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A COMPARISON OF CRIMINAL DRUG ADDICTS
AND NON-ADDICTED CRIMINALS ON THE
MINNESOTA MULTIPHASIC PERSONALITY
INVENTORY

by Paul E. Gendreau

Thesis presented to the School of
Psychology and Education of the
University of Ottawa as partial
fulfillment of the requirements
for the degree of Master of Arts



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CURRICULUM STUDIOREM

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INTRODUCTION

In the last decade considerable controversy has centred around the drug addiction problem as it exists in the American culture. The incidence of drug addiction has decreased steadily since the early twentieth century but the present connexion between opiates and organized crime has prompted society to take a serious look at the drug addict himself and at his peculiar psychological makeup.

Despite the increasing concern little progress has been made in effectively dealing with the situation because basically there has been scant research into the problem. Psychiatry has not even satisfactorily classified the addict as to one personality classification or the other, and if one is interested in the nature or the "psychodynamics" of the addict personality little relevant, reliable research can be found.

This thesis is an attempt to clarify some of the contradictions existent in the field as we now know it. The initial portion of the paper reviews the literature on the various types of psychiatric classifications and personality theories ascribed to drug addicts. The available evidence is categorized under certain types of theories and a critical summary of the previous work is offered.

In an attempt to evaluate the validity of the numerous drug addict personality theories a hypothesis is formulated, which, it is hoped, would test some of the concepts mentioned in the review of the literature. Following the hypothesis a description of the experimental design is presented with the method of the thesis emphasizing the need of a proper control group and suitable testing material to evaluate the hypothesis.

The results obtained in the statistical analysis of the test scores are thereupon presented and interpreted in lieu of the personality theories presented in the review of the literature. The implications derived from the data for subsequent research are discussed. Finally, the appendix contains statistics relevant to the experimental and control groups.

CHAPTER I

REVIEW OF THE LITERATURE

A. A HISTORICAL INTRODUCTION

The use of opium can be traced back to the pre-Christian era and from that time on there have been frequent references to its use as a sedative and pain killer throughout the ages. The use of opium was originally limited to countries in the Mediterranean basin and the Near East. It became widespread in the early 1800's when the Opium War induced China to accept the British sponsored opium trade from India. Opium was brought to the United States by Chinese emigrating to the West Coast. During the American Civil War opium was used extensively as a pain killer and medical cure-all.¹

At that time little was known about opium's addictive powers and opium derivatives were sold commercially as cough syrup and laxatives. The discovery of the hypodermic needle facilitated the consumption of the drug and by the mid-nineteenth century there was an estimated half million opium users in the United States.²

1 I. Gelber, "A history of drug addiction", in the American Journal of Nursing, Vol. 63, No. 7, 1963, p. 52-56.

2 Marie Nyswander, The Drug Addict as a Patient, New York and London, Grunne and Stratton, 1956, xi-179 p.

It was not until the late nineteenth century that medical men became concerned over the addiction problem in the U.S. With the development of an opium synthetic, heroin, drug addiction spread as heroin was used to cure opium addiction. The drug situation became serious to such an extent that the control of narcotics was taken out of the hands of the medical profession. In 1914 the Harrison Narcotic Act was ratified by Congress and the control of opium, morphine and heroin became entirely a police matter. The Federal Bureau of Narcotics was established to regulate the distribution of the narcotics. Drug addicts were then forced to obtain their narcotic from criminal sources, and from the 1920 era on drug addiction has been connected with organized crime.³

Although Canada does not have any formal legal laws restricting physicians with treating addicts, the R.C.M.P. acts in the same capacity as the Federal Bureau of Narcotics and the status of drug addiction is somewhat similar in both countries. To-day the drug most commonly favoured by drug addicts is heroin which is a morphine alkaloid. Heroin in turn can be chemically broken down into codeine, methadone and demerol which are used as substitutes by addicts whenever

3 Nyswander, Op. cit., p. 1-10.

heroin is not readily obtainable. In 1964 police authorities claim there were only 60,000 drug addicts in the U.S. while medical people estimate a population of at least 100,000 to 500,000 active addicts. In Canada drug addiction is restricted to the Vancouver and Toronto areas and census figures are fairly exact. Confidential figures state that there are 3,355 drug addicts in Canada with at least ninety percent classed as criminal addicts or addicts who have been convicted for narcotic offences.⁴

The remaining ten percent consists of medical addicts (those addicted by medical treatment) and professional addicts (physicians and nurses). Little is known about these sub-groups as they are so few in number, but it is suspected that they bear close profile resemblance to criminal addicts and delinquents on psychological tests.⁵ This thesis will deal only with criminal addicts as they are the main addict group and pose the greatest problem for both law enforcement and rehabilitative agencies.

⁴ S.J. Hammond, Division of Narcotic Control, Department of National Health and Welfare, Ottawa (private correspondence, 1964).

⁵ Harris E. Hill, "The Social Deviant and Initial Addiction to Narcotics and Alcohol" in the Quarterly Journal of Studies on Alcohol, Vol. 23, No. 4, 1962, p. 563.

The definition of what exactly constitutes a drug addict has been subject to change over the years as the drug addict's social status has changed from culture to culture. The presently accepted definition of drug addiction is "a state in which a person has lost the power of self-control with reference to a drug and abuses the drug to such an extent that the person or society is harmed".⁶

B. PHYSIOLOGICAL FACTORS IN DRUG ADDICTION

Although this study is concerned with the psychological study of drug addiction the physiological events that occur during the addiction process are reviewed.

Three physiological phenomena which have been studied extensively are "tolerance", "abstinence" and "relapse". Tolerance is the lessening of the effect of a drug with repeated use. In heroin addiction this factor is quite common, and as tolerance to heroin increases the addict concomitantly increases his intake of the drug so as to receive a greater "lift". The abstinence syndrome results from having the opiate withheld from the addict.

⁶ V.H. Vogel, H. Isbell and K.W. Chapman, "Present status of narcotic addiction", in the Journal of the American Medical Association, Vol. 138, 1948, p. 1019.

When this occurs various physiological signs of distress are noted such as dilation of the pupils, muscular contractions, vomiting and diarrhoea. There is a great variance in the severity of withdrawal symptoms in individual addicts. Some authors argue that the abstinence syndrome is primarily "psychological" in effect, but it has been shown that withdrawal symptoms have been observed in subcortical areas both in man⁷ and animals.^{8, 9} The term relapse refers to the process of becoming re-addicted after the addict has undergone a substantial period of time without the drug. The majority of explanations describe the dynamics of relapse from a psychic-need standpoint although Wikler¹⁰ has hinted at some learning theory conditioning principles founded on a quasi-neurological basis to account for relapse. Research relevant to this

7 A. Wikler, M.J. Pescor, E.M. Kallbaugh and R.J. Angelucci, "The effects of frontal lobotomy on the morphine abstinence syndrome in man", in the Archives of Neurology and Psychiatry, Vol. 67, 1952, p. 510-521.

8 A. Wikler, "Reaction of dogs without the neo-cortex during cycles of addiction to morphine and methadone", in the Archives of Neurology and Psychiatry, Vol. 67, 1952, p. 672-684.

9 A. Wikler and K. Frank, "Hindlimb reflexes of chronic spinal dogs during cycles of addiction to morphine and methadone", in the Journal of Pharmacology and Experimental Therapy, Vol. 94, 1948, p. 382.

10 A. Wikler, Opiate Addiction, Springfield, C.C. Thomas, 1953, viii-72 p.

will be reviewed more thoroughly in sub-section (4) of the research theories.

Some physiologists have attempted to explain the etiology of addiction on metabolic processes. The dual action theory¹¹ postulated that morphine has two separate actions upon the central nervous system, one depressant, the other excitory. The excitory action is the longer lasting and although masked by the depressant it allows for greater tolerance to addiction. Cellular tolerance theories posited that central nervous system cells became hyper-irritable as a result of addiction and morphine restores the homeostasis. Studies on morphine content in urine supported the metabolic approach that a metabolic acceleration allows the addict to destroy morphine.¹² These theories are open to criticism and since 1940 research in this area has not progressed to any significant degree.

