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AN EXPLORATORY INVESTIGATION
OF ANXIETY IN ALCOHOLICS

by

Daniel John Anderson

A Thesis Submitted to the Faculty of the Graduate School
of Loyola University in Partial Fulfillment of
the Requirements for the Degree of
Master of Arts

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1957

LIFE

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CHAPTER I

STATEMENT OF THE PROBLEM

The gathering of data which will contribute to a clearer understanding of the kind of person who becomes addicted to alcohol is of central research interest in the study of alcoholism. Logically it has been thought that if a relatively constant combination of psychological characteristics were found in persons developing alcoholism, some light as to the etiology of the pathology could be deduced. However, despite the fact that individual research studies have reported psychological characteristics thought to be representative of alcoholics, there is too little agreement among investigators to conclude from their reports that a typical or consistent personality structure is present. As Sutherland, Schroeder and Tordella¹ conclude in their critique of thirty-seven research studies of personality traits of alcoholics, no satisfactory evidence has been presented to support a belief that alcoholics compose only one personality type or that they are homogeneous in personality structure.

¹Edwin H. Sutherland, H. G. Schroeder and C. L. Tordella, "Personality traits and the alcoholic. A critique of existing studies," Quart. J. Stud. Alc., XI (December 1950), 559.

Although research in the area of alcoholic personality structure has failed to reveal or isolate any common personality variables capable of contributing to a psychological theory of alcoholism, a unifying hypothesis which will explain the phenomenon of addiction within a psychological frame of reference is still being sought. In this search several investigators, particularly Jellinek² and Horton,³ have gone beyond the monistic personality trait theories of addiction and have formulated certain premises concerning the universal social use of beverage alcohol which appear to be particularly relevant with respect to the development of alcoholism. These basic assumptions may be summarized as follows:

(1) Consumption of beverage alcohol is an almost universal phenomenon; with but few exceptions it is ingested in some form by all racial, national and cultural groups.

(2) Although numerous reasons are given for this almost universal use, i.e., food, medicine, social purposes, religious use, ceremonial value, etc., the principal physiological effect of alcohol is the alteration of metabolism in such a manner that a progressive central nervous system depression or cortical anesthesia is created.

²E. M. Jellinek, "The alcohol problem: formulations and attitudes," Quart. J. Stud. Alc., IV (December 1943), 458.

³Donald Horton, "The functions of alcohol in primitive societies: a cross-cultural study," Quart. J. Stud. Alc., IV (September 1943), 223.

(3) This anesthetic effect of alcohol on the cerebral cortex, in turn, uniquely alters psychological feeling states, particularly with respect to the reduction or alleviation of feelings of anxiety, frustration and conflict. Thus, in considering its widespread use, the anxiety reducing capacity of alcohol stands out as being unequivocally significant.

The obvious implications which may be drawn from the foregoing premises when considering the alcoholic is that, if the basic function of alcohol in normal social drinking is the reduction of anxiety, then it very likely serves this same function in pathological or excessive drinking. Thus, the exaggerated or persistent use of alcohol may be indicative of a need on the part of the alcoholic to reduce or alleviate comparably exaggerated feelings of anxiety.

Such an anxiety reduction hypothesis, as the above may be called, appears to be becoming increasingly popular with certain investigators who have been seeking a more unified and meaningful interpretation of problem drinking. However, while such a formulation may be of value in studying some alcoholics, its validity as an hypothesis which may be applied to alcoholics universally is open to question. To date, Buhler and Lefever's⁴ Rorschach investigation is the only experimental study on human beings which

⁴Charlotte Buhler and D. W. Lefever, "A Rorschach study on the psychological characteristics of alcoholics," Quart. J. Stud. Alc., VIII (September 1947), 258.

specifically concludes that anxiety is the common factor in alcoholism. With infra human animals, however, the concept that alcoholism may be symptomatic of the existence of anxiety is much more clearly illustrated. Despite the anthropomorphic problem present in all such research, the experimental conflict studies of Masserman⁵ and Conger⁶ point to the conclusion that, if conflict is anxiety provoking, alcohol could reduce the feelings of conflict and in so doing be reinforced as a mechanism of tension or anxiety reduction.

While the above investigations suggest that alcoholism may represent an attempt on the part of the alcoholic to reduce or relieve anxiety or tension states through alcohol ingestion, the paucity of experimental evidence obtained on human beings presents a distinct research challenge. It is, consequently, the purpose of the present study to subject the anxiety reduction hypothesis as it may apply to alcoholics to experimental verification. It is hypothesized then that if the basic function of alcohol is the same in pathological or excessive drinking as it is in normal social drinking, namely, the reduction of anxiety, then, the exaggerated or persistent consumption of alcohol as observed in

⁵Jules H. Masserman, Principles of Dynamic Psychiatry (Philadelphia, 1946), pp. 145-150.

⁶John J. Conger, "The effects of alcohol on conflict behavior in the albino rat," Quart. J. Stud. Alc., XII (March 1951), 23-26.

alcoholics is a manifestation of a need to reduce comparably exaggerated or persistent feelings of anxiety. Formulated more specifically, the immediate hypothesis to be tested in the present research is as follows: If the excessive and inappropriate drinking of the alcoholic is in response to a need to reduce comparably exaggerated feelings of anxiety, then the manifest anxiety level of a group of representative hospitalized male alcoholics will be found to be significantly higher than the manifest anxiety level of a normal population as measured by an objective testing instrument. A secondary hypothesis to be explored is that if a relationship between anxiety level and alcoholism is found, then anxiety will very likely tend to increase as addiction becomes progressively worse.

CHAPTER II

REVIEW OF THE LITERATURE

Descriptive definitions of the pathological syndrome known as alcoholism or alcohol addiction found in the scientific literature appear to be reasonably unified and consistent.¹ However, data concerned with the psychopathology of alcoholism and the personality structure of the alcoholic are relatively diverse and inconsistent. Critical summaries of the major theories of alcoholism

¹The terms "alcohol addiction" and "alcoholism" appear to be used interchangeably in the scientific literature. Descriptive definitions of the condition usually include statements that the alcoholic has an uncontrollable need for alcohol or that once he has started to drink alcohol he cannot predict or control his future behavior. Although alcoholism always involves excessive drinking it should be noted that drunkenness, in itself, does not necessarily imply alcoholism. Thus, the person who drinks heavily occasionally, or even drinks excessively quite frequently, is not an alcoholic if he can stop drinking when he chooses. The alcoholic, on the other hand, appears to have lost the power of choice with respect to drinking alcohol and it is this lack of freedom to choose that marks the essential nature of the illness. The current provisional definition of alcoholism agreed upon by the Alcoholism Subcommittee of the World Health Organization (World Hlth Org. techn. Rep. Ser., 48, 1952, 16) may be taken as a representative description of the condition: "Alcoholics are those excessive drinkers whose dependence upon alcohol has attained such a degree that it shows a noticeable mental disturbance or an interference with their bodily and mental health, their interpersonal relations, and their smooth social and economic functioning; or who show the prodromal signs of such developments. They therefore require treatment."

published up to 1945 are offered by Bowman and Jellinek,² Marshall,³ Landis,⁴ and Lorand⁵ while Sutherland, Schroeder and Tordella,⁶ Patrick,⁷ and Gibbons⁸ present summaries which include more recent studies.

In reviewing certain of these reports and other selected articles it seems all too apparent that the various theories of alcoholism set forth, be they in terms of geographical, physiological, psychological, or other determinents, are not only divergent and conflicting but largely unsubstantiated with adequate experimental evidence. Wilson points out the confusion which exists in the treatment of alcoholism as a result of this state of affairs: "Here, then, is the crux of the whole matter;

²K. M. Bowman and E. M. Jellinek, "Alcohol addiction and its treatment," Quart. J. Stud. Alc., II (June 1941), 98-172.

³H. Marshall, "Alcohol: a critical review of the literature, 1929-1940," Psychol. Bull., XXXVIII (April 1941), 193-217.

⁴Carney Landis, "Theories of the alcoholic personality," Alcohol, Science and Society (New Haven, 1945), pp. 129-142.

⁵S. Lorand, ed., "A survey of psychoanalytic literature on problems of alcohol," Yearbook of Psychoanalysis (New York, 1945), pp. 359-370.

⁶Sutherland, Schroeder and Tordella, "Personality traits and the alcoholic," Quart. J. Stud. Alc., XI (December 1950), 547-561.

⁷Clarence H. Patrick, Alcohol, Culture and Society (Durham, N. C., 1952), pp. 49-57.

⁸R. J. Gibbons, Chronic Alcoholism and Alcohol Addiction. A Survey of Current Literature, Brookside Monograph No. 1 (Toronto, 1953), pp. 3-31.

confusion in management, past and present, reflects the existence side by side of moralistic and scientific explanations for the same condition. As if this were not enough, the scientific explanations present a welter of largely unproven and monistic hypotheses from the fields of sociology, biology, biochemistry, medicine, and psychology. It is these that guide treatment procedure."⁹

In turning to the literature which deals particularly with psychological theories of alcoholism, currently the most popular area of investigation, a continuation of divergent and conflicting opinion is encountered. Not only are the psychological theorists in opposition to various other explanations of addiction, but they are also found to disagree widely among themselves as to which psychological theory best explains the condition. Most research in this area concerns itself with the identification of significant personality traits found in individuals developing alcoholism and the psychodynamic factors which appear to predispose certain persons to become uncontrolled drinkers. It is noted, however, that in seeking a psychogenetic explanation for alcoholism most investigators usually approach the problem and draft their conclusions in terms of the particular theory of personality to which they adhere with little regard for other explanations or exceptions to their own theory. It should come as no surprise, then,

⁹Ruth Wilson, "An evaluation of treatment methods in alcoholism therapy," Mental Hygiene, XXXV (April 1951), 261.

that numerous explanations of alcoholism have been propounded in which some specific pathology has been noted and elaborated into what the investigator hopes is a sufficient condition for the genesis of addiction.

Perhaps the best illustration of an attempt to build a complete theory of alcoholism on one premise which is presumed to be not only a sufficient but the only cause of alcoholism is contained in the psychoanalytic theories of addiction. Although superficially in disagreement, the psychoanalytic literature on alcoholism appears to have a distinct core of agreement with respect to causative factors in alcoholism. Freud first pointed out in 1905 what to him were oral erotic factors in alcoholism.¹⁰ Later psychoanalytic investigators generalized on Freud's findings and now one of the most widely known theories of alcohol addiction is that which explains the etiology of the condition in terms of repressed homosexuality. Thus, Tabori says: "The psychic reason for alcohol addiction is the incompletely repressed homosexuality which the individual cannot sublimate."¹¹

Another psychoanalytic theory of alcoholism, although still viewing the basic cause of the illness as centering around oral conflicts, visualizes the syndrome of actual alcoholism as an unconscious form of suicide. Karl A. Menninger, a leading proponent

¹⁰E. M. Jellinek, ed., Alcohol Addiction and Chronic Alcoholism (New Haven, 1942), p. 30.

¹¹Quoted in Ibid., p. 31.

of the view that alcohol addiction is one of the chronic and attenuated forms of self destruction, concludes: "Thus alcohol addiction can be thought of not as a disease, but as a suicidal flight from disease, a disastrous attempt at the self-cure of an unseen inner conflict, aggravated but not primarily caused (as many think) by external conflict. It is literally true that the alcoholic, as he himself says, does not know why he drinks."¹²

Another view of alcoholism, still remaining within the general framework of psychoanalytic theory, holds that not all alcoholics are of the same personality type. Robert P. Knight,¹³ the leading proponent of this interpretation, believes that there are at least two main clinical varieties of alcohol addiction: (1) that in which alcohol addiction appears to be a reactive symptom in the course of a neurotic illness developed in adult life, and (2) that in which alcoholism is the most conspicuous of numerous devices utilized by a developmentally deformed character arising from earliest childhood. Although these types differ in terms of personality development and prognostic outlook, the psychological motives for alcoholism are thought to be essentially the same.

In his extensive review of the psychoanalytic literature

¹²Karl A. Menninger, Man Against Himself (New York, 1938), p. 168.

¹³Robert P. Knight, "The psychodynamics of chronic alcoholism," J. Nerv. and Ment. Diseases, LXXXVI (November 1937), 538-548.

Fenichel¹⁴ concurs with the main body of psychoanalytic investigators that alcoholics are characterized particularly by their oral and narcissistic pre-morbid personalities which develop as a result of difficult family constellations. He further concludes that the individual later develops alcoholism primarily as a technique for expressing these unconscious oral and homosexual impulses.

Still other illustrations of attempts to find a particular psychological reason for the presence of alcoholism may be found in the psychiatric literature. Here it is noted that psychiatric investigators, unlike their psychoanalytic brethren, tend to be more eclectic in orientation, and, consequently, offer more diversified explanations for addiction. However, the presumption that one particular psychological trait or characteristic is a sufficient cause of alcoholism is still present throughout the literature.

By way of example, Strecker, Ebaugh and Ewalt advance the opinion that the alcoholic is an introvert. They state that

In effect, we believe that chronic alcoholism is a psychoneurosis. Further, it is preponderantly the psychoneurosis of the introvert, the shy, reserved, diffident individual who tends to be socially awkward and acquires social facility and graces only with the greatest difficulty. At some time in his life he desires above all things social ease and popularity. Soon he discovers that a few cocktails or other alcoholic beverage

¹⁴Otto Fenichel, The Psychoanalytic Theory of Neurosis (New York, 1945), p. 379.

will melt away his reserves and not only will he feel more secure socially, but he will even begin to enjoy the society of his fellow men.¹⁵

Lolli,¹⁶ on the other hand, sees addiction as an expression of lop-sided mental growth with infantile traits in one part of the personality coexisting with mature traits in another. The revelation that alcohol can provide a pleasurable blending of these incongruous aspects of the personality is held by him to mark the beginning of addiction. Lolli also holds that while addiction, to a great extent, has its origins in anomalous family constellations, hereditary or constitutional instability and low threshold for stress play an important causal role.

Although Lolli attempts to place the factors of hereditary or constitutional liability in a relatively subordinate position with respect to the development of alcoholism, it should be noted that there are other psychiatric investigators who hold that the basic cause of alcoholism is a fundamental hereditary or constitutional weakness. It is further presumed that such hereditary-constitutional liability is directly related to both alcoholism and psychopathy. Bowman and Jellinek¹⁷ have pointed out with some

¹⁵Edward A. Strecker, F. G. Ebaugh, J. R. Ewalt, Practical Clinical Psychiatry, 6th ed. (Philadelphia, 1947), p. 419.

¹⁶Georgio Lolli, "The addictive drinker," Quart. J. Stud. Alc., X (December 1949), 404-414.

¹⁷Bowman and Jellinek, "Alcohol addiction and its treatment," Quart. J. Stud. Alc., II (June 1941), 114.

concern the grossly exaggerated and oftentimes distorted picture of hereditary taint which has been presented by some investigators to account for the presence of alcoholism. Gibbons¹⁸ notes, too, the fact that leading authorities have pointed out from time to time that the theory that alcoholism is an expression of psychopathy is an untenable one, but in spite of this, the idea of the decisive role of hereditary liability or of psychopathic disposition has remained.

Still other specific personality or developmental pathologies noted by clinical investigators to exist in alcoholics may be pointed out as being illustrative of the diversity of opinion which surrounds this condition. Here, following Patrick, mention will be made only of those psychiatric theories of alcoholism which are noted to recur frequently in the literature. They include: "emotional instability"; "idealization, during childhood, of a domineering mother and fear of a stern, autocratic father"; "inability to meet the demands of adult living"; "a feeling of insecurity as evidenced by an insistent feeling of need for religious security and a strong feeling of sin and guilt"; "weakness of will"; and "lack of persistence."¹⁹

Some investigators, having noted that there does not appear to be uniform personality traits among alcoholics have altered

¹⁸Gibbons, p. 6.

