate presence of the person from whom it is taken. In the absence of violence or threats, the act committed would be a theft.
4. Receiving Stolen Goods - Reception of any property with the knowledge that it has been feloniously or unlawfully stolen, taken, extorted, obtained, embezzled or disposed of.
5. Grand Theft - Auto - This falls under the general definition of Larceny with the specific property removed being that of an automobile.

6. Forgery - The false making or material altering with intent to defraud or any writing which if genuine might apparently be of legal efficacy or the foundation of legal liability. A fraudulent making and alteration of writing to prejudice of another man's right, or a false making, a making maloanimo of any instrument for the purpose of fraud or deceit.
7. Embezzlement - The fraudulent appropriation to his own use or benefit of property or money entrusted to him by another, by a clerk, agent, trustee, public officer or other person acting in a fiduciary character. The fraudulent appropriation of property by a person to whom it has been entrusted or to whose hands it has lawfully come. Embezzlement is a common-law larceny, extended by statute to cover cases where the stolen property comes originally into the possession of the defendant without trespass.
8. Vandalism - Willful or ignorant destruction of artistic or literary treasures. Hostility to, or contempt for what is beautiful or venerable. Willfully or ignorantly destructive.
9. Malicious Mischief - Willful destruction of personal property from actual ill will or resentment towards its owner or possessor. Though only a trespass at the common law, it is now by several statutes made severely penal.
10. Manslaughter - The unlawful killing of another without malice, either express or implied, which may be either voluntarily upon a sudden heat, or involuntarily but in the commission of a human creature without any deliberation which may be involuntary in the commission of a lawful act without due caution and circumspection.
11. Assault - An intentional, unlawful offer of corporeal injury to another by force, or force unlawfully directed toward person of another under such circumstances as creates a well founded fear imminent peril coupled with the apparent present ability to execute attempt, if not prevented. Of importance in this definition is the intention to harm.
12. Aggravated Assault - One committed with the intention of committing some additional crime, or one attended with circumstances of peculiar outrage or atrocity. This class includes assault with a dangerous or deadly weapon.

13. Rape - The unlawful carnal knowledge of a woman by a man, forcibly and against her will. Without her consent and against her utmost resistance.
14. Illegal Sale of Controlled Substances - The sale or other financial manipulation of substances prohibited by law, specifically seen in the sale of such things as narcotics.
15. Addiction - The act of acquiring the habit of using spiritous liquors or narcotics to such extent as to deprive the individual of reasonable self control.
16. Possession of a Concealed Weapon - Concealed defined as to hide, secrets, hold from the knowledge of others, to withdraw from observation, to withhold from utterance or declaration, to cover or keep from sight. Weapon is defined as an instrument of offensive or defensive combat or anything used or designed to be used in destroying, defeating or injuring an enemy. Therefore, concealed weapon is any object designed for defensive or offensive combat that is willfully or knowingly covered or kept from sight.
17. Vagrancy - The act of going about from place to place by a person without visible means of support, who is idle, who though able to work for his or her maintainance, refuses to do so, but lives without labor on the charity of others. Under some statutes a single act may be sufficient, thus it has been held that the act of prowling about and creeping up on parked automobiles or occupants at night under circumstances indicating an intent to commit a crime, constitutes vagrancy. It has also been held that although traveling in an automobile, a person may nevertheless be a vagrant, and even though he travels without stop or hesitation for a considerable distance, he can come within the statute punishing one who wanders about at late hours.

An indigent is distinguished from a vagrant in the sense that he is an individual who is needy and poor, or one who has not sufficient property to furnish him a living nor anyone able to support him to whom he is entitled to look for support.

18. **Income Tax Evasion** - The act of eluding or avoiding, or avoiding by artifice the payment of due taxes. Evasion is defined as to avoid by some device or strategy or the concealment or intentional withholding of some fact which ought in good faith to be communicated.
19. **Accessory** - Contributing to or aiding in the commission of a crime. One who without being present at the commission of a felonious offense becomes guilty of such offense, not as a chief actor, but as a participator as by command, advice, instigation or concealment either before or after the fact or commission.
20. **Driving While Under The Influence** - The act of conducting or operating a coach, carriage, wagon or other vehicle, such as a motor car while legally being in an intoxicating state.
21. **Fraud** - An intentional perversion of truth for the purpose of inducing another in a reliance upon it to part with some valuable thing belonging to him or to surrender a legal right. A false representation of a matter of fact whether by words or by conduct, by false or misleading allegations or by concealment of that which should have been disclosed, which deceives and is intended to deceive another so that he shall act upon it to his legal injury.
22. **Prostitution** - The act or practice of an individual of prostituting or offering their body to an indiscriminate intercourse for money or its equivalent.
23. **Abortion** - This is defined in terms of the abortionist or one who criminally produces abortions, or one who follows business or practices of crime of producing abortions. Abortion being defined as the expulsion of the fetus at the period of utero-gestation so early that it has not acquired the power of sustaining an independent life. An unlawful destruction or the bringing forth prematurely of the human fetus before the natural time of birth. A miscarriage produced by unlawful means.
24. **Arson** - The burning of the house or the building of another. This also includes the burning or property, his own or another's with intent to defraud or prejudice an insurer thereof.