11 A.L. Tatum, M.H. SeEVERS and A.H. COLLINS, "Morphine Addiction and its physiological interpretation based on experimental evidences", in the Journal of Pharmacology and Experimental Therapeutics, Vol. 36, 1929, p. 447-475.

12 F.W. Oberst, "Free and bound morphine in the urine of drug addicts", in the Journal of Pharmacology and Experimental Therapeutics, Vol. 69, 1940, p. 240-251.

C. PSYCHOLOGY OF DRUG ADDICTION

Precisely the question of what drives a person to become addicted can be stated in this manner: "if there is no significant difference between the personality structures of addicts and non-addicts, drug addiction would seem to be primarily due to the action of drugs". If it can be shown "that the addict has a specific unique combination of psychological factors then those factors would be truly meaningful"¹³ in explaining why a person becomes addicted. The obvious inference being that the personality traits are the reason for the addiction. This thesis attempts to answer Nyswander's general hypothesis concerning the addict's specific unique combination of psychological factors.

In the review of the theories which report psychological factors that are considered causal to narcotic addiction the theories will be sub-divided into 1) Early theories, 2) Psychiatric theories, 3) Sociological theories and 4) Research theories.

13 Nyswander, Op. cit., p. 64.

1. Early Theories

The early theories were remarkable in that they still reflect the mainstream of thought current in the field of drug addiction. That is, they stated the addict chooses the specific effect of heroin in order to satisfy his unique needs. These needs would be reflected in the addict's personality which was assumed to be of an inimitable type. This view was prominent in the very first theory by ¹⁴Stille and in the psychoanalytic contributions of ¹⁵Rado and ¹⁶Glover.

Another hypothesis was put forth by ¹⁷Strauss who classed addicts as psychotics with agitated depressions or as "normals" who were trying to alleviate physical pain.

¹⁴ A. Stille, The National Dispensatory, Lea Bros. and Co., Philadelphia, 1894, quoted by R.M. Felix in "An Appraisal of the Personality Type of Addicts", in the American Journal of Psychiatry, Vol. 100, 1944, p. 462.

¹⁵ J. Rado, "The Psychic Effect of Intoxicants", in the International Journal of Psychoanalysis, Vol. 7, 1926, p. 396, quoted by P. Zimmering in "Heroin Addiction in Adolescent Boys", in the Journal of Nervous and Mental Disorders, Vol. 114, 1951, p. 24.

¹⁶ F. Glover, "On the Etiology of Drug Addiction", in the International Journal of Psychoanalysis, Vol. 13, 1932, p. 298, quoted by Zimmering, *Op. cit.*, p. 25.

¹⁷ E. Strauss, "On the Pathology of the Chronic Drug Addict", in the Monthly for Physiology and Neurology, Vol. 46, 1919, p. 1-20, quoted by A. Wikler in Opiate Addiction, Springfield, C.C. Thomas, 1953, p. 5.

Much of the literature at this time was embellished by melodramatic accounts adapted from De Quincey's self-confessions¹⁸ and Claude's¹⁹ romantic description of the addict as a self-willed, sensitive, intelligent and artistically imaginative person. None of these authors supported their arguments with scientific evidence and theories were based upon personal observation only.

2. Psychiatric Theories

As drug addiction is primarily a medical problem psychiatrists' views have been quite prominent. The psychiatric approach, particularly in reference to drug addiction, has been generally one of observation of individual clinical cases that have been referred to the psychiatrist in the clinical situation. Observations were based on small samples without the use of psychological tools to support conclusions.

²⁰
Kolb's review supplied the first comprehensive review of the spreading addiction problem in the United

¹⁸ Thomas De Quincey, The Confessions of an English Opium Eater, 1821.

¹⁹ H. Claude, "On Several Social Poisons, Morphine and Cocaine", in the Scientific Review, Vol. 61, 1923, quoted by Felix, *Op. cit.*, p. 462.

²⁰ Laurence Kolb, "Types and Characteristics of Drug Addicts", in Mental Hygiene, Vol. 10, 1925, p. 300-313.

States and classified narcotic addicts as neurotics characterized by psychopathic traits who, under inebriated impulses, sought heroin. The term psychopathic was defined in terms of criminal activity. Sinmel²¹ labelled addicts as manic-depressives due to their periods of great activity (in seeking the drug) and then depression (as a result of the effect of the drug). Felix²² revised Kolb's classification and categorized addicts as normals, psychopaths, individuals with associated psychoses and neuroses, with normals being the minority group. Both Kolb and Felix were content to stay away from any psychodynamic explanation of the addict's behavior.

Abraham Wikler,^{23, 24} who has been the most prominent theorist in the field, has stated that the addict's

21 E. Sinmel, "On the Problem of Coercion and Addiction", in the Medical Congress for Psychotherapy, 1930, quoted by Zimmering, Op. cit., p. 24.

22 R.M. Felix, "An Appraisal of the Personality Types of the Addict", in the American Journal of Psychiatry, Vol. 100, 1944, p. 462-467.

23 A. Wikler and R. Rasor, "Psychiatric Aspects of Drug Addiction", in the American Journal of Medicine, Vol. 14, No. 5, 1953, p. 556-570.

24 A. Wikler, "A Psychodynamic study of a patient during experimental self-regulated re-addiction to morphine", in the Psychiatric Quarterly, Vol. 76, 1952, p. 270-293.

behavior is basically a form of self-therapy and the anxiety resulting from the addict's inability to handle his problems concerning his sexual image and role as an aggressive competitive male in to-day's society is controlled by his heroin habit. Thus the addict's unique needs and problems, i.e. sex, hunger, male assertiveness, are satisfied by the specific effect of heroin.

A further elaboration of Wikler's ideas was provided by Nyswander.²⁵ She elaborates the avoidance of sex theory whereby heroin is a sexual symbol and provides sexual gratification thus enabling the addict to escape the responsibility of a mature sexual relationship. The avoidance of aggression hypothesis proposes that due to the addict's inability to cope with social pressures and compete in normal society for common goals (jobs, status, etc.) with other males, he gives in or breaks down and depends upon his narcotic. These explanations are supported by the fact that from twenty to forty years of age the sexual and aggression areas are most prominent in the life roles of men and this age span coincides with the usual age span of narcotic addicts when they are actively using drugs. After forty years of age the basic drives (sex, aggression)

25 Nyswander, Op. cit., p. 64-66.

slowly dissipate and there are also relatively few drug addicts over forty years of age.

Nyswander also has her own theory based on cumulative records and case histories. The traits she felt representative of the addict personality were superficial self-esteem, infantilism, hostility and pseudo-aggressivity, repressed exhibitionism, over-identification with the mother figure and idealization of the self-image.²⁶ Each of these traits is a fairly unique dimension particularly attributable to drug addicts. Furthermore, much of this behavior is so out of line with reality that it is schizo-affective in nature or can be classed as sub-clinical schizophrenia.²⁷ Since drug addict behavior has such resultant destructive effects supporters of this categorization feel it is definitely schizophrenic in nature.

An exploratory study by Eveson²⁸ of drug addicts incarcerated in the Kingston, Ontario, prisons posited that male drug addicts should show a much higher level of anxiety

26 Nyswander, Op. cit., p. 69-81.

27 Nyswander, Op. cit., p. 62.

28 Mark Eveson, "Drug Addiction, A Hypothesis for Experimental Test", in the Canadian Journal of Corrections, Vol. 15, No. 2, 1963, p. 110-113.

than other addicted offenders. This anxiety would be caused by conflicts within the sexual area and the attempted control of hostile impulses. In generalizing from a study of female addicts, Eveson²⁹ states that male addicts, of all criminal offenders, are the most passive and inadequate and they array themselves with an anti-social group in order to express their aggressions adequately.

This criteria of passivity and dependency was also implicated by Scott³⁰ in his psychiatric evaluation of a number of drug addicts in Ontario over the past seven years. According to the aforementioned author the type of crime a criminal commits is an indication of his type of personality. The bank robbery type is classed as aggressive, a fraud artist passive, and among the criminal hierarchy the addict is the most passive and dependent.