¹⁹Patrick, p. 55.

their search for the alcoholic personality by turning, instead, to a search for specific sub-types of personalities among alcoholics. Carney Landis,²⁰ in reviewing the various classifications that have been used to categorize the alcoholic, notes that the following types have been described: the introverted and the extroverted drinkers; the decadent, the impassioned, the stupid and the self-aggrandizing drinkers; the somatotonic and the viscerotonic physique drinkers; and the alcohol addicts and the symptomatic drinkers. To this list could be added other classifications based on other criteria. Such a procedure, however, is of questionable worth. As Haggard and Jellinek²¹ point out, the classification systems that have been devised for typing alcoholics have yielded a variety of overlapping and sometimes conflicting groupings based frequently on the arbitrary clinical experience or opinion of the investigator. Also, such categorizations, other than to suggest a variety of motivations for intoxication and a diversity of effects of alcohol, appear to have achieved little in the way of establishing an acceptable psychological etiology of alcoholism.

From the diversified nature of the foregoing resume of the personality variables which are presumed to be of etiological

²⁰Landis, pp. 131-136.

²¹Howard W. Haggard and E. M. Jellinek, Alcohol Explored (Garden City, N. Y., 1942), p. 152.

significance in alcoholism it seems obvious that there is no general agreement among clinical investigators as to the personality structure of the alcoholic or the psychodynamics of the illness. Not only this, but as has been pointed out earlier, none of these theories of alcoholism have been substantiated with adequate experimental evidence. It is only when turning to those few studies which deal with hypotheses based on controlled experimental verification that an expectation of finding data which might lend itself to a scientific psychological explanation of alcoholism is developed. However, here, too, are found a conflicting list of personality traits obtained from different samples of alcoholics which are suspected of being the cause of alcoholism. It is well to note, also, that not all experimental investigations are well conducted or of equal worth or validity.

Historically, psychological experimentation has been conducted not on alcoholics but on the effects of alcohol on the performance of specific tasks involving motor co-ordination, memorizing, reaction time, muscular strength, etc.. Jellinek and McFarland²² have presented a comprehensive and critical review of these studies. From their interpretation of the results of such investigations, many of which were poorly conducted, they conclude that "alcohol has a depressing effect on all psychological

²²E. M. Jellinek and R. A. McFarland, "Analysis of psychological experiments on the effects of alcohol," Quart. J. Stud. Alc., I (September 1940), 272-371.

functions yet measured" and that, generally, complex psychological activities like reasoning and judging seem to be more impaired by alcohol than simpler activities. While such studies have a distinct value in their own right as contributions to psychology, critics point out that they are of limited usefulness in explaining the social and emotional effects of alcohol.

The problem of devising psychological experiments which would clarify the social and emotional role of alcohol in human behavior and the determination of what personality variables contribute to the excessive use of alcohol has been of more recent origin. Here, it is noted, the experimental literature is almost entirely devoted to attempts to substantiate certain theories as to the personality structure of alcoholics or to differentiate the alcoholic from the nonalcoholic in terms of intellectual or personality differences. A brief review of this work seems important at this time.

Concerning the intellectual level of alcohol addicts much has been presumed. Certain generalized descriptions would have it that as a group alcoholics are intellectually inadequate. Still other generalizations view alcoholics as being brighter than average. Actually the alcoholic is not limited to any particular intellectual, occupational, or educational level according to objective measurements made by several investigators concerned with this question. Among those who have demonstrated the wide variability which alcoholics show with respect to these factors may be

included Wechsler,²³ Roe and Shakow,²⁴ and Halpern.²⁵ As Gibbons notes in his summary of this data: "In intelligence, addicts range from feeble-minded to very superior; in occupation, from unskilled labourer to civil engineer; in education, from grade one to college graduates. Mental impairment with respect to such factors as mathematical skill, logical analysis, immediate recall, and manual manipulation is found in a large percentage of the cases, and the degree of impairment appears to vary directly with chronicity."²⁶

Although agreement has been reached concerning the intellectual, occupational and educational variability of alcoholics as a group, no comparable agreement can be found in published reports concerning the personality structure of the alcoholic. In this research area it is noted that each investigator seems to conclude that his study presents a reliable picture of the personality structure of the alcoholic; yet other investigators, doing comparable work, come up with different views. Thus, in reviewing

²³David Wechsler, "The effect of alcohol on mental activity," Quart. J. Stud. Alc., II (December 1941), 479-485.

²⁴Anne Roe and D. Shakow, "Intellectual functions in alcoholic psychosis," Quart. J. Stud. Alc., IV (March 1944), 517-522.

²⁵Florence Halpern, "Studies of compulsive drinkers: psychological test results," Quart. J. Stud. Alc., VI (March 1946), 468-478.

²⁶Gibbons, p. 24.

these studies, one usually encounters different investigators presenting different and oftentimes conflicting lists of personality traits found in different samples of alcoholics which are suspected of being of etiological significance in the development of alcoholism. Several of the more relevant research studies done on alcoholics may be presented as evidence of this state of affairs.

Because the Rorschach Test is regarded as a particularly fruitful instrument for the evaluation of personality it has been used more widely and exclusively than other tests to determine personality characteristics of alcoholics. Here, however, as in other areas of alcoholic personality investigation, conclusions reached are either inconclusive, contradictory or incapable of identifying or distinguishing alcoholics from non-alcoholics.

Klopfer and Kelley in their review of Rorschach studies previous to 1942 concluded that alcoholics are a heterogenous group. "If chronic alcoholic deterioration has not become apparent," they say, "records of confirmed drinkers generally show neurotic, schizophrenic, depressive, or psychopathic personality trends. . . As deterioration develops, organic signs make their appearance."²⁷

Since 1942, a number of other Rorschach studies on alcohol addiction have been made. These have been reviewed by Buhler and

²⁷Bruno Klopfer and D. M. Kelley, The Rorschach Technique (Yonkers, 1942), p. 399.

Lefever²⁸ and Sutherland, Schroeder and Tordella.²⁹ A representative picture of the types of personality said to be possessed by alcoholics may be obtained from a summary of some of these Rorschach findings.

A study of forty chronic alcoholics was made by Billig and Sullivan³⁰ using the Rorschach. Summarizing their findings, Buhler and Lefever describe the alcoholic as follows: "High ambition and limited achievement; sensualization of personality difficulties but lack of adaptation; withdrawing from environment and inability to smooth relation between self and reality; self-centered wish fulfillment furthered by a rich imagination; emotional maladjustment involving weak restraint, poor poise and stability, little control of mood swings and desires, lack of attention, hypochondriacal ideas."³¹

The Rorschach results obtained by Seliger and Cranford³² on a group of alcoholics led them to conclude that there "is no one definite alcohol personality type as such, and therefore no

²⁸Buhler and Lefever, "A Rorschach study on the psychological characteristics of alcoholics," Quart. J. Stud. Alc., VIII (September 1947), 197-260.

²⁹Sutherland, Schroeder and Tordella, pp. 547-553.

³⁰O. Billig and D. J. Sullivan, "Personality structure and prognosis of alcohol addiction," Quart. J. Stud. Alc., III (March 1943), 554-573.

³¹Buhler and Lefever, p. 209.

³²R. Seliger and V. Cranford, "Rorschach analysis in the treatment of alcoholism," Med. Rec., N.Y., 158 (1945), 32-38, cited in Ibid., p. 209.

definite alcohol Rorschach-protocol." The test results obtained by Seliger and Cranford were also interpretively summarized by Buhler and Lefever. "Ambition and urge for self expression," are present, they say, "but no ability to attain these because of lack of purpose and perseverance." Also found are "hypersensitivity and paranoid traits; inability to adapt to social or personal relations and tendency to flinch from adult responsibilities and seek escape from reality; strong to violent emotional forces; a self-pampering tendency (I want what I want when I want it) which refuses to tolerate unpleasant states of mind; unreasoning demands for happiness, excitement, etc.."33

Halpern has also generalized on her Rorschach test findings in alcoholics. "Not one of the Rorschach test records . . . , " she concludes, "could be described as a normal one. In all of them there was evidence of emotional disturbance . . . manifested in immature, impulsive and uncontrollable affective reactions . . . Emotions and not the intellect were in control."34

Buhler and Lefever, who not only reviewed and evaluated the Rorschach findings of several other investigators but also conducted an exhaustive Rorschach study of their own on one hundred alcoholics, describe the personality structure of the alcoholic somewhat differently than their colleagues. According to them,

³³Buhler and Lefever, p. 209.

³⁴Halpern, p. 478.

even if alcoholics are classified within various clinical groups, they still have a number of essential and common personality traits. This common personality structure, as it is viewed by Buhler and Lefever, is described as follows:

From the Rorschach, then, the alcoholic personality appears to have the following characteristics: significantly low tension tolerance, therefore need to escape tension; low inner directivity in the sense of lack of imagination in setting up goals and insufficient motivation by such goals; instead, strong motivation by instinctual needs. While these traits are common to the alcoholic and social psychopath, discriminating characteristics are the alcoholic's critical self awareness, guilt feelings and anxieties, and more adequate rationality and emotionality.³⁵

Sutherland, Schroeder and Tordella in their critique of personality studies on alcoholics analyzed eleven personality investigations in which the Rorschach Test was used. Six of these studies, which also include the four studies already mentioned in this paper, were subjected to a penetrating analysis. Found in this study were wide differences in the measured findings of individual investigators with inconsistent and contradictory use of specific Rorschach symbols. Because of the absence of consistency in use of Rorschach symbols and interpretation among the several investigators, Sutherland, et al., flatly rejected all findings. "The general conclusion from this survey of Rorschach studies of alcoholics," they state, "is that the tests have not demonstrated

³⁵Buhler and Lefever, pp. 238-239.

any respect in which alcoholics differ from nonalcoholics."³⁶

Another test which has been used extensively in evaluating the alcoholic has been the Minnesota Multiphasic Personality Inventory (MMPI). Cottle has summarized the results of other investigators in using this test with alcoholics. "The effect of alcohol on MMPI scores," he states, "is to change the level of the profile, but not the shape of the curve. After ingestion of alcohol the Lie scale decreases and there is a tendency for scores on Pd and Mf to fluctuate. The MMPI profiles of chronic alcoholics are elevated on the neurotic triad and the Pd scale. It is possible to divide alcoholics into groups having a profile similar to neurotics and to psychopaths. Alcoholics score significantly higher than normals on the Pd scale"³⁷

Despite Cottle's stated presumption that alcoholics can be categorized into two groups, neurotic and psychopathic, it is of interest to note that only one MMPI study has achieved this end. It was Brown³⁸ who, in using the MMPI to evaluate eighty hospitalized alcoholics, concluded that a major part of the group could be subdivided according to profile pattern into a chronic alcoholic

³⁶Sutherland, Schroeder and Tordella, p. 552.

³⁷William C. Cottle, The MMPI: A Review (Lawrence, Kansas, 1953), p. 47.

³⁸M. A. Brown, "Alcoholics profiles on the Minnesota Multiphasic," J. clin. Psychol., VI (July 1950), 266-269.

psychopathic group. Harris and Ives,³⁹ using the MMPI, the Rorschach, and other tests, matched nineteen chronic alcoholics with a control group of mixed neurotics and concluded that the alcoholics had a general neurotic structure. Manson,⁴⁰ in another study, compared 314 male alcoholics with 222 male nonalcoholics on only the Pd scale of the MMPI and found that the alcoholics made significantly higher scores than the control group. Manson's findings are substantiated by Hewitt⁴¹ who evaluated forty-six alcoholics using the MMPI alone. He concluded that nearly all the alcoholics in his study showed marked psychopathic deviation which was often associated with neurotic, paranoid or schizoid trends. Quaranta,⁴² on the other hand, in comparing thirty alcoholics with thirty matched controls and using the MMPI and the Willoughby Emotional Maturity Scale found no significant difference between the two groups.

Still other studies based on various psychometric data may be

³⁹R. E. Harris and V. M. Ives, "A study of the personality of alcoholics," Am. Psychol., II (October 1947), 405 (Abstract).

⁴⁰Morse P. Manson, "A psychometric analysis of psychopathic characteristics of alcoholics," J. consult. Psychol., XIII (April 1949), 111-118.

⁴¹C. C. Hewitt, "A personality study of alcohol addiction," Quart. J. Stud. Alc., IV (December 1943), 368-386.

⁴²J. V. Quaranta, "Alcoholism: a study of emotional maturity and homosexuality as related factors in compulsive drinking," Quart. J. Stud. Alc., X (September 1949), 354 (Abstract).

cited as illustrative of attempts to define or describe the personality structure of the alcoholic. The following are representative of the continued disagreement among investigators in this area.

Manson,⁴³ after designing a test which would psychometrically differentiate alcoholics from nonalcoholics, applied the paper-and-pencil instrument to 261 alcoholics and a control group of 278 nonalcoholics. The alcoholics made consistently higher scores than the control group with higher critical ratios for both males and females. Manson concluded that alcoholics differ from normals in their more neurotic and psychopathic states of anxiety, depressive fluctuations, emotional sensitivity, feeling of resentment, failure to complete social objectives, feeling of aloneness, and poor interpersonal relations. Although this test showed significant statistical differences between alcoholics and controls, Sutherland, Schroeder and Tordella point out several defects in the development of the instrument which should lead one to regard it "with considerable skepticism at present."⁴⁴

Marshall⁴⁵ has reported a study comparing 120 male alcoholics without psychosis with 179 nonalcoholic males similar in age,

⁴³Morse P. Manson, "A psychometric differentiation of alcoholics from nonalcoholics," Quart. J. Stud. Alc., IX (September 1948), 175-206.

⁴⁴Sutherland, Schroeder and Tordella, p. 554.

⁴⁵Helen Marshall, "A study of personality of alcoholic males," Amer. Psychol., II (August 1947), 289 (Abstract).

education and occupational level. She used a number of evaluative instruments including a combined questionnaire and rating scale, the Chassell Experience Variables Record, The Humm-Wadsworth Temperament Scale, and the Strong Vocational Interest Test. The stated conclusions were: (1) Alcoholics come from homes with greater security, both economic and emotional. (2) Alcoholics are lower in familial, occupational, emotional and social adjustment. (3) Alcoholism may be due to an environment which fails to develop ability to deal with frustration. (4) All of the personality characteristics found in adult alcoholics can be interpreted as the result of alcoholism rather than as causes.

Despite the wide acceptance of the psychoanalytic theory of alcoholism, few studies of its validity have been done. However, Wittman⁴⁶ has reported an attempt to test the validity of the psychoanalytic theory that alcoholism is the product of a doting and oversolicitous mother and a stern and forbidding father, and to determine whether alcoholics have the traits of narcissism, emotional immaturity and instability, infantilism, passivity and dependence, oral eroticism, and latent homosexual trends imputed to them in this theory. She used a modified Chassell Inventory in this study which included one hundred male patients diagnosed as alcoholics without psychosis and one hundred volunteer patients

⁴⁶Mary P. Wittman, "Developmental characteristics and personalities of chronic alcoholics," J. abnorm. soc. Psychol., XXXIV (July 1939), 361-377.

and staff members who were not alcoholics but matched for age, nationality and education. Wittman's general conclusion is that the theories of psychoanalysis "have in general but not entirely been substantiated." However, when an analysis of the areas covered by this test is made and the mean scores of the alcoholics compared with the control group much overlapping is found with no trait standing out as significant of either group. Also, although the report shows some low adjustment scores for alcoholics and the areas in which the scores are located (mother relationship, religion and standards, vocational adjustment, emotional adjustment), these raw scores are far removed from demonstrating or substantiating the psychoanalytic theory of alcoholism. Sutherland, et al., are in agreement with this conclusion concerning Wittman's findings. "No evidence whatever is presented in this published report," they state, "that has any bearing on the psychoanalytic theory The report shows some low adjustment scores and the areas in which the scores are located, and absolutely nothing else."⁴⁷

Klebanoff⁴⁸ has reported a Thematic Apperception Test study of seventeen male alcoholics who were psychiatrically diagnosed as "symptomatic chronic alcoholism without psychosis." He concluded

⁴⁷Sutherland, Schroeder and Tordella, p. 555.

⁴⁸S. G. Klebanoff, "Personality factors in alcoholism as indicated by the TAT," J. Consult. Psychol., XI (May-June 1947), 111-119.

that alcoholics have a good deal of internalized emotional stress involving particularly intoxication, domination and rejection, but that this frustration does not, as in other persons, result in aggressive tendencies.