25. Conspiracy - A combination or confederation between two or more persons formed for the purpose of committing by their joint efforts some unlawful or criminal act. Or some act which is innocent in itself becomes unlawful when done by the concerted action of the conspirators or for the purpose of using criminal or unlawful means in the commission of an act not in itself unlawful.
26. Disorderly Conduct - This includes any behavior that is contrary to law and more particularly such as tends to disturb the public peace or decorum, scandalize the community or shock the public sense of morality. Disordered persons are defined as being dangerous or hurtful to the public peace and welfare by reason of their misconduct or vicious habits and are therefore amenable to police regulations.
27. Sodomy - A carnal copulation by human beings with each other against nature or with a beast. Often defined in statutes and judicial decisions as meaning a crime against nature, or as carnal copulation against the order of nature by man with man or in the same unnatural manner with women or with a beast.

APPENDIX B

DEMOGRAPHIC DATA

Number: _____ Age: _____ Academic Level: _____ Major: _____

Parental History (those individuals primarily responsible for your development):

Father's Education (last grade completed): _____

Occupation: _____ Income: _____

Marital Status: _____

Mother's Education (last grade completed): _____

Occupation: _____ Income: _____

Marital Status: _____

Brothers and Sisters:

Age	Sex	Education	Natural	Step
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Home - Community (community in which the majority of your childhood was spent): _____

Comments and/or additional information: _____

APPENDIX C

INTERVIEW SCHEDULE

1. Frequency of occurrence (used only if card is in "Three or more times" slot). About how often did this happen in the past three years? Once a week or more _____ Two or three times a month _____ Once a month _____ Once or twice every four months _____ Once or twice a year _____.
2. Tell me of the last time this happened.
3. Where was this?
 - a. About how many blocks was that from where you were living? 0-2 _____ 3-5 _____ 6-10 _____ 11-20 _____ 21 or more _____ 2 miles or more _____.
4. Were you with anyone? Yes ___ No ___ (Go on to Question 5)
 - a. Who were they? _____
 - b. Did you actually take part ___ or just watch ___?
5. Whose idea was it to do this? Mine ___ Other (specified) _____
6. Had you thought about it before you did it? Yes ___ No ___
7. When did this happen?
 - a. Year _____
 - b. Month _____
 - c. Day: Mon _____ Tues _____ Wed _____ Thurs _____ Fri _____ Sat _____ Sun _____

d. Time: 5a.m.-noon ___ Noon-3p.m. ___ 3p.m.-6p.m. ___
6p.m.-11p.m. ___ 11p.m.-5a.m. ___

8. Did you tell anyone about it later? Yes ___ No ___

(Go on to Question 9)

a. How many individuals did you tell? Men ___ Women ___

b. What relationship are these individuals to you?

9. Did anyone catch you? Yes ___ No ___ (Go on to Question 10)

a. Who caught you? _____

b. How did they catch you? _____

c. What happened after you were caught? _____

10. Did your parents find out about it? Yes ___ No ___ (Go on to
Question 11)

a. How did they find out? _____

b. What did they do or say? _____

11. Were any official steps taken against you? Yes ___ No ___

a. What was the nature of these steps? _____

b. What was the outcome? _____

APPENDIX D

CARD SORT ITEMS

- Card # 1. Have you ever taken things of value (under \$50) which did not belong to you?
- Card # 2. Have you ever taken things of value (over \$50) which did not belong to you?
- Card # 3. Have you ever broken into or entered a building during the nighttime with the intention of stealing or otherwise removing property that did not belong to you?
- Card # 4. Have you ever by use of force taken money or valuable property from someone or someplace?
- Card # 5. Have you ever been involved in the buying, receiving, or selling of stolen property?
- Card # 6. Have you ever been involved in the theft of an automobile?
- Card # 7. Have you ever forged your signature or produced fake documents in order to realize monetary gain?
- Card # 8. Have you ever illegally taken funds from an employer?
- Card # 9. Have you ever destroyed or damaged public or private property of any kind?
- Card #10. Have you ever by accident or through negligence caused the death of another person?
- Card #11. Have you ever physically assaulted another person?
- Card #12. Have you ever forced a female to have sexual relations?
- Card #13. Have you ever threatened another person with either your actions or through the use of a weapon?
- Card #14. Have you ever sold illegal drugs?
- Card #15. Have you ever been habitually addicted to drugs?
- Card #16. Have you ever carried a concealed weapon?