Yahraes³¹ states that the addict's habit is a psychological problem, and the sources of anxiety lie in the

29 Mark Eveson, "Research with Female Drug Addicts at the Prison for Women", in the Canadian Journal of Corrections, Vol. 6, No. 1, 1964, p. 21-30.

30 G.D. Scott, "Classification and Offense Characteristics of Criminal Behavior", a paper presented to the Forensic Psychiatric Seminar, Queen's University, Aug. 23, 1963.

31 Herbert Yahraes, "Narcotic Drug Addiction", in Mental Health Monograph, No. 2, U.S. Dept of Health, Education and Welfare, No. 1021, 1963, viii-22 p.

sexual and aggression areas. Furthermore, the addict is more disturbed than others in his immediate environment (lower socio-economic). Therefore among his delinquent friends the drug addict is the more severely maladjusted which is one of the main reasons he resorts to drugs.³²

A recent summary of the literature by Holmes³³ states that there has been much theorizing and few facts. Holmes outlines the psychiatric theorist's position that the addict's relapse is due to psychic discomfort and the psychoanalyst school which maintains that the addict has regressed to the oral stage of psychosexual development and is mother fixated. Holmes feels that in the future, with some basic, valid, controlled research, these psychiatric theories will be less emphasized and a psycho-pharmacological theory will offer a more adequate explanation, although he does not elaborate upon the latter point.

32 Yahraes, Op. cit., p. 5-7.

33 S.J. Holmes, "Chemical Comforts and Man", in the Canadian Mental Health Supplement, Dept. of National Health and Welfare, No. 41, 1964, p. 1-25.

3. Sociological Theories

As drug addiction is in part a social problem sociologists have attempted to interpret how social forces play their role in the addiction process. Lindesmith³⁴ posited that specific environmental conditions and personality factors were determinants of addiction. He felt that the addict is not motivated by psychological needs to seek heroin, rather, if the addict is in a social situation conducive to obtaining a drug and has the proper social attitudes he will take the drug. Lindesmith does not define, clarify or separate "attitudes" from personality.

Other sociologists have tried to discover social variables that correlate with drug addiction. Prescor³⁵ gave a percentage breakdown of drug addicts' family status and parental relationships. None of these statistics was compared to a control group but the conclusions drawn were that social and economic forces play some part in determining the onset of the addiction process. Stevenson's³⁶

³⁴ R.R. Lindesmith, "Opiate Addiction", Bloomington, Principia Press, 1947, ix-224 p.

³⁵ M.J. Prescor, "A Statistical Analysis of the Clinical Records of Hospitalized Drug Addicts", in Public Health Supplement, Vol. 143, 1943.

³⁶ G.H. Stevenson, G. Lewis, R. Lingley, G. Trasov and H. Stanfield, "Drug Addiction in British Columbia, A Research Survey", Vol. I, Dept. of Justice, 1956, p. 26-126.

comprehensive study of addicts in the Vancouver area could find no differences between criminal addicts and a random sample of criminals on variables such as type of childhood, family life, education, employment records, use of alcohol and tobacco, previous criminal records prior to addiction, and sexual experiences. Stevenson's results were enlightening because they showed that on many socio-economic variables ordinary criminals did not differ from criminal drug addicts. Secondly, the criminal drug addict's lengthy crime record before his first conviction for narcotics did not support the premise that the drug addict was only a criminal because of the narcotic laws. According to Stevenson the drug addict had as many sexual experiences as criminals from his own environment, and it does not seem, in this instance, that the drug addict is avoiding the sexual aspect of his life.

4. Research Theories

This sub-section deals with theoretical positions derived from the results of experimental research in contrast with previous theories which dealt mainly with dialectic orientated theories.

In 1947 Pfeffer and Ruble³⁷ reported that five percent of their addict population were classified as

³⁷ A.Z. Pfeffer and D.C. Ruble, "Chronic Psychosis and Addiction to Morphine", in the Archives of Neurology, Vol. 56, 1946, p. 665-672.

schizophrenic and as far as their sample was concerned they seriously doubted the literature that reported a high incidence of psychosis in narcotic addiction. Zimmering³⁸ studied adolescent addicts in New York and concluded that they had a pre-morbid personality which was particularly susceptible to drugs. Using a controlled study Zimmering³⁹ and his co-workers stated that the addict did not have a delinquent personality. On one hand drug addicts were soft spoken, non-impulsive and passive, but were easily frustrated, had no use for close interpersonal relationships, disregarded social mores and misdirected and channelled their hedonistic impulses towards punitive goals. Sexual conflict in the form of latent homosexuality was also indicated. It is apparent a number of contradictions exist as many drug addict type traits are easily applicable to the delinquent stereotype of behavior. In addition conclusions were based on a select sample totalling only twenty-two. The control group consisted of twelve hospitalized non-addicts. Details concerning statistical significance and matching procedure were not elucidated upon.

³⁸ Paul Zimmering, P. Toolen, R. Safrin and S.B. Wortis, "Heroin Addiction in Adolescent Boys", in the Journal of Nervous and Mental Disorders, Vol. 114, 1951, p. 19-34.

³⁹ Paul Zimmering, "Drug Addiction in Relation to Problems of Adolescence", in the American Journal of Psychiatry, Vol. 109, 1952, p. 272-278.

40

Gerard and Kornetsky⁴⁰ also reported that drug addicts did not share the general disposition of criminals and (addicts) distinctly exhibited non-psychopathic behavior. Identical to Zimmering's study, Gerard and Kornetsky applied a rather loose test-based psychodynamic interpretation to their results which could easily be applied to criminals. A further conclusion was that the addict was an extremely passive person who was more seriously disturbed than other associates in his immediate environment, such as the case mentioned by Yahraes'⁴¹ previous paper. The control group of non-addicts numbered twenty-three out of an original sample of ninety-one. The representativeness of the sample was in question. The non-addict group was paid by the hour to undergo projective tests. The two groups differed significantly on the variable of intelligence, and scores on tests seemed to be influenced by overly subjective interpretations.

The only study in the literature that provides evidence to the contrary of those findings previously listed

⁴⁰ D.L. Gerard and C. Kornetsky, "Adolescent Opiate Addiction, A Study of Control and Addict Subjects", in the Psychiatric Quarterly, Vol. 10, 1955, p. 457-486.

⁴¹ Yahraes, Op. cit., p. 5-7.

⁴²
was by Stanton. Stanton used the MMPI for large scale testing of penitentiary inmates in Pennsylvania and found that drug addicts did not differ from the remainder of the prison population. Stanton's study was not concerned with drug addicts in particular and he did not discuss or elaborate in any thorough manner upon his interesting finding. Stanton also found that the organismic factors of age and IQ must be controlled for in any group studies using the MMPI on penal populations.

⁴³
Stevenson's survey contained, in part, a controlled psychological study by Lingley⁴⁴ comparing addicts and penal inmates. Lingley used a combination of objective and subjective tests, however three of the six tests used did not have proper adult norms and a statistical test was not applied to the projective test scores. A large number of the addict population refused testing and they may have constituted a special sub-group in themselves.

⁴² J.M. Stanton, "Group Personality Profile Related to Aspects of Antisocial Behavior", in the Journal of Criminal Law, Criminology and Police Science, Vol. 47, 1956 p. 340-349.

⁴³ Stevenson, et al., Op. cit., p. 26-126.

⁴⁴ Lingley, Op. cit., p. 201-227.

Lingley's results indicate that drug addicts' behavior was less stable, objective and purposeful than the control group delinquents and their range of interests was more restricted. There were also trends on projective tests reporting some differences among the two groups involving traits of emotional immaturity. In this category were included traits of lack of intellectual control over emotions, lack of constructive purpose and self reliance, with restriction of interests and egocentricity. Despite finding differences, Lingley argued that possibly drug addiction was only a form of delinquency. Another point raised by the study was that the narcotic problem, both from a psychological and a sociological viewpoint, is not identical in the U.S. and Canada.