Schaefer, in a recent study, attempted to place alcoholics into diagnostic categories by using the technique of obverse factor analysis. His analysis led him to statistically isolate and identify five different personality structures among a group of thirty-six alcoholics. The personality types isolated were identified as including "(A) A schizoid personality. (B) A relatively normal personality. (C) An uncontrolled personality with an anxiety reaction to stress and frustration. (D) An emotionally unstable personality. (E) A psychoneurotic personality with pronounced sexual conflict and feelings of anxiety."⁴⁹

A number of other experimental studies reported in the literature, and not detailed here, attempt to establish by interview or case history techniques evidence that alcoholics may be differentiated from nonalcoholics in terms of introversion-extroversion, mother attachment, psychosexual adjustment, marital difficulties and ordinal position among siblings.⁵⁰ Here, also, the stated

⁴⁹Earl S. Schaefer, "Personality structure of alcoholics in outpatient psychotherapy," Quart. J. Stud. Alc., XV (December 1954), 317.

⁵⁰For a concise review of certain of these studies see Sutherland, Schroeder and Tordella, "Personality traits and the alcoholic," Quart. J. Stud. Alc., XI (December 1950), 547-561.

conclusions with respect to differentiation of the alcoholic from the nonalcoholic are either inconclusive, vague, contradictory or unjustified.

In evaluating the foregoing studies in terms of their ability to identify the alcoholic or differentiate him from the nonalcoholic it can only be said that they seem to be of questionable value. Despite the fact that individual studies report certain psychological characteristics thought to be representative of alcoholics, the distinct lack of agreement among investigators vitiates the identification of a typical or a consistent alcoholic personality structure. Also to be noted is the fact that it is impossible to determine whether the various personality traits described are associated with the development of alcoholism or are representative of the effect of alcoholism.

On the other hand, despite the differences of opinion as to which particular personality traits are associated with alcoholism, the foregoing investigations have pointed out that, in general, personality deviation or maladjustment to some degree is all too frequently associated with alcoholism. At first glance it might seem reasonable to presume from this that personality maladjustment, regardless of type or kind, is a sufficient cause of pathological drinking. However, even though it is granted that the majority of distinctive personality traits found in alcoholics are of a deviant nature, such a finding, in itself, does not explain the phenomenon of alcohol addiction. To presume that an

individual is an uncontrolled drinker because he is an introvert, or extrovert, or because he is neurotic or psychopathic, or because he is emotionally unstable or maladjusted does not really account for the presence of alcoholism; the fact that there are thousands of individuals with pathological or maladjusted personalities who do not drink in an uncontrolled fashion must be explained. Also to be accounted for are the non-pathological or normal personality types which are found to exist in samples of the alcoholic population. In view of these still remaining nosological and etiological problems it would seem best at this time to concur with Sutherland, et al., who, after examining thirty-seven reports of organized research on the personality characteristics of alcoholics conclude that: "No satisfactory evidence has been discovered that justifies a conclusion that persons of one type are more likely to become alcoholic than persons of another type."⁵¹

While the foregoing evaluation of the research which concerns itself with the psychological identification of the alcoholic ends on a pessimistic note, it must be pointed out that this is, nevertheless, a realistic appraisal of that literature. It must, consequently, be concluded that neither a meaningful nor a unified psychological theory of alcoholism has been forthcoming from investigations which have attempted to differentiate the alcoholic

⁵¹Ibid., p. 559.

from the non-alcoholic in terms of traditional monistic psychiatric categorizations.

In view of the inadequacy of this traditional methodology it would seem that an altered and more meaningful approach to the problem of alcoholism is demanded. With this objective in mind it is encouraging to observe several methodological and interpretive innovations which are currently being applied to the phenomenon of addiction. For example, although the literature concerned with the role which alcohol plays in human society and personality is extremely clouded, certain studies have been done on infra human animals which indicate that alcohol plays a relatively clear role in certain experimental situations. Despite the anthropomorphic problem present in all such research and realizing the caution necessary in suggesting analogies between animal and human behavior, the fact still remains that these studies are available and they do seem comparable with analogous phenomena occurring in humans.

By way of illustration, Masserman's now classic animal studies may be pointed out. Here, in a series of experiments, cats motivated by hunger were trained to work a relatively complicated switch which would release a small quantity of food when needed. After this behavior had been well learned the same animals were exposed to a series of air blasts or electrical shocks upon approaching the feeding station. For the cats, who wanted to obtain the food and yet wanted to avoid the air blasts or shocks, this

situation resulted in an approach-avoidance conflict. The consequent pathologic reactions which the animals developed to the switch, the feeding station and to their general surroundings as a result of this irreconcilable conflict have been described by Masserman as "neurotic" behavior. Upon the administration of alcohol, however, the same animals which previously had responded with pathologic reactions and refused to work in the conflict situation once more spontaneously worked the switch and fed on schedule despite the air blasts or shocks. It was also observed that while under the influence of alcohol the cats showed some general loss of efficiency in executing their food-getting responses, but this was quickly regained following the withdrawal of alcohol. Significantly, the original motivational conflict with its aberrant responses was also reinstated upon the withdrawal of alcohol. Masserman interprets these findings as indicating that while alcohol "partially disintegrates . . . all behavior patterns . . . , nevertheless, along with these general effects there occurs a particular disorganization of highly complex neurotic patterns themselves, so that, with small doses of alcohol, more nearly elementary and better established reactions such as dominance-assertion or simple feeding on signal remain relatively intact and reappear in overt behavior."⁵²

⁵²Jules H. Masserman, Principles of Dynamic Psychiatry (Philadelphia, 1946), p. 145.

In another experiment reported by the same author, a cat trained to respond to feeding signals is given alcohol and then irregularly subjected to air blasts or electric shocks at several food takings. Under such circumstances the animal may develop some "neurotic" symptoms in immediate response to the situation, but these are significantly milder or even absent the next day, and on the whole the cat does not develop "neurotic aberrations of behavior" that are as severe or persistent as those seen in control cats not given alcohol. Moreover, if later the same animal, as its own experimental control, is exposed to the motivational conflict while sober, a pronounced and chronic "neurosis" may be induced. Masserman interprets these findings as indicating that alcohol "can be employed to diminish the pathologic intensity of perception of a neurotogenic conflict as well as to ameliorate the residual effects of the latter; in fact, hypnotic, sedative and narcotic drugs have served throughout the ages as welcome balms and nepenthes for anxiety-ridden mankind."⁵³

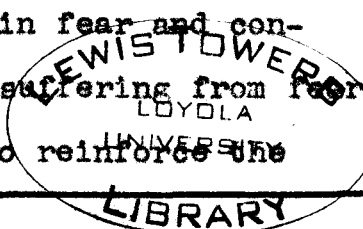
A similar series of follow-up experiments are reported by Conger⁵⁴ in which rats were given alcohol after a simple approach-avoidance conflict had been established. The findings indicate that alcohol reduced a conflict built up by electric shock and

⁵³Ibid., p. 150.

⁵⁴John J. Conger, "The effects of alcohol on conflict behavior in the albino rat," Quart. J. Stud. Alc., XII (March 1951), 1-29.

that if conflict is tension producing, alcohol could reduce the tension. It was further concluded that if alcohol removes a fear-motivated restraint in a conflict situation and permits satisfaction of drives whose goal responses had been inhibited by the conflict, further reinforcements for the drinking habit may be provided.

From the animal experiments reviewed above it is clear that in certain conflict situations where ordinary problem-solving behavior is frustrated and tension or anxiety is produced alcohol can be made to function as a temporary, but nevertheless efficient, tension or anxiety reducing mechanism. Also, the anxiety reduction which is achieved results from the direct pharmacological effect of the alcohol which apparently alters or disorganizes both the feeling state associated with the conflict and the perception of the conflict itself. In view of the fact that it is man rather than the experimental animal who is usually anxiety-ridden, the question must be raised as to whether the unique ability of alcohol to reduce feelings of anxiety has not been overlooked in considering its widespread use among humans. Dollard and Miller, in considering this issue, hold that the conclusions reached concerning the effects of alcohol derived from animal experimentation apply equally validly to mankind. They conclude that "alcohol seems to produce a temporary, direct reduction in fear and conflict and hence in misery. For people who are suffering from fear and conflict, this reduction will be expected to reinforce the



responses involved in drinking."⁵⁵

With respect to the social and emotional functions of beverage alcohol in human society several other investigators also conclude that alcohol functions as a tension or anxiety reducing agency in many instances. Jellinek generalizes further than most in this regard. "Anxieties, frustrations and conflicts are the mainsprings of unconscious motivation for the moderate as well as the excessive drinker," he states. "Even the normal person has his anxieties"⁵⁶

Cross-cultural data analyzed by Horton⁵⁷ give further support to the hypothesis that the drinking of alcohol in society in general is motivated by need for anxiety reduction. In his study Horton analyzed fifty-six different primitive societies that had access to alcohol and had been studied sufficiently well to provide adequate data. For each society he made separate ratings of the amounts of insobriety reported and of the subsistence hazards that presumably would evoke anxiety. When these two ratings were compared, the amount of insobriety was found to be reliably related to the degree of subsistence hazard.

⁵⁵John Dollard and Neal Miller, Personality and Psychotherapy (New York, 1950), p. 377.

⁵⁶Jellinek, "The alcohol problem: formulations and attitudes," Quart. J. Stud. Alc., IV (December 1943), 458.

⁵⁷Horton, "The functions of alcohol in primitive societies: a cross-cultural study," Quart. J. Stud. Alc., IV (September 1943), 199-320.

Although unsubstantiated by direct experimental verification the conclusions arrived at by Jellinek and Horton seem to be compatible with the facts known about the anesthetic action of alcohol on the cerebral cortex. Regardless of the reasons given by individuals for drinking beverages containing alcohol, the fact remains that ethyl alcohol is a chemical capable of directly disturbing metabolism in such a way that, according to dosage, it can duplicate the therapeutic effects of various drugs described as sedative, hypnotic, analgesic, and narcotic.⁵⁸ It should not seem strange then that man, exposed to the anxieties and frustrations of modern society as he is, appears to seek occasional relief or release from this state through the anesthetic action of alcohol.

But what of the alcoholic? Does the occasional relief of anxiety and the relaxation of tensions through the sedative action of moderate alcohol consumption suggest a rationale for its exaggerated or persistent use? Could the exaggerated or persistent use of alcohol by certain individuals, even though they differ widely as to personality structure, indicate a common need to reduce comparably exaggerated or persistent feelings of tension or anxiety? Some investigators believe that the anesthetic action of alcohol may be so rewarding for certain anxiety-ridden individuals that they must risk the harm associated with the over use of this

⁵⁸R. G. Bell, "Clinical orientation to alcoholism," Industr. Med. Surg., XXI (June 1952), 251-260.

drug. For example, Ullman,⁵⁹ Williams,⁶⁰ Bales,⁶¹ and Schilder⁶² hypothesize along with Jellinek and Horton that it is the anxiety reducing capacity of alcohol which stands out as the unequivocally significant motivating factor in its widespread use. They further imply, however, that in the alcoholic the same basic motivation is present, only here the exaggerated drinking behavior is in response to a comparably exaggerated need for anxiety reduction.

While the above investigators suggest that alcoholism may represent an attempt on the part of the alcoholic to reduce or relieve anxiety or tension through alcohol ingestion, very little experimental verification on human beings is available. The only experimental work which specifically concludes that anxiety is the alcoholic's problem is contained in the previously mentioned study by Buhler and Lefever. Here, after exhaustively analyzing the Rorschach responses of one hundred alcoholics the authors conclude that

In the case of the alcoholic, anxiety seems to result from the loss of control in acute tension situations which the alcoholic cannot stand and immediately escapes.

⁵⁹Albert D. Ullman, "The psychological mechanism of alcohol addiction," Quart. J. Stud. Alc., XIII (December 1952), 602-608.

⁶⁰E. Y. Williams, "The anxiety syndrome in alcoholism," Psychiat. Quart., XXIV (October 1950), 782.

⁶¹R. F. Bales, "Cultural differences in rates of alcoholism," Quart. J. Stud. Alc., VI (March 1946), 480-499.

⁶²P. Schilder, "The psychogenesis of alcoholism," Quart. J. Stud. Alc., II (September 1941), 277-292.

This acute tension is his problem. The escape to alcohol is not a parallel to psychoneurotic symptoms which are reactions to unconscious deep-level conflicts. The escape to alcohol is escape from acute pressure, whether aggravated by deep-level conflicts or not.⁶³

Although unsubstantiated by other experimental investigators Buhler and Lefever's conclusion as to the role played by anxiety in alcoholism does seem to be a pertinent contribution to a potentially more unified and meaningful psychological theory of alcoholism. It is hoped that the present research will offer further experimental evidence with respect to the presence of anxiety in individuals with alcoholism.

In turning now to the next phase of this investigation, namely, the objective measurement of the phenomenon under question, several problems present themselves. The first of these is concerned with the selection of an adequate measuring instrument. Because the issues involved in valid test construction, especially personality tests, are large and complex, the recommendations and suggestions offered by Cronbach,⁶⁴ Ellis,⁶⁵ Guilford⁶⁶ and others were used as practical guides in choosing a measuring instrument

⁶³Buhler and Lefever, pp. 258-259.

⁶⁴Lee J. Cronbach, Essentials of Psychological Testing (New York, 1949), pp. 43-83.

⁶⁵Albert Ellis, "The validity of personality questionnaires," Psychol. Bull., XLIII (September 1946), 385-440.

⁶⁶J. P. Guilford, Psychometric Methods (New York, 1954), pp. 341-465.

for this study.

In general, the test desired was one which would be completely objective, applicable to the population being evaluated, free from excessive errors of measurement and adequately validated against a reliable criterion. The specific aim of the present investigation also required that the instrument selected have as its primary goal the measurement of degrees of anxiety and, preferably, nothing else. An additional feature desired was for a test which would be designed to give valid results even though administered to respondents with little insight into their personalities or behavior and, very likely, little motivation to reveal personal areas of maladjustment.

While the practical and technical requirements of an appropriate measuring instrument may be easily enumerated, the finding of a test which would meet these requirements to some degree was no simple matter. Validity coefficients for diagnostic instruments, for example, are not often high, and validation criteria frequently tend to be equivocal or inconsistent. Another difficulty observed was that norms for personality questionnaires were usually derived from very limited populations. Also, without exception it seemed, a willingness to reveal deviant behavior or attitudes was always demanded of the respondents. With particular regard to the phenomenon of anxiety it was interesting to observe that although this is a fundamental psychological concept the evaluation of which is considered to be important for a variety of reasons, its

measurement in most instances was left largely to clinical judgment or indirect psychometric analysis. As a consequence of these and other limitations the number of measuring techniques which could be used was sharply reduced. Finally, only three objective devices for evaluating the condition remained for consideration. These tests included:

(1) The Welsh Anxiety Index.⁶⁷ This numerical index of anxiety is a statistic derived from the consideration of profile configurations seen in M.M.P.I. records of psychiatric patients characterized by anxiety as a prominent clinical feature. Although the validity scales of the M.M.P.I. could be used to good advantage here to indicate initial test-taking attitude on the part of respondents, the index was rejected because its derivation was much too dependent upon the relatively inadequate reliability and validity of the four combined sub-scales (Hypochondriasis, Depression, Hysteria, Psychasthenia) upon which it is based. Also, experience by Levitt⁶⁸ indicates that the index will probably not give a reliable indication of the degree of anxiety as he found that neurotics and psychotics without the anxiety pattern of other groups also scored in the direction of high anxiety on the test.

⁶⁷George S. Welsh, "An anxiety index and an internalization ratio for the M.M.P.I.," J. consult. Psychol., XVI (February 1952), 65-72.

⁶⁸Eugene E. Levitt, "A note on the Welsh M.M.P.I. anxiety index," J. consult. Psychol., XVIII (April 1954), 112.

