

AN INVESTIGATION OF RELATIONSHIPS BETWEEN  
" PSYCHOLOGICAL TYPE AND PATTERNS OF  
ALCOHOL USE

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A Thesis

by

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Submitted to the Graduate School  
Appalachian State University  
in partial fulfillment of the requirements for the degree of  
MASTER OF ARTS

May 1983

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A Thesis

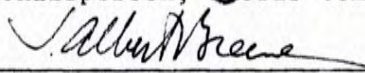
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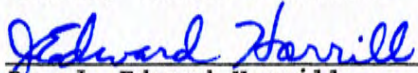
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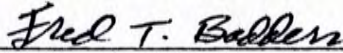
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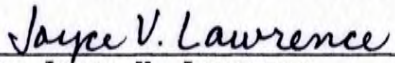
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ABSTRACT

AN INVESTIGATION OF RELATIONSHIPS BETWEEN  
PSYCHOLOGICAL TYPE AND PATTERNS OF  
ALCOHOL USE. (May 1983)

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This study sought to establish the existence of relationships between psychological type and patterns of alcohol use. Subjects were 123 undergraduate students from Appalachian State University. All subjects were administered the Myers-Briggs Type Indicator to determine psychological type and the Alcohol Use Inventory to measure patterns of alcohol use. Raw scores on the scales of the Alcohol Use Inventory were grouped into Low, Moderate, and High categories. A chi-square test for significance was used to establish the existence of relationships between the two variables, type and pattern of alcohol use. A chi-square analysis was also performed to determine the presence of relationships between the sex of subjects and pattern of alcohol use.

The results of this study demonstrated several significant relationships. Female subjects reported significantly greater mental benefits due to drinking alcohol. Extraverts were shown

to report significantly higher levels of alcohol use. Intuiting types were shown to report a significantly higher level of continuous drinking than other types. Judging types were shown to report significantly more extreme (High and Low) responses on the two Alcohol Use Inventory Withdrawal Scales. Subjects with a dominant function which is a perceiving one (either sensing or intuiting) showed significantly higher levels of continuous drinking than did those with a judging dominant function (thinking or feeling). The generalizability of the findings from this study was cautioned and suggestions concerning future investigations (such as examining the relationship between level of alcohol use and Myers-Briggs Type Indicator continuous scores) were recommended.



## ACKNOWLEDGEMENTS

I would like to take this opportunity to express my appreciation to all the individuals who have been instrumental in helping me to complete this project. For providing me with subjects I would like to thank Dr. Art Skibbe, Dr. Henry Schneider, and Ms. Jean McKinney of the Department of Psychology and Dr. Harry Padgett of the Department of Counselor Education and Research. I would also like to express my thanks to Dr. Padgett for his encouragement to take this "road less traveled." My thanks go also to Dr. Joyce Lawrence for her support and encouragement and to Dr. Deanna Bowman for her expert assistance in statistical analysis and for helping me to tame the computer.

My special thanks go to Dr. Sally Atkins and the entire staff of the Appalachian State University Counseling and Psychological Services Center for their unfailing support during this entire project. And for providing me with shoulders to cry on and ears to ventilate to I need to thank Mr. Gary Hazlett and Ms. Jane Rawson: when I felt alone and beaten you were there to support me and share in my frustration. Thanks guys!

Last, but certainly not least, I need to express my appreciation to my wife, Barbara, for putting up with having a part-time husband these past few months and for supporting me in those quiet and often unappreciated ways.

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## Chapter 1

### INTRODUCTION

Researchers in the field of alcohol abuse have for many years been attempting to ascertain some relationships between personality and alcohol abuse. Some researchers have even gone so far as to hypothesize the existence of an "alcoholic personality," the identification of which would enable practitioners to determine high risk populations. The fatal flaw of much of this research has been the selection of diagnosed "alcoholics" as the subjects under investigation. By the time an individual's abuse pattern has become severe enough to be labeled "alcoholic," it is impossible to separate those personality characteristics which may be responsible for the abuse from those characteristics which are a direct result of the abuse. The present study attempts to reduce the effects of this problem by utilizing nondiagnosed subjects from a student population.