Recent studies by Hill⁴⁵ have reported a high "psychopathic" content in drug addicts' behavior. Hill felt that the pre-addiction personality did not undergo a marked change following addiction, and the drug addict personality characteristics were fairly constant from

⁴⁵ Harris E. Hill, C.A. Haertzen and R. Glaser, "Personality Characteristics of Narcotic Addicts as Indicated by the MMPI", in the Journal of General Psychology, Vol. 62, 1960, p. 127-139.

adolescence to old age. Chein's⁴⁶ and Monachesi's⁴⁷ researches support this last fact. Hill's study also classified addicts with the MMPI as a criteria. The categories were: psychopaths - 30%, neurotics - 19%, schizoidal - 17%, normals - 5%, and 29% not classifiable.

A factor analytic study of alcoholics, drug addicts and criminals by Hill⁴⁸ found addicts differed from a group of criminals on the depression, masculinity-femininity and hypomanic scales on the MMPI. On a rating scale of "psychopathy" addicts had a lower score than criminals. Conclusions were that criminals have less manifest anxiety and were more "manic" than addicts. Criminals also have more disregard for social norms and elicit more bizarre responses. These differences could be due to several factors. Criminals were selected from a maximum security prison that was hardly representative of inmates in general.

⁴⁶ I. Chein and E. Rosenfield, "Juvenile Narcotics Use", in Law and Contemporary Problems, Vol. 22, 1957, p. 52-68.

⁴⁷ Elio D. Monachesi, "Personality Characteristics of Institutionalized Male Delinquents", in the Journal of Criminology, Criminal Law and Police Science, Vol. 41, 1950-51, p. 167-172.

⁴⁸ Harris E. Hill, C.A. Maertzen and H. Davis, "An MMPI Factor Analytic Study of Alcoholics, Narcotic Addicts and Criminals", in the Quarterly Journal of Studies on Alcohol, Vol. 23, No. 3, 1962, p. 562-582.

The intelligence variable was not controlled for, and the use of factor analysis on the MMPI, which has overlapping scale items, can give spurious combinations of results or factors.⁴⁹

The latest psychoanalytic theory based on research findings by Savitt⁵⁰ stated that drug addiction was an impulse disorder. The drug addict's object relationships were on an archaic level. He (the addict) feared disintegration, love and gratification, and tension, and bypassed the oral route in favor of the more primitive intravenous method. The injection symbolically represented an attempt to re-establish fusion with the mother's breast. The opiate was a tension relieving mechanism that preserved the infantile ego. In comparison to other psychiatric classifications the drug addict was the most "primitive". The key to the etiology of drug addiction was extreme mother deprivation.

49 Gerald H. Shure and M.S. Rogers, "Note of Caution on the Factor Analysis of the MMPI", in the Psychological Bulletin, Vol. 63, No. 1, 1965, p. 14-19.

50 R.A. Savitt, "Psychoanalytic Studies on Addiction", in the Psychoanalytic Quarterly, Vol. 32, 1963, p. 43-57.

Recent hypotheses by Hill,⁵¹ Nichols⁵² and Wikler⁵³

avoid the myriad of psychological theories and apply the use of learning theory to drug addict behavior. They feel that the narcotic addict is primarily a criminal, becomes addicted by chance, and relapses due to the powerful addicting and reinforcing effects of heroin. The dynamics of such a relapse could be explained within the general concepts of Hull and Skinner's learning theories.⁵⁴ The assumption that there are no primary personality differences between addicts and criminals has so far been partially disproven even by Hill⁵⁵ himself, so further research is still needed to settle the question.

51 Harris E. Hill, "The Social Deviant and Initial Addiction to Narcotics and Alcohol", in the Quarterly Journal of Studies on Alcohol, Vol. 23, No. 4, 1962, p. 562-582.

52 John R. Nichols, "How Opiates Change Behavior", in Scientific American, Vol. 212, No. 2, 1965, p. 80-88.

53 A. Wikler and F.T. Pescor, "Further Studies on the Use of Etonitazene in Drinking Water as a Reinforcing Agent in Conditioning of Opiod Drug-Seeking Behavior in Rats"; personal communication, 1964.

54 Ernest Hilgard, Theories of Learning, New York, Appleton-Century-Crofts, 1948, ix-563 p.

55 Hill, Op. cit., p. 562-582.

SUMMARY

The review of the literature generally supports the viewpoint that the narcotic addict has a unique cluster of personality traits which distinguish him from other pathological groups. Most of the theories have been dialectic in nature while the theories that have been developed from research findings are open to question on the basis of faulty controls, inadequate sampling and lack of statistical analysis.

There are some personality trends that predominate in the literature. The general statement is that the addict is unique from a psychological standpoint. Some studies state emphatically that the addict is not a criminal or psychopath. The element of extreme passivity is frequently mentioned, probably caused by fear of sexual and competitive roles in society. The addict is also thought to be more neurotically disturbed than other nosological groups. Specific areas such as the depression, masculinity-femininity, hypomanic scales of the MMPI have been indicated. Other specific traits as latent homosexuality, oral regression, sub-clinical schizophrenia and manic-depressive syndrome are also supposedly applicable to narcotic addicts. There is some evidence that drug addicts are markedly similar to criminals in personality structure. If this

were to be proven so, then the addict problem would be simplified. The study, then, will attempt to clarify the validity or lack of such in regard to drug addict personality theories previously mentioned.

At present the personality traits attributed to narcotic addicts are poorly defined, are derived from questionable research, and accomplish little except to add confusion to an already complex social and psychiatric problem.

CHAPTER II

EXPERIMENTAL DESIGN

In light of the information gathered in the review of the literature chapter II contains the reasoning leading up to the statement of the hypothesis. The method and procedures involved in testing the hypothesis are described. The nature of the subjects, description of the test material used and statistical results are given.

1. Statement of the Hypothesis

The selection of a proper hypothesis posed some difficulty for, as we have indicated previously in chapter I, the literature was not clear as to what exact unique cluster of traits characterized the drug addict. It was pointed out that the validity of the research supporting a drug addict personality was suspect on the grounds of experimental design but, on the other hand, there was only meagre evidence¹ that narcotic addicts were not unique psychologically. Thus, in view of the majority of expert opinion that favored finding test-based psychological differences between addicts and non-addicts, the hypothesis predicted

¹ J.M. Stanton, "Group Personality Profile Related to Aspects of Antisocial Behavior", in the Journal of Criminal Law, Criminology and Police Science, Vol. 47, 1956, p. 340-349.

from a positive viewpoint in that it predicted differences would be found between addicts and a comparable control group.

Another problem was encountered in that there was a surprising lack of unanimity of opinion among researchers about just exactly what differences might occur. Some personality trends were more prominent but there were many contradictory theories brought up in the literature. Therefore, any hypothesis attempting to predict all the theories represented in the literature would either be very unwieldy or would have to be partitioned into numerous sub-categories.

It was thought that an alternate solution lay in postulating from within a general framework, and whatever differences were found could be applied to whatever theory the results seemed to support.

The hypothesis was therefore stated in the following form: "that there will be differences found between criminal male narcotic addicts and a comparable control group as measured by a reliable test of personality". The null hypothesis predicted no differences would be found. The prime hypothesis as it stands is incomplete, for the control group and measuring instrument have not been specified. These crucial points are elaborated upon in the method.

2. Method

In order to test the hypothesis, experimental conditions were set up whereby any psychological test differences were attributed solely to the drug addicts and were not due to artifacts of an inadequate control group. Frequently research on drug addiction had failed to meet the qualification of using even a control group, and experiments that have employed controls have used groups of normal people or biased samples of some sort. The use of "normal" controls in clinical research has been common practice, but in fact these types of controls control for very little.^{2, 3}

It was virtually impossible to match groups on all relevant variables, so it seemed that random sampling techniques might be more desirable. This, in fact, had been done previously by Hill⁴ but he sampled from a select

² Benton J. Underwood, Psychological Research, New York, Appleton-Century-Crofts, 1957, p. 116-118.