(2) The Taylor Manifest Anxiety Scale.⁶⁹ This test has been widely employed as a measure of anxiety. It initially consisted of sixty-five M.M.P.I. items that were rated by clinical psychologists to be indicative of anxiety. Those items found to be non-discriminating through item analysis were subsequently eliminated. The present scale consists of fifty discriminating items and 175 buffer items all drawn from the M.M.P.I.. Normative data is based on 1971 individuals, mostly college students in introductory psychology classes. Although no attempt was made in the development of the scale to relate the items to an empirical criterion initial data indicate that the instrument does distinguish between normals and psychiatric patients. Subsequently, several attempts have been made to relate scale scores to manifestations of clinically diagnosed anxiety states. Gleser and Ulett⁷⁰ have reported a correlation of .61 between scale scores and psychiatrists' ratings of anxiety proneness. Lauterbach,⁷¹ according to Goldstein,⁷² found

⁶⁹Janet A. Taylor, "A personality scale of Manifest anxiety," J. abnorm. soc. Psychol., XLIII (April 1953), 285-290.

⁷⁰Goldine Gleser and G. Ulett, "The Saslow Screening Test as a measure of anxiety-proneness," J. clin. Psychol., VIII (July 1952), 279-283.

⁷¹C. Lauterbach, "An empirical study of the Manifest Anxiety Scale and its relationships to other clinical measures of anxiety," Unpublished doctor's dissertation, State University of Iowa.

⁷²Leonard D. Goldstein, "Interrelationships among several measures of anxiety and hostility," J. consult. Psychol., XVIII (February 1954), 35-39.

a correlation of .31, significant at the .01 level between Taylor scores and psychologists' ratings of overt anxiety, but the correlation found with psychiatrists' ratings was not significantly different from zero. In commenting on the contradictory results which followed from his comparison of the Taylor scale with two other tests purporting to measure anxiety, Goldstein concludes that not all tests thought to measure anxiety are measuring the same variable.⁷³ And this seems to be the primary criticism of the Taylor scale; that is, it measures something, but not necessarily manifest anxiety. Here it is important to note that this is not strange since Taylor developed the scale originally without regard to relationship of scores to clinical observations and intended the instrument only as an experimental tool for the measurement of level of drive, excitability or motivation, rather than manifest anxiety as such. Taylor herself cautions users of the test on this point. "While defining degree of anxiety in terms of the anxiety-scale score is a legitimate operational procedure," she comments, "determining the relationship between this definition and clinical judgements might extend applicability of both scale and experimental findings."⁷⁴

Concerning the problem of what the Taylor scale measures,

⁷³Ibid., p. 38.

⁷⁴Taylor, p. 290.

Sampson and Bindra⁷⁵ conclude that scores within a certain range are more likely to be associated with a clinical diagnosis of "anxious" than are scores above and below this range. This evidence of multidimensional scaling plus the absence of a clear and univocal relationship in other studies between the Taylor scale and clinical manifestations of anxiety led to the rejection of this test for use in the present investigation.

(3) The Freeman Manifest Anxiety Test.⁷⁶ Because this was the instrument finally selected for use in this study a fuller description of its development is contained in the following section.

The Freeman test for the measurement of anxiety is a pencil-and-paper test consisting of five subsections listed as A, B, C, D, and E. There is a total of 141 items in these combined sections, fifty-six of which are considered significant indicators of manifest anxiety ("MA").⁷⁷ The author of this test maintains that it has an advantage over other objective scoring instruments through its feature of disguise, the test being ostensibly designed to evaluate the subject's ability to judge (socially) the behavior of

⁷⁵Hubert Sampson and Dalbir Bindra, "'Manifest' anxiety, neurotic anxiety and the rate of conditioning," J. abnorm. soc. Psychol., XLIX (April 1954), 256-259.

⁷⁶M. J. Freeman, "The Development of a Test for the Measurement of Anxiety: A Study of its Reliability and Validity," Psychol. Monogr., LXVII (1953).

⁷⁷See appendix for copy of test and scoring key.

other people. He believes that in structuring the test on this basis the subject is less inclined to falsify items and tends to project his unconscious identifications for revelation of his personal anxiety characteristics. While there is no time limit on the test, most subjects require from thirty to sixty minutes to complete the 141 items. Scoring is accomplished in from ten to fifteen minutes simply by adding up all of the significant items scored in the direction of "MA". The raw score obtained may then be compared, for clinical purposes, with a critical score and with a table of percentile norms.

The author's basic hypothesis in developing the above test was that anxiety as a pathological manifestation could be differentiated from normal anxiety which occurs in response to an actual external threat. The term manifest anxiety was defined descriptively as including the behavioral responses of fear and apprehension which psychiatrists have observed to be manifest to an abnormal degree in persons suffering from neurosis.

In developing the actual test material special care was taken to eliminate certain weaknesses inherent in paper-and-pencil tests. For example, questions easily falsified were eliminated. Also, most items were sufficiently disguised to the extent that a subject would not be aware of the diagnostic intent of the question. Further, and most important, all items were designed to be of a projective character. That is, the respondent is asked questions, not about himself, but about how other persons feel, or behave or

respond to certain stimuli. Presumably, in giving answers, a subject must respond through a projective mechanism of one kind or another.

Concerning the population used in the development and validation of the test it should be mentioned that a total of 921 subjects, mostly adult males, were tested. Of this number, 405 were used in preliminary investigations and 616 in final validation studies. The various criterion or "MA" groups were selected from a number of hospital populations not on the basis of psychiatric classification but solely on the basis that each subject displayed undisputed manifest signs of anxiety in accordance with the definition of that term noted above. The psychiatric requirements for the diagnosis of manifest anxiety included a minimum observation period of thirty days, no organic pathology to account for symptoms and concurrence by the head hospital psychiatrist with the resident physician or psychiatrist in the diagnosis of manifest anxiety. As each diagnostician was provided with a definition of manifest anxiety and as only subjects with obvious manifestations of this behavior were selected, no differential diagnostic problems were encountered. In all 511 different control subjects were used throughout the study.

Concerning the procedure used in validating this test it should be pointed out that each item of the completed instrument was individually validated by comparison of responses made by various criterion and control groups as well as the final validation

of the test as a whole. The procedure of item-analysis has the advantage of validating every single item of the test through the establishment of item-identity in all of the validity comparisons made. In all a total of 771 subjects, 310 criterion cases and 461 normals, were used in the preliminary and final applications of this validation procedure. Thus, the establishment of the validity of the instrument on the basis of constancy of item-differentiation should have been adequately achieved.

The problem of measuring manifest anxiety and not other variables inherent in the situation was also given consideration in the development of this test. For example, the factor of hospitalization was examined for its effect on the instrument by application of the test to a group of hospitalized normals characterized by equal length of stay in the hospital, but with organic illness without manifest anxiety involvement. Nonhospital normal cases were also compared with hospitalized manifest anxiety cases. And, finally, nonhospital normal cases were compared with hospitalized normal cases. The conclusion reached was that although some measure of anxiety may be attributed to hospitalization or organic illness, not enough is present to identify these hospitalized groups with the actual manifest anxiety cases. Also, since certain groups necessarily contained both sexes, the problem of possibly measuring sex differences rather than manifest anxiety was investigated. The results of this validation study which included 100 males and fifty females suggest that sex does not seem to be a

determining factor in the formation of anxiety (t of means is .89).

Another measure to control the influence of extraneous factors on the investigation was the attempt to match the various normal and criterion groups on the variables of age and education. However, an adequate matching of the groups on these variables was not achieved with the exception of two preliminary studies. In fact, these data are not even obtained for the groups used in the final validation study and several of the preliminary studies. The author's only comment on this lack of control is concerned with the age variable. Following one final item-validation study where ages could not be matched he concluded that this factor does not appear to materially influence the discrimination of the items. Since these variables are found to vary widely between certain groups or are not controlled at all between others it must be presumed either that they are of no practical significance or that they are uncontrolled variables whose effects on the scale are unknown.

Following the several preliminary item-analysis and item-validation studies it was determined that fifty-six items were significant or "nearly significant" in discriminating between the various criterion and control groups (ϕ values of .09 or over). Then, taking these fifty-six item-differentiators, two reliability studies were conducted. The population here included one hundred "MA" cases and one hundred normal nonhospital cases. A final reliability coefficient of .73 was obtained. Following this study

the final validation of the test as a whole was accomplished using a new group of one hundred "MA" cases which were compared with the one hundred normals used in the previous reliability study. The following relevant data were obtained.

The criterion group obtained a mean score of 29.30; the S.D. was 7.29. The normal group obtained a mean of 24.81; the S.D. was 6.18. A very significant difference in the mean scores is indicated (t of means is 3.90). The null hypothesis can therefore be rejected and it may be concluded that it is highly improbable that the difference found between the means is the result of chance.

A cut-off score was established by the graphic method of locating the point of intersection of the curves of the distributions of the two groups. The critical score is 28.

A validity coefficient (ϕ) of .32 was also obtained. In terms of equivalent Pearson r , this equals .40. For a significance test, ϕ was converted into chi square. Since chi square equals 13.31 and the required figure for significance at the .01 level is 6.635, there is less than one chance in a hundred that the obtained chi square could occur by chance. It may be concluded therefore that the coefficient obtained does differ significantly from zero and the null hypothesis may be rejected with confidence.

In order to complete the development of the scoring key, a percentile table is available. The cut-off score of 28 falls at the 70th percentile of the normal group, which means that 30 per

cent of the nonhospital normal population have scores higher than the cut-off score.

To conclude this analysis of the Freeman Scale certain observed advantages and limitations might be pointed out. First, the fact that the instrument was empirically derived from an apparently univocal clinical criterion and then validated both in terms of constancy of item-differentiation and in terms of total items made it appear that it was developed with rigorous regard for principles of valid test construction. Second, its utilization of various controls and certain features of disguise to avoid falsification of items made it, by far, the instrument of choice for use with the experimental group being examined in the present study. Certain limitations of the test are also readily apparent. It is obvious, for example, that it is still at an experimental level of development and standardization data is based on a relatively small and restricted population. Also, subjects used although controlled for hospitalization and sex, are not adequately controlled for age, education, and other variables. Thus, how directly comparable the standardization group is to other adult populations on whom it might be used is difficult to say. What influence these uncontrolled variables may have on anxiety level is also unknown. Yet, despite these limitations, the instrument appears to be far superior to other objective tests of anxiety and particularly appropriate for use in the present investigation.

CHAPTER III

PROCEDURE

As stated previously the objective of the present study was to explore the validity of the hypothesis that anxiety manifests itself in a group of alcoholics to a significant degree. The procedure and materials used in carrying out this research are described under the following headings: (1) research design, (2) statistical methodology, (3) experimental population, and (4) testing instruments.

(1) Research design. Each of 150 randomly selected male alcoholics was given a standardized test specifically designed to objectively measure manifest anxiety. This instrument, the Freeman Manifest Anxiety Test, already described in chapter II, was then scored and evaluated in the manner designated by its author. Since the study was intended primarily to explore the test performance of a sample of alcoholics on an empirically constructed measure of anxiety and to determine the level of anxiety achieved by the group, results were compared only to scores obtained by the standardization population which was used in the original validation studies and upon which the percentile norms of the test are based.

In addition to evaluating its relative position on the Freeman test an attempt was also made to analyze the experimental group in terms of its comparability to the standardization population. Since such factors as age, education, etc., were not controlled throughout in the original validation studies this analysis could include only a comparison of the two populations on such controlled variables as sex and hospitalization. However, other comparative data were determined by inference from the description given of the standardization population and this was presented insofar as it applied to age and educational levels.

Also, because it was not known initially whether the alcoholics available for study would be representative of the general alcoholic population, several descriptive variables were analyzed for comparison of the experimental group with this larger population. Here, four variables were found on which comparisons could be made. They included age, education, intelligence and marital status.

Finally, because there is factual evidence to indicate that alcoholism is a progressive illness,¹ it was thought that an analysis of the relationship between level of anxiety and factors related to the extent or degree of chronicity of alcoholism would be

¹See E. M. Jellinek's discussion of this phenomenon as presented to the Expert Committee on Mental Health, Alcoholism Subcommittee, Second Report, "The phases of alcohol addiction," World Hlth. Org. techn. Rep. Ser., No. 48 (August 1952), 26-39.

worth while. The hypothesis was that anxiety level would very likely increase as addiction became progressively worse. The difficulty here, however, was that direct indications of the extent of addiction were impossible to obtain because of the absence of objective and reliable sources of information. As a result several indirect indicators of the extent or severity of addiction were selected and correlated with the measures of anxiety obtained. Because addiction must progress through time one variable selected was the absolute number of years of drinking of the patient. It was selected instead of the number of years of alcohol addiction because it was impossible to obtain an objective estimate of how long each patient had used alcohol addictively. Another factor related to the progression of addiction was thought to be the age of the patient, particularly as this was related to the number of years of drinking. Thus, years of age was included as an indirect measure of addiction. Two other factors indicative of extensive addiction found in alcoholics are resistance to treatment and social instability as evidenced by inability or unwillingness to function in primary social groups.² Again, these factors could only be measured indirectly and then only crudely. With respect to resistance to treatment, hospital status upon admission was the only objective measure available, with patients being classified

²See Robert Straus and Selden Bacon, Alcoholism and Social Stability (New Haven, 1951), pp. 1-30.

according to their type of admission; that is, as voluntary or committed. Concerning social instability, a gross but, nevertheless, reliable variable was the patient's marital status, dichotomized here as married or not married. Still another variable included in this analysis was the intelligence of the patient. It was thought to be related to chronicity of addiction because gradual but progressive intellectual deterioration is frequently noted as alcoholism increases.³ However, even though a negative relationship were to be found between anxiety level and intellectual performance such a situation could conceivably be related to educational level rather than intellectual deterioration. Thus, because educational level is so closely related to intellectual level, it too was included in the analysis for purposes of control. Data for all of these variables except intelligence were obtained either directly from the patient or from his hospital chart. The determination of intelligence, like the measurement of anxiety, was achieved through the administration of a formal test, here the Army General Classification Test (AGCT).

(2) Statistical methodology. With the anxiety scores gathered, the basic data were available for computing whether any difference existed between the alcoholic group's anxiety level and that of Freeman's normal control and manifest anxiety groups. The statistical techniques used here included the computation of the

³See chapter II, page 17.

significance of the difference between the means of the two groups being compared and the determination of the critical ratio. In comparing the experimental group with other samples of alcoholics mean differences were also obtained, but here standard deviations were not available for most of the variables. Only in comparing educational levels could a significance ratio be determined. Finally, with the anxiety scores gathered, and with the appropriate variables quantified for indirectly measuring degree of addiction, the basic material was available for correlating the anxiety scores with the data derived from each of these variables. The statistical technique which was used when the continuous distribution variables of age, education, intelligence, and years of drinking were related to the anxiety scores was Pearson's product-moment coefficient of correlation. The statistical technique used when the dichotomized variables described as voluntary-committed and married-not married were related to the anxiety scores was point biserial correlation. The significance level of the correlations obtained was also determined.

(3) Experimental population. One hundred and fifty consecutively admitted nonpsychotic, white, male alcoholics who came to the Willmar State Hospital, an alcoholic treatment center, and remained a minimum of ten days were selected as subjects for this study. In no instance was there any clinical doubt as to the presence of alcoholism. No patient was evaluated until he had been in the hospital at least five days and was considered by his

ward physician to be free from symptoms of acute intoxication and in adequate physical health. Omitted from the experimental group were nine patients who proved to be untestable with the instruments used in this study.⁴ A more detailed description of the experimental population may be obtained through a short review of each of the six previously mentioned variables (age, years drinking, years education, intelligence, hospital status and marital status) which were analyzed.

In terms of age upon admission the group shows considerable variability. Ages range from twenty-four to sixty-nine years. The mean age upon admission is 45.47 years with a standard deviation of 10.50 years.

For the group, the number of years of drinking is also extremely variable with the absolute number of years of drinking ranging from two to fifty years. The mean length of time drinking is 20.00 years with a standard deviation of 9.17 years.

With respect to the educational level of the group, variability continues to be the distinguishing mark with years of education ranging from five to seventeen years. The mean educational level is 10.63 years with a standard deviation of 2.55 years. Typical of education curves, the distribution is multimodal with two particularly significant peaks, one at the termination of

⁴Three patients had uncorrected visual defects, three others were unable to read English, two were hospitalized with long-term physical illnesses and one refused to be examined.

eighth grade and the other at the completion of high school.