- Card #17. Have you ever been without any visible means of support to the point that it has become of interest to law enforcement agencies?
- Card #18. Have you ever been involved in income tax evasion?
- Card #19. Have you ever protected or hidden a wanted criminal or in any other way participated indirectly in the commission of a crime?
- Card #20. Have you ever driven a motor vehicle while under the influence of alcohol?
- Card #21. Have you ever purposefully misrepresented yourself in order to achieve monetary gain?
- Card #22. Have you ever engaged in sexual behavior for monetary gain?
- Card #23. Have you ever committed or assisted in committing an abortion for monetary or material gain?
- Card #24. Have you ever been involved with the illegal burning of another person's property.
- Card #25. Have you ever joined with another person in order to commit some unlawful act?
- Card #26. Have you ever engaged in dangerous or hurtful behavior or shocked the public so as to be brought to the attention of the police?
- Card #27. Have you ever engaged in any sexual behavior prohibited and punishable by law?

APPENDIX E

INSTRUCTIONS PROVIDED BY AUTHORS

I. Instructions for the administration of the MMPI.

"This inventory consists of numbered statements. Read each statement and decide whether it is true as applied to you or false if applied to you."

You are to mark your answers on the answer sheet you have. Look at the example of the answer sheet shown at the right. If a statement is true or mostly true, as applied to you, blacken between the lines in the column headed T. (See Capital A at the right.) If statement is false or not usually true, as applied to you, blacken between the lines in the column headed F.

Remember to give your own opinion of yourself. Do not leave any black spaces if you can avoid it.

Remember, try to make some answer to every statement.

II. Instructions for the Motor Inhibition Tasks.

Task Number 1

Trial 1, "I would like you to trace this circle."

Trial 2, "Now trace this circle as slowly as possible without stopping the motion of the pencil."

Task Number 2

Trial 1, "I would like you to write the words, Stillwater Chamber of Commerce."

Trial 2, "Now I would like you to write the words Stillwater Chamber of Commerce as slowly as possible without stopping the motion of the pencil."

III. Instructions for the Personal Space Tests.

Trial 1, "I would like you to go over to the white line on the floor and stand facing me, now I would like you to walk toward me and stop when you reach a distance from me at which you feel most comfortable."

Trial 2, "In terms of inches, how far from me do you believe that you are?"

IV. Instructions for the Embedded Figures Tests.

"I am going to show you a series of colored designs. Each time I show you one, I want you to describe it in any way you wish. I will then show you a simple form which is contained in that larger design. You will then be given the larger design again and your job will be to locate the simple form in it. Let us go through a practice trial to show you how it is done."

"I will now show you the colored design again and you are to find the simple form in it, as soon as you have found the simple form let me know and start tracing the simple form with this stylus. When you are tracing, do not let the stylus touch the surface of the card."

"This is how we will proceed on all trials. In every case the simple form will be present in the larger design. It will always be in the upright position, so don't turn the card around. There may be several of the simple form in the same design, but you are to find and trace only one. Work as quickly as you possibly can, since I will be timing you, but be sure that the form you find is exactly the same as the original simple form in shape, size, and proportions. As soon as you have found the form, tell me at once and then start to trace it. If you ever forget what the simple form looks like, you may ask to see it again, and you may do so as often as you like. Are there any questions?"

V. Instructions accompanying the interview.

"I am going to ask you to sort this pack of cards. On each card is a statement concerning something a person might have done. Place the cards in the slot that most closely agrees with what you did. This task is concerned with behaviors people engage in and not the people themselves. It is for this reason that after today there will be no follow-up or other attempts to contact you. This study is dependent upon you realizing that your answers are anonymous. It is only in this manner that I may obtain honest answers, and consequently, valid results."

VITA

Robert Rees Jones

Candidate for the Degree of

Doctor of Philosophy

Thesis: THE ROLE OF PSYCHOLOGICAL FACTORS IN CRIMINAL BEHAVIOR: A
STUDY OF THE CONVICTED CRIMINAL, THE HIDDEN CRIMINAL, AND
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