³ H.J. Eysenck, Handbook of Abnormal Psychology, New York, Basic Books Incorporated, 1960, p. 697-725.

⁴ Harris E. Hill, C.A. Maertzen and H. Davis, "An MMPI Factor Analytic Study of Alcoholics, Narcotic Addicts, and Criminals", in the Quarterly Journal of Studies on Alcohol, Vol. 23, #3, 1962, p. 411-431.

population. The method adopted here was similar to that of Hill, for it seemed reasonable to assume that if the great majority of drug addicts were classed as criminals then a suitable control group would necessarily consist of criminals. The random selection of criminals was completed before the subjects were classified in any manner by prison authorities.

It was also felt that it was not enough to have a proper randomly selected control group and that if possible the control subjects should also have had opportunities, as far as one could gather by case histories and interview, to come in contact with narcotics. Since the addict subjects habituate only a select part of Ontario, i.e. Toronto, the non-addict subjects should also come from around this area or have at least lived a major part of their lives in an environment that was conducive to obtaining narcotics. The random sample was in essence a random sample of criminals from a specified geographical area. The exact procedure of the sampling will be described in the procedure.

Another check on the sampling was added by completing intelligence test and age data on all subjects. The sampling should control for these two important variables⁵

⁵ Stanton, Op. cit., p. 346.

but a supplementary check was taken to see if there were any large discrepancies between groups on these variables.

The criteria of objectivity and general all around usefulness are of importance in selecting a test to measure psychological disease entities. Previous research relied heavily upon projective techniques which, although useful in individual diagnosis, were time-consuming and subject to prejudiced interpretation. What was needed was a psychometric instrument that could provide in a simple test scores on all the most important phases of personality. The Minnesota Multiphasic Personality Inventory⁶ was chosen as this inventory, while it does not provide a complete assessment of personality, is very applicable to testing social deviants and provides reliable estimates of neurotic and schizophrenic-like disorders.⁷ The test is also easy to complete, suitable for group testing and objectively scored. The MMPI has also been subjected to a great deal of research and in comparison with other personality tests it is relatively sophisticated statistically and well

⁶ Starke R. Hathaway and J. Charnley McKinley, The Minnesota Multiphasic Personality Inventory, New York, The Psychological Corporation, 1951, p. 1-31.

⁷ Hill, Op. cit., p. 421.

standardized. For a measure of intelligence the Beta IQ test⁹ was used.

A purely practical problem that occurred which is common to "field" studies of this type was the obtaining of a suitable number of subjects. There are few addicts in Canada although according to the R.C.M.P.¹⁰ there are several hundred in Ontario. How many of these are actual heroin addicts is not actually known. In any case the only place where addicts could be found in sufficient quantity was in jail. Kingston Penitentiary is about the main housing institution for drug addicts. Some addicts go to reformatory but the sentencing of an addict to either federal or provincial houses does not seem to be based on any sound rationale on the part of the law courts. This study used addicts who were sentenced to Kingston Federal Penitentiary. It would be preferable to test subjects on the "street" but

8 Hans J. Eysenck in the Third Mental Measurements Year Book, edited by V. Krisen Buros, Highland Park, Gryphon Press, 1949, p. 60.

9 R.M. Lindner and M. Guivitz, The Beta Intelligence Test, New York, The Psychological Corporation, 1957, p. 1-10.

10 S.J. Hammond, Division of Narcotic Control, Department of National Health and Welfare, private correspondence, Ottawa, 1964.

this was an impossibility considering the narcotic laws.

The data was analyzed using a non-correlated t-test. The formula was taken from Edwards (1960).¹¹ The t-test was applied to twelve scales of the MMPI. The data seemed ideal for parametric statistics and none of the assumptions¹² of the t-test was isolated.

3. Procedure

MMPI and IQ testing of subjects took place at Kingston, Ontario, Federal Penitentiary from the period of January 1, 1962 to January 1, 1965 with the following exceptions: a) for part of 1962 and 1963 recidivists were not being tested and thus much valuable data was lost; b) the author was present as a psychological intern during part of 1962 and 1963 and managed to test some addict recidivists; c) the non-addict sample was gathered from test scores taken from the period from January 1, 1962 to September 1, 1964, with the exceptions noted in a).

All subjects were tested by trained clerks or the experimenter approximately two weeks after arrival to penitentiary. Testing was administered in groups or at

¹¹ Allen L. Edwards, Experimental Design in Psychological Research, New York, Holt, Reinhart and Winston, 1960, p. 93.

¹² Edwards, Op. cit., p. 105-114.

times individually by the experimenter when routine testing of recidivists was not being undertaken by the psychology department. Testing time allowed by prison authorities was only two hours at the most. For this reason "waste" items and the MMPI social introversion scale were omitted, leaving 39¹ items. Despite the reduced number of items some inmates had difficulty completing the test on time. All key questions pertaining to the other twelve MMPI scales were left intact. A total of fifty-one addict profiles were completed in the three-year period. Fourteen addicts were not tested. Seven were not tested as recidivists during part of 1962 and 1963 while seven refused testing. The inmates who refused usually did so in a group of two or three. Four of the refusals later turned out to be well behaved inmates. A total of 1500 non-addict profiles were completed in the twenty-month span. From these original 1500 profiles two hundred samples were drawn using Edwards's random numbers.¹³ Out of this number, 82 test results were selected. This final group was chosen since, so far as could be ascertained from case history, police reports and interview, these subjects had previous opportunities to obtain narcotics but never became addicted or used narcotics. The use of the non-addict selecting criteria was also used to select addicts. A thorough

13 Edwards, Op. cit., p. 332-336.

review on the addict had been done prior to his coming to penitentiary, thus drug addicts' identities were easy to sort out from the other criminals.

4. Test Material

The Minnesota Multiphasic Personality Inventory (MMPI) has been discussed previously in this chapter. The MMPI scales that were used in this study are briefly described from Hathaway's¹⁴ manual and Barry's¹⁵ review of the MMPI literature.

Clinical scales:

1. Hypochondriasis Scale (Hs) - a complaint scale that measures the amount of abnormal concern about bodily functions.
2. Depression Scale (D) - a measure of the symptom complex, depression.
3. Hysteria Scale (Hy) - a measure of conversion-type hysteria symptoms.
4. Psychopathic Deviate Scale (Pd) - measures traits such as absence of deep emotional response, inability to profit from experience, and the disregard of social mores.
5. Interest Scale (MF) - a measure of sophistication of aesthetic interests, possibly passivity and poor sexual identification.
6. Paranoia Scale (Pa) - a measure of fixed false beliefs, undue suspiciousness.
7. Psychasthenia Scale (Pt) - a measure of neurotic compulsive and phobic behavior.

14 Hathaway, Op. cit., p. 18-21.

15 William Barry, personal course notes on the interpretation of the MMPI, University of Ottawa, 1964.

8. Schizophrenia Scale (Sc) - a measure of agitated neurosis, bizarre unusual thoughts and, in severe cases, psychotic symptoms.
9. Hypomania Scale (Ma) - a measure of marked overproductivity in thought and action.
10. Validity Scales:
 - L - Lie Scale - a measure of deliberate falsification, rigidity, uncooperativeness.
 - F - Validity Scale - a measure of test faking or actual malingering.
 - K - a measure of psychological defensiveness and attitude.

The social introversion scale was not included.

Little is known of this scale and by eliminating it the test manual was cut down to 391 items. The reasons for this were elaborated upon before. Standard MMPI scoring keys were used to tabulate raw scores for each scale.

The regulation Beta IQ test was used. All six sub-test scores were weighted to accumulate an overall IQ score.

5. Subjects

The drug addict and non-addict criminals had all received sentences of two years or more. Their crimes were break and enter, robbery, theft and fraud. Ages of both groups ranged from seventeen to sixty-three, and intelligence scores ranged from a Beta classification of dull normal to very superior. The mean age and IQ scores of addicts were 30.47 and 104.04. The mean age and IQ scores of non-addict

were 29.45 and 103.20 respectively. A brief history of the subjects is contained in the Appendix.