As mentioned earlier, intelligence was determined by administering the AGCT. Here again considerable spread is indicated and scores range from forty-nine to 151 AGCT points. The mean AGCT score is 106.50 with a standard deviation of 20.00. Table I, below, showing the distribution of scores on these four variables may be consulted for a more detailed analysis of the experimental group.

TABLE I
DISTRIBUTION OF SCORES OF 150 ALCOHOLICS
ON FOUR SELECTED VARIABLES

Measure	Variables			
	Age in years	Years drinking	Education in years	AGCT scores
Range of scores	24-69	2-50	5-17	49-151
Mean	45.47	20.00	10.63	106.50
Median	45.45	20.14	10.22	108.38
Standard deviation	10.50	9.17	2.55	20.00

With respect to the voluntary or committed hospital status of the group no clear-cut admission preference is shown. Sixty-eight patients, or forty-five per cent of the total group, were admitted

voluntarily, while eighty-two patients, or fifty-five per cent of the total group, were committed.

In terms of marital status, described here as a married-not married dichotomy, the group is again about equally divided. Seventy-six patients, or fifty-one per cent of the total group, were married upon admission, while seventy-four, or forty-nine per cent, were not married.

(4) Testing instruments. The most important single evaluative instrument used in this study was the one selected to determine the degree of anxiety present in the experimental group. After a careful evaluation of available tests which purport to measure such states, the Freeman Manifest Anxiety Test was finally chosen as being most applicable. As stated earlier, it was preferred over other like-measures essentially because of its empirical construction, its acceptable reliability and validity, coefficients, and its projective structuring of items which appears to appreciably reduce falsification of scores.

The only other formal testing instrument used in this research was the Army General Classification Test, First Civilian Edition, Form AH (AGCT).⁵ Despite the fact that the AGCT is designed as a measure of general learning ability rather than as an intelligence test, its favorable relationship with other tests

⁵Science Research Associates, Army General Classification Test, First Civilian Edition (Chicago, 1947).

which purport to measure intelligence plus its ease of administration in group form made it appropriate for use in this study. In administering this test the procedure outlined in the examiner's manual was followed closely as to testing room, distribution of material and practice exercises. Subjects were tested in groups of five to twenty-five at intervals and results were hand-scored and converted to AGCT standard scores as directed.

CHAPTER IV

RESULTS

The results of the administration of the Freeman Manifest Anxiety Test to 150 alcoholic patients at the Willmar State Hospital are graphically indicated in Figure 1 in terms of distribution of "MA" scores.¹ Here it may be observed that the majority of scores show a distinct tendency to distribute themselves above the critical score of twenty-eight or in the direction of greater amounts of anxiety. By individual count only forty-three subjects, or 29.87 per cent of the group, have "MA" scores below the critical score of twenty-eight while a total of 107 subjects, or 70.13 per cent of the group, score above this point. The mean score for the entire group is 32.32 with the standard deviation being 7.41. Extreme scores range from eighteen to fifty-four "MA" score points. By inspection it may be observed that this distribution of scores appears to closely approximate a normal curve.

When the "MA" score distribution of the alcoholic group is compared as in Table II, below, with the "MA" scores obtained by Freeman's normal control group certain distinct similarities and

¹See Figure 1, p. 59.

Number of
alcoholics

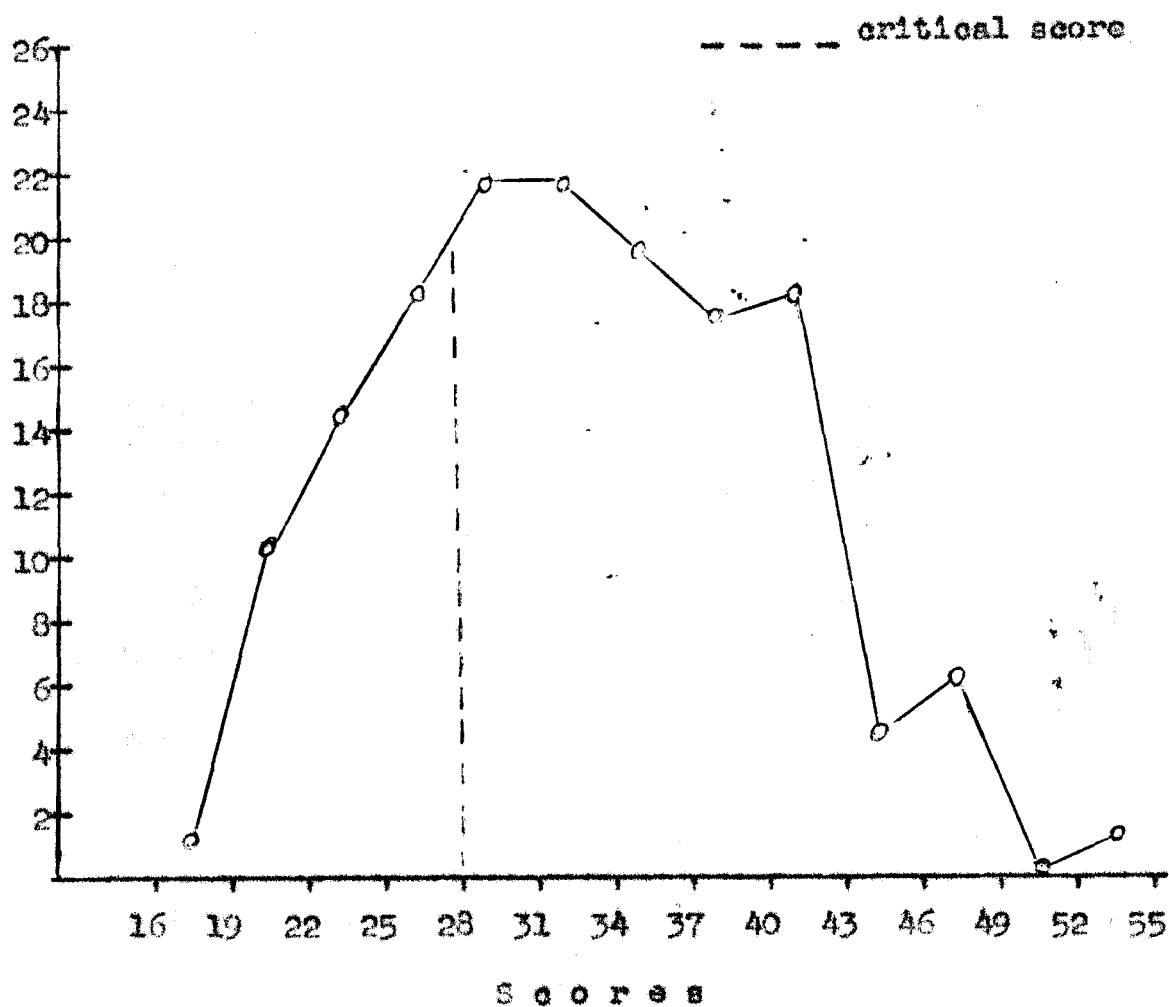


FIGURE 1

DISTRIBUTION OF MANIFEST ANXIETY SCORES
OF 150 MALE ALCOHOLICS

differences stand out.² Keeping in mind that the experimental group is a somewhat larger population, the distribution and spread of scores for both groups are found to be essentially similar. The difference between mean scores, on the other hand, appears to be the only significant dissimilarity between the two groups. The difference of 7.51 points between the alcoholic group's "MA" mean

TABLE II

COMPARISON OF MANIFEST ANXIETY SCORES OF 150
ALCOHOLICS AND 100 NORMAL CASES

Group	Range of scores	Mean	SD
150 alcoholic cases	37	32.32	7.41
100 normal cases	29	24.81	6.18
Critical score: 28			

score of 32.32 and the normal group's mean of 24.81 does not, at first glance, indicate a pronounced difference. However, when the two groups are compared in terms of percentile norms the difference between means is brought out in a more pronounced manner. Here, in using Freeman's percentile table,³ the mean of the normal

²For description of normal group see: Freeman, "Development of test for measurement of anxiety," Psychol. Monogr., LXVII (1953), 4.

³Ibid., p. 11.

group is found at the 50th percentile while the mean of the alcoholic group is found at the 85th percentile, a point considerably above the norm.

Despite the fact that a relatively large mean difference seems to exist between the normal and the experimental group, such a condition could conceivably be due to random sampling errors. Because of this possibility a critical ratio was calculated, the results of which are contained in Table III, below. As indicated

TABLE III

SIGNIFICANCE OF DIFFERENCE OF "MA" SCORE MEANS:
ALCOHOLICS VS. NORMALS

Group	Mean	Diff. of means	S.E. of Diff.	C.R.	P
150 alcoholics	32.32	7.51	.8647	8.68	.001
100 normals	24.81				

in the table a critical ratio of 8.68 was obtained. Such a ratio, when interpreted in terms of the normal probability curve, indicates that the chances are about one in a thousand (.001) that the observed difference was due to accidental sampling errors. Thus it may be concluded that it is highly improbable that the difference found between the means of the normal and the experimental group is the result of chance.

On the other hand, when the "MA" score distribution of the

alcoholic group is compared with the scores obtained by Freeman's "MA" hospital cases as in Table IV, below, it is apparent that the distribution for both groups is quite similar. Yet, even though

TABLE IV

COMPARISON OF MANIFEST ANXIETY SCORES OF 150
ALCOHOLICS AND 100 "MA" HOSPITAL CASES

Group	Range of scores	Mean	SD
150 alcoholic cases	37	32.32	7.41
100 "MA" hospital cases	30	29.30	7.29

the alcoholic group is being compared with a population selected specifically because of its propensity toward manifest anxiety, it still has a mean "MA" score 3.02 points higher than this group. This difference when expressed in percentiles places the "MA" hospital group at the 75th percentile while the alcoholic group, as mentioned before, falls at the 85th percentile.

Again, because of the possibility of sampling errors, a critical ratio was calculated to determine whether this difference was statistically significant or not. The resulting critical ratio and probability level are contained in Table V, below. As shown in the table a critical ratio of 3.19 was obtained. Such a ratio indicates that the chances are about one in a hundred (.01) that the observed difference was due to accidental sampling errors.

Thus, it may be concluded that it is highly improbable that the difference found between these means is the result of chance.

TABLE V

SIGNIFICANCE OF DIFFERENCE OF "MA" SCORE MEANS:
ALCOHOLICS VS. "MA" HOSPITAL CASES

Group	Mean	Diff. of means	S.E. of Diff.	C.R.	P
150 alcoholics	32.32	3.02	.9473	3.19	.01
100 "MA" cases	29.30				

Since the standard for comparison in this exploratory study is the normal control group and the hospitalized manifest anxiety group used in the final standardization of the "MA" test, it would be well at this point to examine the extent to which the present experimental population may be compared to these groups. As noted earlier, control over certain variables was not maintained throughout the validation of the scale and thus much descriptive data are not available. However, certain information is indirectly available or may be implied from the description which is given of these subjects.⁴ For example, it is known that the normal control group was composed of salesmen, fraternity applicants and college students. Although no information is available on these subjects

⁴Ibid., pp. 8-9.

other than that they are all male and categorized as nonhospital normal cases, age and educational levels may be inferred to some extent from their listed occupations and implied social status. Thus it may be presumed that the majority of the group is composed of young adult college students. If this assumption is correct then the present experimental group is on the average very likely considerably older and less well educated than the normal control group. Concerning the manifest anxiety group comparative data is even more meager. Here it is known only that the subjects used in the final validation study were hospitalized adult psychiatric cases selected by psychiatrists because they met the specifications already described for inclusion in the "MA" group.

Despite the fact that descriptive data is minimal concerning the composition of both of these groups the fact that it was determined in the original study that sex, hospitalization and age did not have a material influence on "MA" level suggests that these variables, at least, do not necessarily require control. Thus it may be that the only variability of any possible consequence between these groups and the present experimental group is that of educational level. The limitations which this and other possible group differences places on the present findings will be discussed more fully at a later point.

The next data which will be presented is that by which the sample population of alcoholics is compared with the parent population from which it was drawn. However, in determining the

present experimental group's comparability with the general alcoholic population certain limitations are apparent. There are an estimated 3,800,000 alcoholics in the United States⁵ who are at various stages of alcoholism and for whom no general and systematic descriptive analysis is available. The only way the present experimental group can be evaluated is relatively through comparing it with other samples of alcoholics found in jails, hospitals or out-patient clinics. Although these samples, too, may be considered selected segments of the general alcoholic population, they are the only sources from which comparative data is available. With these sampling limitations in mind a comparison of the present population with other samples of alcoholics may be made.

One realistic and reliable source of comparative data on alcoholics may be found in the previously mentioned study on alcoholism and social stability.⁶ Here nine different samples of alcoholics totaling approximately 6,190 individuals are compared in terms of age. Means range from 41.2 years for alcoholic out-patients to 47.9 years for first admissions with alcoholic psychoses. Standard deviations are not given. The mean age of 45.5 years found in the present study falls within this range of means and is found to be closest to that sample which is categorized as

⁵E. M. Jellinek and Mark Keller, "Rates of alcoholism in the United States of America, 1940-1948," Quart. J. Stud. Alc., XIII (March 1952), 58.

⁶Straus and Bacon, Alcoholism and Social Stability (New Haven, 1951), pp. 1-30.

first admissions for alcoholism without psychosis. The mean age for this group is 44.9 years.⁷

In another comparative analysis contained in the same study just referred to the marital status of 2,008 alcoholic male out-patients in various parts of the United States are analyzed. Fifty-three per cent of these alcoholics were found to be married and living with their families. Forty-seven per cent were categorized as single, divorced, widowed or separated.⁸ In the present study 51 per cent of the group are found to be married while 49 per cent are single, divorced, widowed or separated. The similarity between groups here indicates that the alcoholics found in the present study are definitely comparable to out-patient alcoholics in terms of marital instability.

With respect to the educational level of the population used in the present study no obvious differences are noted if comparisons are made with samples of alcoholics coming from the so-called "middle class." While samples of alcoholics coming from lower socio-economic levels have similarly lower educational levels, alcoholics not categorized in this fashion seem to be directly comparable in terms of educational achievement with alcoholics in this study.⁹ For example, the seventy-four male alcoholics in

⁷Ibid., p. 12.

⁸Ibid., p. 9.

⁹Edwin H. Lemert, "Educational characteristics of alcoholics," Quart. J. Stud. Alc., XI (March 1950), 38.

Manson's study had a mean educational level of 10.6 years with a standard deviation of 2.9 years.¹⁰ This compares favorably with the mean educational level of 10.6 years, standard deviation 2.5 years, achieved by the alcoholics in the present study. The t of means here was .08 indicating that there is no significant difference between the two groups.

Concerning the representativeness of the present population in terms of intelligence reference may be made to the studies cited earlier in this paper on the intellectual level of alcoholics.¹¹ Characteristic of the results obtained by previous investigators, the intellectual functioning of the alcoholics examined in this study is noted to be typically variable with no significant deviations from the general population (AGCT scores range from 49 to 151 with the mean score being 106.5 and the standard deviation 20.0). Thus, it may be concluded that in terms of intellectual functioning no apparent factor of selection can be observed which would distinguish this population from any other non-selective sample of alcoholics.

The final data to be presented are concerned with the numerical relationships which exist between manifest anxiety level and the various indirect measures hypothesized to denote extent of alcohol addiction. As will be recalled, the variables selected as

¹⁰Morse P. Manson, "Educational characteristics of alcoholics," Quart. J. Stud. Alc., XI (March 1950), 38.

¹¹See Chapter II, pp. 16-17.

being possible indicators of degree of addiction included years of drinking, age, hospital status, marital status, intelligence and educational level. The results of the correlation of the "MA" scores obtained on each subject with each of the six variables listed above are contained in Table VI.¹² Here it may be observed that, of the six factors correlated with the "MA" variable, four have a degree of significance ($P=.01$) which suggests that one may be very confident that the coefficients of correlation obtained are meaningful estimates of relationship. The two remaining variables, both dichotomized, fail to show any degree of correspondence with the "MA" scores. A closer inspection of the table reveals that, of the four variables showing a significant relationship to "MA" level, none have coefficients indicative of a high degree of relationship. Two of the variables, however, have coefficients which denote a substantial relationship; the r of $-.52$ between "MA" level and AGCT score, and the r of $.42$ between "MA" level and years of age. The two remaining significant coefficients indicate a relatively low degree of correspondence. These include the r of $-.35$ between "MA" level and years of education and the r of $.26$ between "MA" level and years of drinking. An attempt to critically evaluate and interpret the above experimental results in terms of the stated hypothesis to be tested will be made in the chapter following.