6. Results

The accompanying table is a list of the mean raw scores of the addict and non-addict groups on the MMPI scales. The significance level was set at .05. No significance was detected using a two-tailed non-correlated t-test for all scales. The levels of significance obtained for each scale are indicated. The total degree of freedom was 131.

Only two scales, the MF and Hy, showed slight tendencies towards significance on behalf of the experimental group. Four MMPI scales (L, F, Pt, Sc) had higher mean scores for the control group. Six scales (F, Hs, Pd, Pa, Pt, Sc) were very similar among groups in regard to mean scores and distribution of scores, with values below .50. For significance to occur at the .05 level a t value of 1.98 was needed.

Figure I contains a profile analysis of each group's performance on all scales of the MMPI. The scale scores are K-corrected transformed scores with a K value of 15 for addicts and 14 for non-addicts. The profile is the standard for the MMPI. The normal range lies within T=70 to T=30.

Table I.-

A Table of Mean Scores and Significance Levels
of Addicts and Non-Addicts on Twelve MMPI Scales.

MMPI Scale	Mean Scores Addict-Non-Addict	T values and Significance Levels
L	3.53 - 3.93	.91 N.S., $p > .05$
F	7.76 - 8.00	.30 N.S. "
K	14.65 - 14.18	.53 N.S. "
Hs	6.59 - 6.57	.02 N.S. "
D	23.20 - 22.55	.63 N.S. "
Hy	22.41 - 21.23	1.34 N.S. "
Pd	25.27 - 24.94	.43 N.S. "
MF	25.27 - 24.07	1.46 N.S. "
Pa	10.96 - 10.95	.05 N.S. "
Pt	15.47 - 15.59	.08 N.S. "
Sc	14.55 - 15.34	.51 N.S. "
Ma	20.18 - 20.04	.16 N.S. "

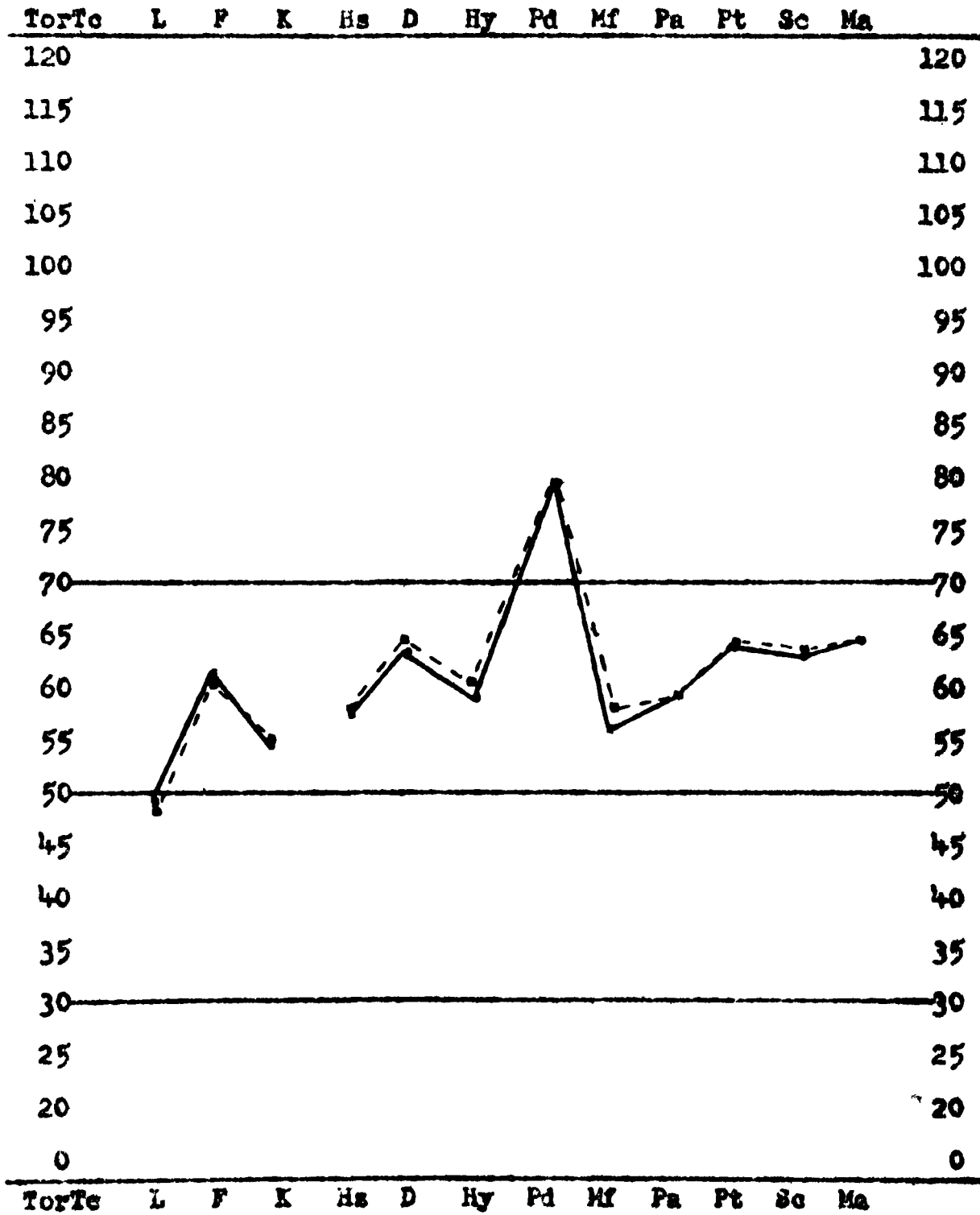


Figure 1. An MMPI Profile of Addicts (broken line) and Non-Addicts (solid line) using Transformed Scores on a Standard MMPI Profile Sheet.

The contours of the two groups' profiles are quite alike. Transformed score values lie within the upper half of the normal range. The psychopathic deviate scale with a T of almost eighty for both groups is the only scale well above normal limits.

CHAPTER III

DISCUSSION OF RESULTS

1. Statistical Results Applied to Theoretical Positions

The results were uniformly negative. The drug addict scale scores were markedly similar to the control group scale scores. Specific areas such as latent homosexuality, sub-clinical schizophrenia, manic depressive syndrome, egocentricity, disregard of social mores and hostility were not significantly different among groups. The D - depression, Mf - interest, and Hy - hypomanic scales were similar although the addict group showed a slight tendency to be greater than the non-addicts on the Mf scale. It would be difficult to justify attaching an interpretation to this result because even if the sample was larger significance could not be wrung out of the data.

The consideration that the drug addict is more neurotically disturbed than other types of groups, e.g. criminals, was not apparent. The scales that measured that type of maladjustment were within the normal range. The control group had higher mean scores on two neurotic scale variables (Pt, Sc). The theories of extreme addict passivity were not borne out. High scores on the Pd scale did not support this. An argument based on the Mf scale did not warrant such a conclusion.

The research that posited that drug addicts did not display criminal and/or "psychopathic" traits was not supported. The addict scores on the Pd scale were well above normal limits. The Pd scale, as noted previously, measures the similarity of subjects to a general group that disregard social mores and end up in serious trouble such as stealing, etc. Secondly, addict scale scores on all dimensions were similar to the criminal group. It must be noted that the studies which stated that addicts were not criminals described their addict groups in psychological terms that were quite descriptive of delinquents in general.

The results lend strong support to the general theory that drug addicts are criminals and that drug addiction may be only a symptom of delinquent behavior and not a special psychological entity in itself. It would be expected that one of the twelve scales tested would show significance even if by chance. This was not the case, and the immediate hypothesis raised was whether the two groups were similar within the scope of this study. The hypothesis was stated in the positive form; it was disproved, and the null hypothesis was supported. From a logical standpoint a null form was not used because the null hypothesis cannot be proved. In predicting differences it was hoped that the hypothesis would be rejected and similarities found. Unfortunately, the nature of clinical research is such that

one rarely looks for similarities and as of yet there are no statistical techniques that are accurately designed to state reliably that there are no differences between group A and group B on a specific variable. The statistics employed in this study approached the problem in a backhand fashion. The differences between scales were negligible and so much so that the variances between several scales were very slight. Absolute similarity cannot be accepted, as test scores for each group were not exactly equal, but the margin or error was minimal enough to certainly allow for a conclusion that the personality makeup of a group of drug addicts was not unlike that of a random sample of criminals as measured by the MMPI.

In conclusion, if two groups give response measures that are very much alike on certain variables as measured by an instrument or technique of some sort, then a single process can be inferred. In this particular case the drug addict personality as a phenomenon did not differ from the criminal personality as measured within the bounds of this experiment. Thus, the problem has been simplified to an extent and results suggest that whatever components or factors go to make up the drug addict personality also equally apply to criminals. Future research attempting to separate drug addicts from non-addicts on various psychiatric personality concepts would seem to be futile and superfluous.

2. Problems Concerning the Experimental Design

One of the main difficulties encountered in this sort of clinical field study is one of a purely practical nature. In attempting to complete the task consideration must be given to the environment in which the research is undertaken. The rigid and sometimes inconveniencing rules of a prison setting made the selection and testing of subjects difficult. In order to obtain a reasonable number of experimental subjects an inordinate amount of time had to be spent waiting for subjects to come to prison. It took three years to obtain a sufficient number in this case. The peculiar testing program of the psychology department (failure to test recidivists) did not make it a simple matter of going through files to obtain data. On several occasions valuable subjects had to be literally searched for and special testing sessions set up. Even then several subjects were missed when the experimenter was at school. However, the environment in which the study was carried out was valuable in that some meaningful observations of addict life in the field situation of the prison were made.

Relating to specific problems of design a question could be asked of the representativeness of the addict sample. Sixty-five addicts came to Kingston Penitentiary in a three-year period. Fifty-one addicts were tested.

There are supposedly at least several hundred drug addicts in the Ontario area of which ninety percent are criminal addicts. Quite a few addicts are sent to reformatory, but no more so than to penitentiary. The proportion of the estimated total addict population in Ontario that come to jail is small indeed. It may be that there are fewer addicts than estimated, or else there are quite a few known to the authorities that are being allowed to carry on their habit in the street. Whatever the case, one third (see Appendix 1) of the tested addict group could be classed as habitual institutionalized criminals, while eight subjects had relatively brief records. It is impossible to determine if the criminal addicts not in jail at present have similar criminal records, but available evidence^{1, 2} indicates that at least on the MMPI,³ addicts with long records have markedly similar profiles to addicts who have few convictions. The factor of institutionalization seemed to have little effect.

1 Harris E. Hill, et al., "Personality Characteristics of Narcotic Addicts as Indicated by the MMPI", in the Journal of General Psychology, Vol. 63, 1960, p. 127-139.

2 I. Chein and E. Rosenfield, "Juvenile Narcotics Use," in Law and Contemporary Problems, Vol. 23, 1957, p. 52-68.

3 Hill, Op. cit., p. 127-139.

The degree of generalization of the results reported here is difficult to ascertain. Strictly speaking the discussion of the statistical results is applicable only to the sample of addicts found in Kingston Penitentiary. It would, however, be reasonable to assume that drug addicts on the West Coast and other areas of Canada are not fundamentally different from area to area. The nature of crime and the type of people committing the crimes certainly do not seem to vary from city to city. The assumption has never been disproven to the knowledge of the author. Generalization of results to other countries would be hard to justify, although in comparison to the United States many similarities do exist. Generalization of results to female addicts would have to be guarded, for the situation in which female addicts are found seems to be different from that of males.

Another point of contention concerns the test used. It is possible that the MMPI was not sensitive enough to subtle differences between groups. Several other tests could be used, but the justification of using the MMPI in the particular situation has been argued for previously in Chapter II.

⁴ Mark Eveson, "Research with Female Drug Addicts at the Prison for Women", in the Canadian Journal of Corrections, Vol. 6, No. 1, 1964, p. 21-30.

3. Implications for Future Studies

If, as Nyswander⁵ stated, no differences on psychological variables could be found between addicts and a comparable control group, then the reason addiction occurs is primarily due to the action of the drug. This statement has some truth, for the chemical action of heroin certainly does produce physical dependence. The taking of a morphine alkaloid is restricted generally to the criminal element and addiction to the opiate may be due primarily to "chance" factors, although events in life are seldom random. In trying to avoid the confusion and unreliability of a psychodynamic approach to drug addiction it might prove to be more economical and logical to place the dynamics of addiction within a learning theory framework. The taking of a drug is a learned instrumental response which is strongly reinforcing. Certain environmental factors can produce learning situations where the probability of making such a response is greater. Such situations are found within the criminal element. With this approach the nebulous personality concepts are avoided and at least the theory is based on valid experimental learning concepts founded in the laboratory. A more sophisticated statement of the author's

⁵ Marie Nyswander, The Drug Addict as a Patient, New York and London, Grunne and Stratton, 1956, p. 60-64.

reasoning can be found in Nichols⁶ research. This type of theorizing which is based on some of the more practical concepts of Hull and Skinner seems to show some promise. What has just been stated is of course gross oversimplification of the drug addiction problem. Many variables remain to be tested, but possibly a simple learning model (re- drug addiction) will prove more fruitful than the complex ones used previously.

4. Summary and Conclusions

The general theory that the drug addict is a drug addict because of his unique personality traits and needs that seek the specific effect of opiates was tested. A review of the literature indicated that few authors agreed on the personality traits that were particularly applicable to drug addicts. The results supported the hypothesis that the drug addict's personality traits as measured by the MMPI are very like the ones attributed to a random sample of urban criminals within the general area of Ontario and specifically those subjects found in Kingston Penitentiary. It was suggested that a theoretical position based on general learning theory might generate some valuable research in the future.

⁶ John R. Nichols, "How Opiates Change Behavior", in Scientific American, Vol. 212, No. 2, 1965, p. 80-88.

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Hill, Harris E., C.A. Haertzen and R. Glaser, "Personality Characteristics of Narcotic Addicts as Indicated by the MMPI", in the Journal of General Psychology, Vol. 62, 1960, p. 127-139.

An exploratory investigation of drug addicts' personality as measured by the MMPI.

-----, "An MMPI Factor Analytic Study of Alcoholics, Narcotic Addicts, and Criminals", in the Quarterly Journal of Studies on Alcohol, Vol. 23, No. 3, 1962, p. 567-582.

A cross sectional study that used fairly sophisticated experimental techniques in evaluating personality differences among the three groups.

-----, "The Social Deviant and Initial Addiction to Narcotics and Alcohol", in the Quarterly Journal of Studies on Alcohol, Vol. 23, No. 4, 1962, p. 562-582.

An attempt to integrate previous research into an organized body which will bear fruit in future research.

Nichols, John R., "How Opiates Change Behavior", in Scientific American, Vol. 212, No. 2, 1965, p. 80-88.

A new approach to drug addiction based on learning theory founded on basic research.

Nyswander, Marie, The Drug Addict as a Patient, New York and London, Grunne and Stratton, 1956, xi-179 p.

A basic text that provides valuable material on the history of addiction, the various theories, especially Wikler's, and suggests possible treatment of addicts.

Stevenson, George H., R.A. Lingley, et al., "Drug Addiction in British Columbia, A Research Survey", Vol. I and Vol. II, Dept. of Justice, Canada, 1956, 567 p.

The only study on Canadian drug addicts that presents useful information concerning social variables. Also a thorough review of the problem.

Stanton, J.M., "Group Personality Profile Related to Aspects of Antisocial Behavior", in the Journal of Criminal Law, Criminology and Police Science, Vol. 47, 1956, p. 340-349.

Although not concerned with drug addiction, this study provides valuable information pertaining to addiction which has been ignored by authors in the field.

Wikler, Abraham, Opiate Addiction, Springfield,
C.C. Thomas, 1956, viii-72 p.

A handbook on addiction that summarizes the views
of the most prominent researcher in the field of addiction.