¹²See Table VI, p. 69.

TABLE VI
CORRELATION OF 150 ALCOHOLIC "MA" SCORES
WITH SIX SELECTED VARIABLES

Variables	Type of correlation	Coefficient
"MA" level: years of age	Product moment	.417 ^a
"MA" level: years of education	Product moment	-.351 ^a
"MA" level: intelligence(AGCT)	Product moment	-.517 ^a
"MA" level: years of drinking	Product moment	.265 ^a
"MA" level: hospital status (voluntary-committed)	Point biserial	.004
"MA" level: marital status (married-not married)	Point biserial	.068

^aSignificant beyond the .01 level of confidence.

CHAPTER V

DISCUSSION

The immediate hypothesis isolated for study in this paper, namely, that anxiety will manifest itself in a randomly selected group of alcoholics to a significant degree, appears to derive considerable support from the findings outlined in the preceding chapter. With one hundred and seven of 150 alcoholics, or 70.13 per cent of the experimental group scoring at or above the critical "MA" score of twenty-eight, and with the mean score of 32.32 falling at the 85th percentile for the whole group, it would seem that this population of alcoholics has an obviously high level of anxiety. That this anxiety level is very likely excessively high is borne out by the fact that the mean score of the experimental group is even 3.02 points higher ($P=.01$) than the mean obtained by the hospitalized psychiatric cases selected in the original development of the anxiety scale specifically because of their obviously excessive manifest anxiety. Add to this the fact that the difference in means between the alcoholic group and the normal control group used to standardize the Freeman test is well beyond chance expectancy ($P=.001$) and it may safely be concluded that the alcoholics in this study show a relatively high level of manifest

anxiety which readily distinguishes them from a normal population when the Freeman "MA" Test and its norms are used as the criterion.

Contingent upon the hypothesis that alcoholics have a higher than average level of anxiety is the secondary but, nevertheless, equally important presumption that the condition is somehow directly or functionally related to alcoholism. A tentative interpretation of this relationship has already been stated in an earlier chapter of this paper. Here it was noted that according to some investigators alcohol is thought to be used primarily by alcohol addicts as an anxiety reducing or anxiety suppressing technique.¹ As a further demonstration of the plausibility of this anxiety reduction hypothesis an analysis of the common behavioral phenomena associated with alcohol addiction could be presented at this time. However, a complete analysis of the forty-three behavioral symptoms of progressive alcoholism as outlined by Jellinek and adopted by the WHO² would be exceedingly lengthy. Instead, for sake of brevity, it will be better here to refer to a more summarized description of this process. The following is such a summary as presented by the Alcoholism Subcommittee of the WHO.

¹See Chapter II, pp. 30-36.

²Expert Committee on Mental Health, Alcoholism Subcommittee, Second Report, "The phases of alcohol addiction," World Hlth Org. techn. Rep. Ser., No. 48 (August 1952), 26-39.

In the first of these [stages], which has aptly been described as "symptomatic drinking", alcohol is taken to deal with a current problem. The problem may be that of stress on the individual arising either from physical conditions, from psychological factors, or from social circumstances. The excessive drinking is used as an anodyne to enable the individual to face the current problem. It is important to realize that this may occur not only in individuals who have previously been unaccustomed to alcoholic beverages but also in those who have for many years taken alcoholic beverages in a moderate manner without deviating from the acceptable drinking patterns of the community in which they live. The use, however, of alcohol as a means of dealing with current stress, which we have termed above "symptomatic drinking", may well create further difficulties for the patient concerned. These difficulties again arise from physical symptoms, psychological factors, or social problems. As examples, one may quote anorexia due to gastritis, feelings of inferiority arising from behaviour while intoxicated, disturbances of personal relationships, or occupational ineffectiveness. It is at this stage that the patient who originally used alcohol in excess to ease a current stress now finds it necessary to use it also to mitigate the symptoms which the previous excessive use of alcohol has itself provoked. The anorexia of alcoholic gastritis, for instance, may be dealt with by the stimulating use of aperitifs. Alcohol may be used to overcome the individual's sense of social inferiority or, in the case of problems of social relationships or occupational ineffectiveness, to blunt the additional difficulties which these results of his previous drinking have created for the patient.

At this stage it is clear that a situation far more serious than "symptomatic drinking" has arisen. The patient is involved in a circular process whereby his excessive drinking creates additional problems for him which he can face only with the aid of further excessive drinking. The condition of true alcoholism has been established. In this second stage, in certain countries, the problem is referred to as that of "addictive drinking"

The third stage in the development of alcoholism is the appearance of organic disease or psychic deterioration, e.g., the Korsakoff psychosis. In certain types

of organic damage the appearance or non-appearance will depend to a considerable extent on factors other than the extent and length of excessive drinking, as in the case of delirium tremens³

That the Expert Subcommittee's summary of the development and perpetuation of alcoholism clearly leaves room for an anxiety reduction hypothesis as applied to progressive addiction is clearly illustrated by their recurring references to the use of alcohol as a problem-solving or stress-reducing technique. In terms of logical problem-solving this maladaptive behavior, of course, seems extremely bizarre and irrational. However, in terms of an anxiety reduction hypothesis wherein the motivation is conceptualized as a need to achieve anxiety reduction the concept of progressive alcoholism appears to take on a new and more meaningful interpretive significance. For example, the individual destined to be an alcoholic does not, according to this theory, have to be classically neurotic or psychotic or psychopathic in the usual sense of these terms. Rather, regardless of his personality structure, he need only be anxiety-ridden to a "sufficient" degree and to identify with a culture which permits or encourages the excessive use of alcohol. With this basic background, exposure of the individual to several experiences in which anxiety is markedly reduced following alcohol ingestion creates a favorable learning situation.

³Expert Committee on Mental Health, Alcoholism Subcommittee, Report on the First Session, "Definition of the problem," World Hlth Org. techn. Rep. Ser., No. 42 (September 1951), 5-7.

At this point one could say that the initial stage of prodromal alcoholism referred to above as "symptomatic drinking" has been reached. With continued practice of this anxiety obliterating technique, which at first is extremely effective, additional reinforcement may be presumed to take place. Later, as dependence upon alcohol increases--anxiety increases without alcohol and decreases with alcohol--other anxiety reducing techniques which may be really more effective and adequate in the long run (religion, recreation, social communication) tend to drop out of the individual's repertory of adjustment techniques. They simply cannot compete with this new-found short cut to feeling well. It is at this stage that one could say that "addictive drinking" has developed. Now, as real addiction progresses, alcohol becomes more and more needed in more and more situations where anxiety is felt or even anticipated. Also, at the same time that alcohol is being used more extensively, more and more anxiety is being accumulated not only because of the disuse of other more constructive anxiety-reducing techniques but because habituation to alcohol, in itself, creates its own unique anxiety producing consequences (drunkenness, guilt, inadequacy, uncontrolled sexual and hostile behavior). And these accumulations of anxiety, in turn, can only be relieved by the one technique which the alcoholic has available to him--more alcohol. As addiction progresses on this level it takes but a short time for the third or terminal stage of addiction, chronic alcoholism, to develop with its progressive psychological and, now,

physical deterioration.

With this schematic picture in mind of addictive drinking and the anxiety which presumably precipitates it increasing cumulatively as alcoholism progresses through time, a re-examination of the four variables found in the experimental group to be significantly related to "MA" level seems in order. Here it will be recalled that a tendency was found for "MA" scores to be positively related to age and years of drinking and negatively associated with intelligence (A.G.C.T. scores) and years of education. If the hypothesis is accepted that anxiety increases cumulatively as addiction progresses then those alcoholics who have used alcohol addictively for the longest period of time should tend to have relatively higher "MA" levels. Looking at the relation between "MA" level and years of age ($r=.42$) from this point of view it seems reasonable that "MA" level tends to increase somewhat as age increases because the older alcoholic has very likely drunk addictively for a longer period of time than the younger alcoholic. That the older alcoholic has used alcohol more extensively is indicated by the fact that there is a substantial correlation between age and years of drinking ($r=.49$). However, when the relationship between "MA" and years of drinking is examined it is found to be relatively weak ($r=.26$). This negligible relationship, although it indicates some correspondence between length of time drinking and "MA" level, suggests that years of drinking, in itself, is a poor indirect measure of addictive drinking. Another

factor that must be considered here is the questionable reliability of the information received about drinking from the alcoholic patient. Figure 2 illustrates this point by showing the average number of years of drinking by age group of the 150 alcoholics investigated.⁴ That the relationship between age and years of drinking is a relatively stable one between the ages of twenty and forty-five years is illustrated by the consistency with which the average years of drinking increases by age group within this period. On the other hand, the peculiar variability shown in years of drinking beyond forty-five years of age strongly suggests that the information given may be unreliable. As a consequence, presumptions made about relationships between years of drinking and other variables may be unreliable when certain portions of this data are used.

The substantial negative relationship between "MA" level and intelligence ($r = -.52$) may be likewise accounted for in terms of progressive addiction. Presumably, the same alcoholics who have used alcohol for the longest period of time addictively will tend not only to be older and have higher anxiety levels, but they will also tend to function on a more inefficient intellectual level because of the intellectual deterioration which is frequently present in chronic alcoholism. In all probability all of these factors, increasing age, heightened anxiety and reversible mental

⁴See Figure 2, p. 77.

Average years
drinking

77

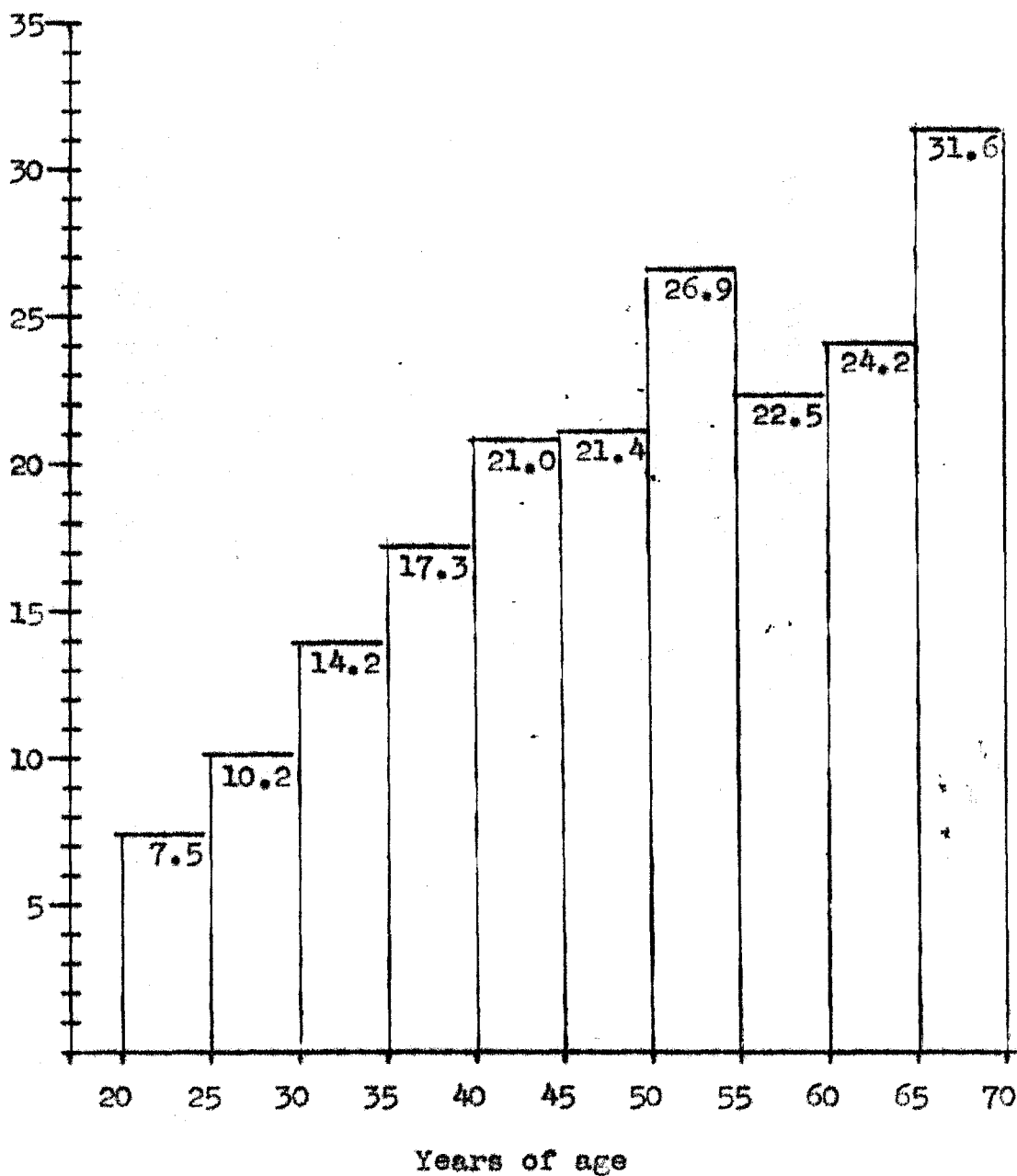


FIGURE 2

AVERAGE NUMBER OF YEARS DRINKING BY AGE
GROUP FOR 150 MALE ALCOHOLICS

deterioration, combine and together reduce the intellectual efficiency of some alcoholics.⁵ However, that factors other than these contribute to intellectual level is demonstrated by the substantial positive relationship found to exist between intelligence and years of education ($r=.56$). Years of education, in turn, is found to be negatively related to "MA" level ($r=-.35$). And this last relationship does not appear to be influenced to any appreciable degree by older alcoholics having lower educational levels, for the negative relationship found between age and educational level is relatively weak ($r=-.17$). Perhaps, because a multiplicity of factors may be contributing to the intellectual status of the group at any given time, no clear cut and isolated demonstration of the influence of chronic alcoholism on intellectual functioning can be given except in individual cases.

Concerning the lack of relationship found between "MA" and the factors of social instability and resistance to treatment, little can be said other than that the variables chosen to indirectly measure social instability (married-not married) and resistance to treatment (voluntary-committed hospital status) are relatively crude and may or may not be adequate indicators of the conditions they were selected to represent.

Since the variables selected to indirectly measure degree of addiction do not show a strong tendency to vary with "MA" level

⁵See reference to intellectual impairment in alcoholics on page 17.

the hypothesis that anxiety increases cumulatively as addiction progresses cannot be said to be confirmed by the present data. Even though some of the variables do show substantial tendencies to be associated with higher "MA" scores, caution must be maintained even in concluding that this is supportive evidence. It would seem, rather, that the hypothesis can neither be affirmed nor rejected by the present data mainly because the variables chosen to measure degree of addiction may not be reliable or valid indicators of this condition and, further, other uncontrolled and independently varying factors may also be influencing "MA" scores to an unknown extent.

At this point certain other limitations of this study and its theoretical and practical assumptions come to mind. First, concerning the validity of the general conclusion that alcoholics seem to have a significantly high level of anxiety it may be said that the statistical results indicate that this is quite probably the case when the Freeman test and its norms are used as the criterion. However, a generalization of this kind can only be made if the test used is accepted as a valid measuring instrument and the population furnishing the results is considered to be representative of the general population of alcoholics. With respect to the first of these issues, the validity of the Freeman scale, evidence has already been presented which suggests that it is both a statistically reliable and empirically valid instrument. Yet, several questions concerning the standardization of this test

arise which have ramifications with respect to its applicability to the present experimental population. One of these has to do with the representativeness of the normal control group used to standardize the test. Although Freeman states that "special attention was paid to the matter of representative sampling,"⁶ the limited size and meager descriptions given of his normal controls makes it extremely difficult to determine the extent to which they represent the general adult population. In fact, from data already presented, it may even be inferred that in terms of age and education the group is but a selected segment of that population.