APPENDIX 1
SUMMARY OF THE STATISTICAL ANALYSIS

APPENDIX 1

SUMMARY OF THE STATISTICAL ANALYSIS

$$\text{Formula: } t = \frac{\bar{X} - \bar{Y}}{\sqrt{\frac{z_x^2 + z_y^2}{N_x + N_y - 2} \left[\frac{1}{N_x} + \frac{1}{N_y} \right]}}$$

$$\text{with } z_x^2 = z_x^2 - \frac{(z_x)^2}{N}$$

$$z_y^2 = z_y^2 - \frac{(z_y)^2}{N}$$

$N_x + N_y - 2 = 131$ degrees of freedom

$$\frac{1}{N_x} + \frac{1}{N_y} = .032$$

X = Addicts

Y = Non-Addicts

APPENDIX 1

<u>Scale</u>	<u>X</u>	<u>Y</u>	<u>X - Y</u>	<u>X²</u>	<u>Y²</u>	<u>Denominator</u>	<u>t value</u>	<u>Significance</u>
L	3.53	3.93	-.40	354.71	457.56	.1984	.91	n.s. p>.05
F	7.76	8.00	-.27	989.20	1710.99	.660	.30	"
K	14.65	14.18	.47	1247.65	1796.26	.778	.53	"
Hs	6.59	6.57	.02	1060.35	1733.28	.683	.02	"
D	23.20	22.55	.65	2202.04	2164.30	1.07	.63	"
Hy	22.41	21.23	1.18	1086.35	2124.60	.784	1.34	"
Pd	25.27	24.94	.33	938.16	1502.70	.596	.43	"
Mf	25.27	24.07	1.20	1184.16	1559.56	.670	1.46	"
Pa	10.96	10.95	.01	749.92	1095.80	.451	.05	"
Pt	15.47	15.59	-.12	4252.71	5075.02	2.28	.08	"
Sc	14.55	15.35	-.80	4530.43	5696.74	2.50	.51	"
Ma	20.18	20.04	-.19	1141.41	2088.89	.789	.16	"

APPENDIX 2

A BRIEF HISTORY OF THE CONTROL GROUP

APPENDIX 2

A BRIEF HISTORY OF THE CONTROL GROUP

9687	82	235	9765	214
9841	324	9822	9898	212

These subjects had crime histories in Toronto and Vancouver and each one of them had definite connections with drugs and operated as "pushers" but never had become addicted to opiates.

9483	9964	9506	178	9480
9364	9900	9462	322	9498
8399	8191	9413	8333	8225
272				

This grouping contains criminals who have committed fraudulent type crimes. They were generally more experienced in comparison to the criminal group as a whole. Their histories were such that they had been involved in many crime rackets and had almost certainly had exposure to drugs. Some of these subjects have not had many convictions as they have been successful in crime

9614	159	9587	28	9318
9648	286	9581	183	8317
86	275	9910	8374	9544
93	9525	19	8154	9537
100	9531			

This group have all committed broad and enter crimes invoked in the Toronto area. Several members of this group are in their twenties and do not have long records.

9698	167	9371	127	8217
9932	216	9642	231	9399
110	9426	9456	351	9626
353	9333	116		

Members of this group are habitual recidivists with various types of crimes. Many of them are heavy drinkers and have used every kind of stimulant known to mankind. Most of their vagrancy has occurred in or around Toronto.

9579	147	9795	9736	336
9594	328	9665	9296	8243
9655	338	9343	9827	9306
9677	9846			

Subjects in this category are relatively young with records of physical violence and robbery. All are from Toronto and most have relatively brief records.

APPENDIX 3
THE ADDICT GROUP

APPENDIX 3

THE ADDICT GROUP

345	9863	9978	8783	345
7497	9909	9957	8218	569
8914	15	9679	8348	972
8992	188	9635	7049	1218
8929	211	9880	8049	8176
9062	285	9024	8103	8179
9014	293	8980	8104	8185
9390	88	8599	1044	8311
9363	18	4052	837	8325
9496	9474	8851	819	8326
9782				

The crimes of this group were typical: break and enter, theft, robbery and fraud. Seven of them had small records. Eighteen had many convictions and were habitual recidivists.

APPENDIX 4

ABSTRACT OF

**A Comparison of Criminal Drug Addicts and
Non-Addicted Criminals on the
Minnesota Multiphasic Personality Inventory.**

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A Comparison of Criminal Drug Addicts and
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Minnesota Multiphasic Personality Inventory.¹

The social problem of narcotic addiction has recently attracted widespread attention and concern has been expressed as to how to effectively treat the drug addict. A theoretical framework must be established in order to deal with the problem effectively and to this end various psychological theories have been postulated to explain the psychodynamics of the addict personality. The line of argument has been that although relapse to opiates can be explained on the basis of physiological phenomena the reason why a drug addict becomes addicted was due to his unique needs, drives, motives, and traits that can only be satisfied by the specific effect of heroin and its related alkaloids.

The proposed drug addict personality theories have been mostly dialectic orientated and based on personal observations of individual clinical cases. The general conclusion has been that addicts are "unique" and take opiates

¹ Paul Gendreau, Master's thesis presented to the School of Psychology and Education of the University of Ottawa, Ottawa, 1965, vii-62 p.

because of special needs. It has been stated that the addict suffers from gross feelings of inadequacy; afraid to face his sexual and male assertive roles in society, he substitutes heroin to satiate his simplest needs. The addict thus is an extremely passive individual who is more neurotically disturbed than others in his immediate lower socio-economic bracket (e.g. delinquents). The psycho-analytic interpretation of the root of this illness is mother deprivation of some kind.

Theories built on controlled research have been more specific but in some cases contradictory. Some studies state emphatically that drug addicts do not resemble criminals in personality structure, while some evidence has been gathered which indicates that drug addicts are somewhat similar to criminals with specific deviations in personality structure such as the Pt, Mf, and Hy scales of the MMPI test. In conclusion the concensus of opinion, founded on research or from other methods, was that some differences exist between addicts and a comparable control group although the literature was unclear as to what exact differences might be found.

This thesis attempted to test the previous assumptions and the hypothesis posited that differences would be found between drug addicts and a control group.

The problem of concern in the experimental design was that of selecting a proper control group. Previous research erred in this matter and psychological differences attributed to narcotic addicts may have been only artifacts of faulty design. The control group was selected randomly from criminals entering Kingston, Ontario, Penitentiary from January 1, 1962, to September 1, 1964. From this random sample eighty-two subjects were chosen as having come from and lived in areas frequently habituated by addicts. As well as records and histories could ascertain the control subjects had opportunities to obtain opiates but had never become addicted. The experimental group of addicts totalled fifty-one. This was the number of addicts tested, entering Kingston Penitentiary from the period of January 1, 1962 to January 1, 1965.

All subjects were tested upon entry to penitentiary using the Minnesota Multiphasic Personality Inventory. Twelve scales of the MMPI were used (the S1 scale was omitted). It was felt that the MMPI, besides being a fairly stable measure of personality, was also particularly applicable to delinquents. The addict subjects were all classed as criminal addicts because of narcotic convictions. Of the total addict population in Canada ninety percent have been classed in the aforementioned category. The criminal

subjects were markedly similar to the experimental group in age, intelligence score (as measured by the Beta) and type of crime committed and length of criminal record.

The results on the twelve personality variables of the MMPI were all negative and none of the unique addict personality theories were supported. The hypothesis was disproven. The non-correlated t test values were close to zero on several scales. The end result was that the drug addict personality seemed identical to that of the random sample of criminals as measured by the MMPI. However, strict similarities could not be inferred because some differences did occur although they were far from significant.

The findings furnish some support for a theory that drug addiction is merely a symptom of criminal behavior and that whatever personality traits one applies to drug addicts can be equally well applied to criminals. If research attempting to extract nebulous personality concepts seems to serve little useful purpose possibly a theory based on the general concepts of learning theory might prove to be fruitful. Very recently some attempts have been made to describe the drug addict's behavior in terms of Hullerian and Skinnerian methodology. Whether this approach will form a sounder theoretical framework remains to be seen, but initial results seem promising.