Related to this possible limitation and contingent upon it is a secondary one which bears directly on the interpretation of the present findings. Since the criterion for comparison in this exploratory study is the standardization population mentioned above, the findings will be interpretatively limited to the degree to which the present population is comparable to this standard. And, although it has been shown that such factors as age, sex and hospitalization do not materially influence performance on the "MA" test, there are no other directly measurable variables upon which other comparisons may be made. Even though there is no definite evidence that anxiety is significantly related to any of the variables usually controlled in research studies, the fact still remains that this has not been established as yet with respect to

⁶Freeman, "Development of test for measurement of anxiety," Psychol. Monogr., LXVII (1953), 4.

the particular aspects of anxiety which the Freeman scale may be measuring. Thus, a further difficulty related to the representativeness of the standardization population is the question of the applicability of its norms to the present group. As a consequence, the present findings must be cautiously interpreted keeping in mind that the applicability of the test norms to the present population has been not too clearly demonstrated.

The next aspect of the present study which requires discussion concerns the degree to which the experimental group under observation is representative of the general alcoholic population. As will be recalled, comparisons were made with other samples of alcoholics in terms of age, marital status, educational level and intelligence. Results indicated that the present population appears to be quite similar to other samples of alcoholics. The only question that arises here is whether the sample groups chosen for comparison are themselves representative of the general alcoholic population. Since very little data is available on this larger population the only reply that can be given is that even though these samples may be selected portions of this universe they are, at present, the only source from which comparative data may be drawn. Thus, insofar as no obvious differences have been observed between the present experimental group and other apparently representative alcoholic groups it may be concluded that the experimental alcoholic group is in no apparent way more selective or unrepresentative of the universe of alcoholics than other

samples of alcoholics on which comparative data is available.

The foregoing section has focused on several limitations which must be considered before a realistic appraisal can be made of the current findings. Now, at this point, there remains but one more topic for discussion. This concerns the implications for further research which appear to evolve from this study. Certainly the most important and obvious implications for further research follow from the essentially exploratory nature of the present undertaking. And, although some evidence has been presented which indicates that alcoholics differ significantly from the general population in their tendency to have higher levels of manifest anxiety, such a generalization requires much more extensive evidence than this small sample study can offer. Thus, it seems obvious that many more validating studies will be required before confidence can be placed in the present conclusions. Likewise, much more refined, controlled and rigorously conceptualized investigations in this area will be required before an adequate evaluation can be made of the precise interrelations that exist between manifest anxiety and alcoholism. In particular, research into the anxiety level of different subgroups or categories of alcoholics (hospitalized vs. nonhospitalized cases; acute vs. chronic cases; men vs. women; recovered vs. nonrecovered cases; etc.) would reveal whether anxiety does manifest itself generally enough to support the hypothesis that it is a common personality factor in all alcoholics. Another aspect of the problem concerns those alcohol

addicts who obtain relatively low anxiety level scores. In what significant way might they differ from other high scoring alcoholics? Still another interesting project would be to apply several differently derived measures of anxiety to the same alcoholic group. In view of the various definitions, interpretations and criteria of anxiety in use, the experiment should provide interesting, if contradictory, results.

Finally, it should again be stated briefly that the conclusions derived from the present research are admittedly speculative and exploratory findings. While they appear to adequately encompass many of the clinical findings in alcoholism, they fail to offer an easy generalization for this extremely complex pathological syndrome. A sound theory of the role which anxiety plays in alcohol addiction awaits much further study. It is hoped that this inquiry will stimulate such research.

CHAPTER VI

SUMMARY

The general problem which gave rise to this particular investigation concerns the fact that research in the area of alcoholic personality structure has failed to reveal or to isolate any common personality variables capable of contributing to a unifying hypothesis which will explain the phenomenon of addiction within a psychological frame of reference. Accepting as its point of departure the premise that the primary function of alcohol in normal social drinking is the reduction of anxiety, the study goes on to explore whether or not alcohol continues to perform this same function, only on a more exaggerated scale, in pathological or excessive drinking. The immediate hypothesis isolated for study was that if the excessive and inappropriate drinking of the alcoholic is in response to a need to reduce comparably exaggerated feelings of anxiety, then the manifest anxiety level of a group of representative alcoholics will be found to be significantly higher than the manifest anxiety level of a normal population as measured by an objective testing instrument. A secondary investigation had to do with whether or not level of anxiety would be found to be significantly related to degree of addiction as this factor would be

indirectly evaluated by controlling several variables thought to be indicative of progressive alcoholism. It was hypothesized that anxiety level would tend to increase as addiction became progressively worse. The measuring instrument used to determine the presence and degree of anxiety was the Freeman Manifest Anxiety Test. Subjects chosen for the study were 150 consecutively admitted non-psychotic male alcoholics who had been referred to a state hospital for treatment. The population on which the manifest anxiety test had been standardized was used as a control. Results tend to strongly support the initial hypothesis that anxiety will manifest itself to a significant degree in a group of alcoholics. Over seventy per cent of those alcoholics examined were found to have anxiety scores above the critical level as measured by the Freeman scale. The related hypothesis that anxiety would tend to increase cumulatively as addiction progressed was not substantiated by the findings. Although several of the indirect measures of addiction did show substantial correlations with the anxiety variable it was questioned whether they could be accepted as reliable and valid indicators of this condition. Also, other uncontrolled and independently varying factors were suspected of influencing one or more of these variables to an unknown extent. Certain limitations of the study were also discussed. The experimental population, although it was a relatively small sample, was found to be quite representative of other unselected groups of alcoholics. However, because of the reduced size and meager descriptions given of the

control group, the degree to which it represented the general adult population was questioned. A further difficulty related to the representativeness of the standardization population was the question of the extent to which the norms derived from it were applicable to the experimental group. It was concluded that because normative data were constricted the findings should be interpreted with this limitation in mind. Finally, the essentially exploratory nature of the investigation was stressed and suggestions were made for more rigorous experimentation in this area.

BIBLIOGRAPHY

A. BOOKS

- Cottle, William C. The MMPI: A Review. Lawrence, Kansas, 1953.
- Cronbach, Lee J. Essentials of Psychological Testing. New York, 1949.
- Dollard, John, and Neal Miller. Personality and Psychotherapy. New York, 1950.
- Fenichel, Otto. The Psychoanalytic Theory of Neurosis. New York, 1945.
- Gibbons, R. J. Chronic Alcoholism and Alcohol Addiction. A Survey of Current Literature. Brookside Monograph No. 1. Toronto, 1953.
- Guilford, J. P. Psychometric Methods. New York, 1954.
- Haggard, Howard W., and E. M. Jellinek. Alcohol Explored. Garden City, N. Y., 1942.
- Jellinek, E. M., ed. Alcohol Addiction and Chronic Alcoholism. New Haven, 1942.
- Klopfer, Bruno, and D. M. Kelley. The Rorschach Technique. Yonkers, 1942.
- Lorand, S., ed. Yearbook of Psychoanalysis. New York, 1945.
- Masserman, Jules H. Principles of Dynamic Psychiatry. Philadelphia, 1946.
- Menninger, Karl A. Man Against Himself. New York, 1938.
- Patrick, Clarence H. Alcohol, Culture and Society. Durham, N. C., 1952.
- Straus, Robert, and Selden Bacon. Alcoholism and Social Stability. New Haven, 1951.

Strecker, Edward A., F. G. Ebaugh, and J. H. Ewalt. Practical Clinical Psychiatry. 6th ed. Philadelphia, 1947.

Quarterly Journal of Studies on Alcohol. Alcohol, Science and Society. New Haven, 1945.

B. ARTICLES

Bales, R. R. "Cultural differences in rates of alcoholism," Quarterly Journal of Studies on Alcohol, VI (March 1946), 480-499.

Bell, R. G. "Clinical orientation to alcoholism," Industrial Medicine and Surgery, XXI (June 1952), 251-260.

Billig, O., and D. J. Sullivan. "Personality structure and prognosis of alcohol addiction," Quarterly Journal of Studies on Alcohol, III (March 1943), 554-573.

Bowman, K. M., and E. M. Jellinek. "Alcohol addiction and its treatment," Quarterly Journal of Studies on Alcohol, II (June 1941), 98-172.

Brown, M. A. "Alcoholics profiles on the Minnesota Multiphasic," Journal of clinical Psychology, VI (July 1950), 266-269.

Buhler, Charlotte, and D. W. Lefever. "A Rorschach study on the psychological characteristics of alcoholics," Quarterly Journal of Studies on Alcohol, VIII (September 1947), 197-260.

Conger, John J. "The effects of alcohol on conflict behavior in the albino rat," Quarterly Journal of Studies on Alcohol, XII (March 1951), 1-29.

Ellis, Albert. "The validity of personality questionnaires," Psychological Bulletin, XLIII (September 1946), 385-440.

Expert Committee on Mental Health, Alcoholism Subcommittee, Report on the First Session. "Definition of the problem," World Health Organization technical Report Series, No. 42 (September 1951), 5-7.

Expert Committee on Mental Health, Alcoholism Subcommittee, Second Report. "The chart of alcohol addiction," World Health Organization technical Report Series, No. 48 (August 1952), 29-39.

- Freeman, M. J. "The development of a test for the measurement of anxiety: a study of its reliability and validity," Psychological Monographs, LXVII (1953).
- Gleser, Goldine, and G. Ulett. "The Saslow Screening Test as a measure of anxiety-proneness," Journal of clinical Psychology, VIII (July 1952), 279-283.
- Goldstein, Leonard D. "Interrelationships among several measures of anxiety and hostility," Journal of consulting Psychology, XVIII (February 1954), 35-39.
- Halpern, Florence. "Studies of compulsive drinkers: psychological test results," Quarterly Journal of Studies on Alcohol, VI (March 1946), 468-479.
- Harris, R. E., and V. M. Ives. "A study of the personality of alcoholics," (Abstract), American Psychologist, II (October 1947), 405.
- Hewitt, C. C. "A personality study of alcohol addiction," Quarterly Journal of Studies on Alcohol, IV (December 1943), 368-386.
- Horton, Donald. "The functions of alcohol in primitive societies: a cross-cultural study," Quarterly Journal of Studies on Alcohol, IV (September 1943), 199-320.
- Jellinek, E. M. "The alcohol problem: formulations and attitudes," Quarterly Journal of Studies on Alcohol, IV (December 1943), 458.
- , and Mark Keller. "Rates of alcoholism in the United States of America, 1940-1948," Quarterly Journal of Studies on Alcohol, XIII (March 1952), 58.
- , and R. A. McFarland. "Analysis of psychological experiments on the effects of alcohol," Quarterly Journal of Studies on Alcohol, I (September 1940), 272-371.
- Klebanoff, S. G. "Personality factors in alcoholism as indicated by TAT," Journal of consulting Psychology, XI (May-June 1947), 111-118.
- Knight, Robert P. "The psychodynamics of chronic alcoholism," Journal of Nervous and Mental Diseases, LXXXVI (November 1937), 538-548.

- Lemert, Edwin H. "Educational characteristics of alcoholics," Quarterly Journal of Studies on Alcohol, XI (March 1950), 38.
- Levitt, Eugene E. "A note on the Welsh M.M.P.I. anxiety index," Journal of consulting Psychology, XVIII (April 1954), 112.
- Lolli, Georgio. "The addictive drinker," Quarterly Journal of Studies on Alcohol, X (December 1949), 404-414.
- Manson, Morse P. "A psychometric analysis of psychopathic characteristics of alcoholics," Journal of consulting Psychology, XIII (April 1949), 111-118.
- , "A psychometric differentiation of alcoholics from nonalcoholics," Quarterly Journal of Studies on Alcohol, IX (September 1948), 175-206.
- , "Educational characteristics of alcoholics," Quarterly Journal of Studies on Alcohol, XI (March 1950), 38.
- Marshall, Helen. "A study of personality of alcoholic males," (Abstract) American Psychologist, II (August 1947), 289.
- , "Alcohol: a critical review of the literature, 1929-1940," Psychological Bulletin, XXXVIII (April 1941), 193-217.
- Quaranta, J. V. "Alcoholism: a study of emotional maturity and homosexuality as related factors in compulsive drinking," (Abstract), Quarterly Journal of Studies on Alcohol, X (September 1949), 354.
- Roe, Anne, and D. Shakow. "Intellectual functions in alcoholic psychosis," Quarterly Journal of Studies on Alcohol, IV (March 1944), 517-522.
- Sampson, Hubert, and Dalbir Bindra. "'Manifest' anxiety, neurotic anxiety and the rate of conditioning," Journal of abnormal and social Psychology, XLIX (April 1954), 256-259.
- Schaefer, Earl S. "Personality structure of alcoholics in outpatient psychotherapy," Quarterly Journal of Studies on Alcohol, XI (December 1950), 547-561.
- Schilder, P. "The psychogenesis of alcoholism," Quarterly Journal of Studies on Alcohol, II (September 1941), 277-292.
- Science Research Associates, Army General Classification Test, First Civilian Edition, Chicago (1947).

- Seliger, R. V., and V. Cranford. "The Rorschach analysis in the treatment of alcoholism," Medical Records, New York, 158 (1945), 32-38.
- Sutherland, Edwin H., H. G. Schroeder, and C. L. Tordella. "Personality traits and the alcoholic. A critique of existing studies," Quarterly Journal of Studies on Alcohol, XI (December 1950), 547-561.
- Taylor, Janet A. "A personality scale of Manifest anxiety," Journal of abnormal and social Psychology, XLVIII (April 1953), 285-290.
- Ullman, Albert D. "The psychological mechanism of alcohol addiction," Quarterly Journal of Studies on Alcohol, XIII (December 1952), 602-608.
- Wechsler, David. "The effect of alcohol on mental activity," Quarterly Journal of Studies on Alcohol, II (December 1941), 479-485.
- Welsh, George S. "An anxiety index and an internalization ratio for the M.M.P.I.," Journal of consulting Psychology, XVI (February 1952), 65-72.
- Williams, E. Y. "The anxiety syndrome in alcoholism," Psychiatric Quarterly, XXIV (October 1950), 782.
- Wilson, Ruth. "An Evaluation of Treatment Methods in Alcoholism Therapy," Mental Hygiene, XXXV (April 1951), 261.
- Wittman, Mary P. "Developmental characteristics and personalities of chronic alcoholics," Journal of abnormal and social Psychology, XXXIV (July 1939), 361-377.

APPENDIX I

SPECIMEN COPY OF THE FREEMAN MANIFEST

ANXIETY TEST AND SCORING KEY

THE FREEMAN MA TEST

Name.....Age.....Sex.....
 Address.....Occupation.....
 Date of test.....Status.....

INSTRUCTIONS

The purpose of this test is to tell how well you are able to judge the behavior of other people. In some questions you are asked merely to check "yes" or "no." In others you are to choose the right answer. Read each question carefully, but do not spend too much time on any one question.

EXAMPLE

Questions	Answers
1. A boastful person has a weak character	Yes () No (X)
2. A very fussy person is	
(a) very hard to get along with	
(b) no trouble at all	a (X) b ()

"A"

QUESTIONS

ANSWERS

1. When someone says the wrong thing in conversation, he is bothered by it afterwards.	Yes () No ()
2. One who often loses his temper feels sorry afterwards.	Yes () No ()
3. If someone is easily irritated, the reason is he cannot help himself.	Yes () No ()
4. If a person worries a great deal about his job, the reason is that he is afraid of losing his job.	Yes () No ()
5. When a person realizes that he has made a bad mistake, he usually condemns himself for having made that mistake.	Yes () No ()
6. Most people believe that a murderer should get the electric chair.	Yes () No ()
7. The average person becomes "weak" at the sight of blood.	Yes () No ()
8. Looking down from a high building is usually frightening.	Yes () No ()
9. It is a very good thing that most people go to the doctor at the first sign of illness or pain.	Yes () No ()
10. Most people are unable to appreciate how miserable it is to have trouble sleeping at night.	Yes () No ()
11. Going to the blood bank for the first time usually causes a person to be fearful.	Yes () No ()
12. A good driver is one who always has on his mind the many possible accidents that can happen to him.	Yes () No ()
13. Usually when there is pain in one part of the body, other parts of the body also become affected with pain.	Yes () No ()
14. The conscientious person continually keeps thinking of all the other things that have to be done before the day's work is finished.	Yes () No ()

- | | |
|--|----------------|
| 15. In order to be successful, a person should always be worried about doing the wrong thing. | Yes () No () |
| 16. If a person is very sensitive, the reason is that he has a fine character. | Yes () No () |
| 17. From the standpoint of desirable health standards, most people are lacking in sufficient cleanliness. | Yes () No () |
| 18. The person who is exceptionally concerned about his future security is a practical person. | Yes () No () |
| 19. The person who always has trouble making a decision wants to be sure he is not going to make a mistake. | Yes () No () |
| 20. Being in big crowds of people will frequently cause a person to experience a feeling of suffocation. | Yes () No () |
| 21. A sensible person always keeps the window blinds down at night to avoid being seen. | Yes () No () |
| 22. People who have very few friends are likely to be selfish people. | Yes () No () |
| 23. A person who has a great deal of energy is usually a very nervous person. | Yes () No () |
| 24. An honest person will very seldom become a politician. | Yes () No () |
| 25. The person who has a great many fears is usually a coward. | Yes () No () |
| 26. People who reach the top of the ladder in industry usually get there because of some pull. | Yes () No () |
| 27. Many people suffer from extreme fatigue. | Yes () No () |
| 28. Going to the movies is one of the best ways to overcome discouragement. | Yes () No () |
| 29. The difficulty with most relatives is that they are usually very bothersome and jealous. | Yes () No () |
| 30. There are very few people who really understand us well. | Yes () No () |
| 31. It is correct to say that the average person wastes much of his time. | Yes () No () |
| 32. Most people find it particularly annoying to have to wait for a friend who is late for his appointment. | Yes () No () |
| 33. Most of us live under a "nervous tension" because of our "city way" of living. | Yes () No () |
| 34. Usually it is best not to trust anything a salesman says of his product. | Yes () No () |
| 35. The average person finds himself putting heart and soul into his work. | Yes () No () |
| 36. The average person very often checks his work to make sure that he will not make a mistake. | Yes () No () |
| 37. In handling daily duties, one cannot be at ease until the very last thing is out of the way. | Yes () No () |
| 38. As a rule, one does not tell a person about his faults because one does not wish to hurt his feelings. | Yes () No () |
| 39. When something of importance is about to take place, a person usually thinks of the many things that may go wrong. | Yes () No () |
| 40. The trouble with most people is that they do not pay enough attention to turning out perfect work. | Yes () No () |
| 41. Very few people are sufficiently tidy about their work. | Yes () No () |
| 42. Only some people have the exceptional ability to judge whether a person is telling the truth. | Yes () No () |

43. It is usually very upsetting to have to read in the newspapers about a terrible tragedy that has taken place. Yes () No ()
44. It is best to have only a few friends, but good ones. Yes () No ()
45. One typically finds that the experiences which were at first feared turned out to have no danger to them at all. Yes () No ()
46. Most people find it disturbing to read of the many murders and accidents that are reported in the newspapers. Yes () No ()
47. As a rule people's fears concern small silly things rather than large events. Yes () No ()
48. In this day and age it is very difficult to find enough time in which to relax. Yes () No ()
49. One has always so many things to do that it becomes difficult to avoid being rushed. Yes () No ()
50. There are more dishonest than honest people in the world. Yes () No ()
51. A conscientious person is one who spends a lot of time thinking about his problems. Yes () No ()

"3"

(Choose 1 or 2)

52. The person who presents the more undesirable behavior is
 (1) the one who criticizes people
 (2) the person who lies occasionally 1 () 2 ()
53. The less bothersome person would be
 (1) the one who argues a lot
 (2) the one who has a weak character 1 () 2 ()
54. Someone has trouble making a decision.
 The reason is that
 (1) he is giving careful thought to both sides of the question
 (2) he doesn't trust his judgment. 1 () 2 ()
55. The one who would prove to be most undesirable as a friend would be
 (1) the person who is very stubborn
 (2) the person who lacks education 1 () 2 ()
56. A person would suffer more from
 (1) nervousness
 (2) rheumatism 1 () 2 ()
57. The person who works rapidly at his job is
 (1) a nervous worker
 (2) an efficient person 1 () 2 ()
58. A person is the life of the party because
 (1) he is always happy
 (2) he is usually unhappy 1 () 2 ()
59. The successful person
 (1) takes things as they come
 (2) worries before each task 1 () 2 ()
60. A person with good character feels sorry for people in trouble
 (1) once in awhile
 (2) all the time 1 () 2 ()

61. People are usually more bothered by
 (1) loud noises
 (2) headaches 1 () 2 ()
62. People are usually more aggravated by
 (1) being disappointed about something
 (2) not being able to solve problems 1 () 2 ()
63. The average person attempts to enjoy himself by
 (1) usually doing something
 (2) usually relaxing 1 () 2 ()
64. As a rule, when something disturbing takes place
 (1) it does not last long
 (2) usually causes a person to take it to heart 1 () 2 ()
65. Of the two, the more objectionable person is the one
 (1) who is dishonest at times
 (2) who talks too much 1 () 2 ()
66. A person is constantly active because
 (1) he does not like to waste his time
 (2) he finds it hard to do nothing 1 () 2 ()
67. A person who wants to satisfy his wishes without much delay is
 (1) an impulsive person
 (2) a very successful person 1 () 2 ()
68. John Doe has these two fears. He is more disturbed by
 (1) fear of death through an automobile accident
 (2) fear of dying during the night 1 () 2 ()
69. Of the two, a person is more embarrassed when
 (1) realizing he was lost in thought while someone was talking to him
 (2) dropping his fork at the dinner table 1 () 2 ()
70. People as a rule suffer mostly from
 (1) general aches and pains
 (2) one specific illness 1 () 2 ()
71. Forgetfulness usually takes place
 (1) at work
 (2) at occasions when someone's name has to be recalled 1 () 2 ()
72. As a general rule
 (1) most people are very conscientious
 (2) few people are very conscientious 1 () 2 ()
73. People are more frequently disturbed by
 (1) looking down from a tall building
 (2) not having sufficient air in the room 1 () 2 ()
- "C"
 (Choose 1, 2, or 3)
74. When a supervisor is too "bossy" the employee feels that
 (1) the supervisor should be fired
 (2) should be lowered to the employees rank
 (3) should not pay attention to the supervisor 1 () 2 () 3 ()

75. A person who prefers to be alone is usually
 (1) an unfriendly person
 (2) likes to mind his own business
 (3) a home lover 1 () 2 () 3 ()
76. As far as imagination is concerned, most people have
 (1) just an ordinary amount
 (2) a small amount
 (3) a great amount 1 () 2 () 3 ()
77. One usually finds that the average person regards his personal belongings with
 (1) ordinary care
 (2) very careful attention
 (3) not enough care 1 () 2 () 3 ()
78. A person usually worries about things because
 (1) he can't help himself
 (2) he gives serious thought to his problems
 (3) tries to avoid doing the wrong thing 1 () 2 () 3 ()
79. One of your friends is bothered by these three things. The one that aggravates him the most is
 (1) shyness
 (2) poverty
 (3) irritability 1 () 2 () 3 ()
80. Another one of your friends suffers from the following. The most bothersome is
 (1) sensitiveness
 (2) rheumatism
 (3) nervousness 1 () 2 () 3 ()
81. The ideal employee would be one who is
 (1) exceptionally careful about details
 (2) ordinarily careful
 (3) doesn't waste too much time about details 1 () 2 () 3 ()
82. Judging our friends, we should say that most of them are
 (1) exceptionally happy
 (2) occasionally happy
 (3) never really happy 1 () 2 () 3 ()
83. In trying to be successful at work, one should
 (1) stay overtime and try to get everything done
 (2) try not to become discouraged
 (3) work conscientiously 1 () 2 () 3 ()
84. John Doe has three problems. He will first try to overcome
 (1) being fearful
 (2) being in debt
 (3) lack of education 1 () 2 () 3 ()

"D"
 (Choose One)

85. Someone you know shows these undesirable traits. The most aggravating trait that he should first start to overcome is
 (1) telling lies
 (2) not being on time
 (3) laziness
 (4) nervousness 1 () 2 ()
 3 () 4 ()

86. A person who has all of the following ailments is probably mostly upset by
- (1) inability to sleep well
 - (2) continual head colds
 - (3) upset stomach
 - (4) earache
- 1 () 2 ()
3 () 4 ()
87. Of the following four traits, the most undesirable one is
- (1) a person who continually criticizes
 - (2) who is domineering
 - (3) who shows dishonesty
 - (4) who does not save any money
- 1 () 2 ()
3 () 4 ()
88. If one of your friends showed the following traits, the most disturbing one would be
- (1) his being superstitious
 - (2) his becoming easily irritable
 - (3) having feelings of insecurity
 - (4) having many prejudices
- 1 () 2 ()
3 () 4 ()
89. A person hurts himself mostly from
- (1) working too much
 - (2) frequently losing his temper
 - (3) too much anxiety
 - (4) not saving for a "rainy day"
- 1 () 2 ()
3 () 4 ()

"E"

Below is a list of paired characteristics. You are to place an "X" before each one of the pairs which comes the closest to fitting the behavior of the average person.

Here is an example:

- () Forgetfulness
- (X) Does not read enough

Be sure that you mark one of each set of statements.

-
- 90. () Tendency to be lost in thought
 - () Does not read enough
 - 91. () Becomes discouraged at times
 - () Irritable at times
 - 92. () Inclined towards worry
 - () Inclined towards fast driving
 - 93. () Worries about work
 - () Does not belong to enough organizations
 - 94. () Has few friends
 - () Makes mistakes occasionally
 - 95. () Fears looking down from a tall building
 - () Fears riding in an elevator
 - 96. () Fears losing his job
 - () Fears making a mistake
 - 97. () Feels miserable at times
 - () Feels lazy at times
 - 98. () Often severely criticizes himself for doing the wrong thing
 - () Often forgets to remember peoples' names after first meeting them

- 99. () Not satisfied until every detail is properly handled
- () Not satisfied until objectives are reached
- 100. () Fears another war taking place
- () Fears doing the wrong thing
- 101. () Tendency to postpone doing things
- () Does not take enough time for lunch
- 102. () Tendency to overlook details
- () Dislikes riding street cars
- 103. () Too exacting in work
- () Occasional carelessness
- 104. () Dislikes being bossed
- () Dislikes heavy traffic
- 105. () Keeps hurt feelings to himself
- () Occasional loss of temper
- 106. () Tries to keep from being aggravated
- () Tries not to be late
- 107. () Finds it difficult to make new friends
- () Finds it difficult to save enough money
- 108. () Tries hard to be nice to people
- () Tries to be well informed on all subjects
- 109. () Tendency to look at bad side of future happenings
- () A dislike for getting into an argument
- 110. () Has been called stubborn by others
- () Has been criticized for being late for an appointment
- 111. () Has been told that he is forgetful
- () Has been criticized for being late for an appointment
- 112. () Often cannot overcome certain problems
- () Often changes ideas about things
- 113. () Wishes people were more tactful
- () Wishes people were more sensible
- 114. () Wishes he had more time in which to do things
- () Wishes people would be more cooperative
- 115. () Often regrets saying things
- () Often likes to sleep later in the morning
- 116. () Has habit of being too careful in making a decision
- () Has habit of not giving enough thought to old age security
- 117. () Has tendency to feel bad when things do not work out as they should
- () Has tendency to forget to remember a relative's birthday
- 118. () Likes to attend movies frequently
- () Likes to play cards with others
- 119. () Believes in leading a practical life
- () Believes in good neighbor policy
- 120. () Always active and on the go
- () Always interested in enjoying life
- 121. () Dislikes being idle
- () Dislikes Communism
- 122. () Eager to know what the next day will bring
- () Eager to know the news of the world
- 123. () Wishes there were less unhappiness in this world
- () Wishes parking facilities were better
- 124. () Believes nervousness can be overcome
- () Believes nervousness is very difficult to overcome
- 125. () Wants to get rid of all personal fears
- () Wants to get rid of all unfinished tasks

126. () Would like to see Capital and labor get along
() Would like to have people be more friendly
127. () Would like to see more education for everyone
() Would like less politics in government
128. () At times has trouble making a decision
() At times feels a need for rest
129. () Would wish people would drive more carefully
() Would wish a work week would consist of three days
130. () Would regard lack of patience as being a form of nervousness
() Would say lack of patience is due to over-anxiousness in wanting to get a thing done
131. () Would like to enjoy a good night's sleep
() Would like to take a vacation
132. () Would always like to have a healthy heart
() Would always like to be happy
133. () Would like to see a better world in which to live
() Would like to see a reduction of taxes
134. () Believes people need to understand him better
() Believes people need to develop more education
135. () Most people are careless in doing their work
() Most people need more hobbies
136. () The average person works leisurely
() The average person finds a day's work is usually tiring
137. () The average employer fully fails to appreciate his employee
() The average employer doesn't take time to learn what his employee accomplishes
138. () Wishes people's criticisms wouldn't bother him so much
() Wishes industry were capable of more production
139. () Finds that when he hates someone it doesn't last long
() Many people could develop better judgment
140. () Whenever a person is restless he seeks to overcome it
() Whenever someone has cheated, he is distrusted thereafter
141. () Finds that usually when he fears something is going to happen, it doesn't take place
() Finds that he dislikes careless drivers.

PROFILE CHART:

THE FREEMAN "MA" AND "PS" TEST

Name _____ Age _____ Sex _____

Address _____ Occupation _____

Date of Test _____ Status _____

Raw Score _____
Perc. Score _____

MA

PS

C.S.*

	1	5	10	20	30	40	50	60	70	80	90	95	99	Percentiles
	17	20	22	24	25	27	28	30	33	35	39			Raw Score (MA)
MA														
						2	3	4	6	9	14	19		Raw Score (PS)
PS														

N	AN	PT	HS	TN		
	NRS	HY	SD	PD		

MA
Nucleus

*C.S. = Critical Score

TEST BATTERY

I.Q.	T.P.	PERS.	MED.

COMMENT:

" MA " SCORING KEY" PS " SCORING KEY

Raw score equals sum of scored responses
as indicated in key.

<u>" A "</u>		<u>" E "</u>					
1	yes	95	(X)	(X)	3	(X)	59
2	yes		()	(X)	4	(X)	60
3	yes			(X)	5		
4	yes	96	(X)	(X)	6	(X)	62
			()	(X)	7		
7	yes			(X)	8	(X)	64
8 to 23 inclusive	yes	99	(X)	(X)	9		
			()	(X)	10	(X)	66
25	yes			(X)	11	(X)	67
26	yes	100	(X)				
			()	(X)	13	(X)	69
28	yes			(X)	14	(X)	70
29	yes	110	(X)	(X)	15	(X)	71
			()	(X)	16	(X)	72
32	yes			(X)	18	(X)	73
33	yes	112	(X)			(X)	74
34	yes		()	(X)	22	(X)	75
				(X)	23	(X)	76
37	yes	113	(X)			(X)	77
			()	(X)	25	(X)	78
41	yes			(X)	26	(X)	79
42	yes	116	(X)	(X)	27	(X)	80
			()	(X)	28	(X)	81
44.	yes			(X)	29	(X)	82
		117	(X)	(X)	30	(X)	83
46	yes		()	(X)	31	(X)	84
				(X)	32	(X)	85
48	yes	120	(X)			(X)	86
49	yes		()	(X)	34	(X)	87
50	yes					(X)	88
51	yes	133	(X)	(X)	36	(X)	89
			()			(X)	90
<u>" B "</u>				(X)	38	(X)	91
		138	(X)	(X)	39		
52	(1)		()	(X)	40		
54	(1)			(X)	41		
55	(1)						
				(X)	43		
58	(1)			(X)	44		
59	(1)			(X)	45		
				(X)	46		
66	(1)			(X)	47		
68	(1)			(X)	49		
				(X)	50		
<u>" C "</u>				(X)	51		
NONE				(X)	54		
				(X)	55		
<u>" D "</u>				(X)	56		
				(X)	57		

APPROVAL SHEET

The thesis submitted by Mr. Daniel John Anderson has been read and approved by three members of the Department of Psychology.

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the thesis is now given final approval with reference to content, form, and mechanical accuracy.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

January 14, 1957
Date

Frank Kobler
Signature of Adviser