#### Statement of the Problem

The goal of this study is to provide an answer to the following question: is there a relationship between an individual's psychological type and pattern of alcohol use? Jung (1921) suggests a relationship between psychological type and the sex of an

individual, so the sex of subjects will also be examined for possible relationships with their pattern of alcohol use.

To determine the significance of the relationships noted above, several approaches will be utilized. Initial comparisons will concentrate on classifications of specific psychological types (e.g., INFP) as determined by the Myers-Briggs Type Indicator (MBTI). Because the number of types is so large (16) and the N required to insure adequate numbers of each for investigation is correspondingly large, additional comparisons will be made to determine the possible relationships between pattern of alcohol use and broad categories of type, such as all introverts, or all sensing types. The patterns of alcohol use to be examined will include 18 factors as determined by the Alcohol Use Inventory (AUI). These factors fall in three areas: (a) styles of alcohol use, (b) unfavorable consequences of drinking (symptoms), and (c) the behavioral consequences of drinking. In addition, a broad Alcoholism Scale is included in the AUI which will provide some indication of the overall use and effects of alcohol for all the types and type subgroups to be considered.

#### Significance of the Problem

The determination of a significant relationship between psychological type and patterns of alcohol use would have ramifications in three areas: (a) prediction, (b) prevention, and (c) treatment.

In the area of prediction, the identification of a relationship between type and alcohol use patterns would mean that potentially high risk populations could be more easily identified. This early



identification of "pre-alcoholic abusers" would increase the effectiveness of prevention and early intervention programming.

In the area of prevention, a significant relationship between type and patterns of alcohol use would provide a possible direction and orientation to prevention efforts. Professionals in the field of alcohol abuse prevention would be able to focus their efforts at identified high risk populations, and in such a way as to have the greatest impact on those populations. For example, should sensing types be shown to have a significantly higher degree of alcohol abuse, then programming could be developed so the information could be most readily integrated by those types.

Treatment efforts would also be aided by the identification of significant relationships between psychological type and alcohol use patterns. Treatment efforts with alcohol abusers often entail the discovery and exploration of alternatives to their abuse in order to meet the needs which are being met through the abuse. This process would be enhanced and facilitated were it possible to demonstrate the psychological motivation underlying the behavior of alcohol abuse. This identified motivation for alcohol use/abuse, if shown to be related significantly to psychological type, would give the therapist a conceptual framework of the abuser's unconscious processes, thereby aiding the treatment process.

### Hypotheses

Presented below are the overall research and null hypotheses for the present study. As the number of relationships to be tested

for significance numbers 570, only the global hypotheses are presented.

### Research Hypotheses

It is hypothesized that there is a significant relationship between psychological type and patterns of alcohol use. Psychological type is meant to imply not only the distinct classifications of type (e.g., INFP), but the more broad categories of type (as described in Chapter 3) as well. The patterns of alcohol use are those specific behaviors, perceptions, and effects reported on the scales of the Alcohol Use Inventory (AUI). It is additionally hypothesized that there is a significant relationship between the sex of an individual and his/her pattern of alcohol use (as measured by the AUI).

### Null Hypothesis

The null hypothesis for the present study states that there is no significant relationship between patterns of alcohol use as measured by the Alcohol Use Inventory (AUI) and Myers-Briggs Type subgroups and the variable of sex.

### Assumptions and Limitations

Several assumptions for the present study are mentioned below. In addition, two major limitations are noted.

#### Assumptions

The assumptions made for this study are:

1. The subjects responded frankly and adequately in completing the Myers-Briggs Type Indicator and the Alcohol Use Inventory.



2. The number of subjects will provide a basis for discerning the existence of significant relationships.

3. Not drinking alcohol is a significant pattern of drinking behavior; therefore, nondrinkers were not eliminated from the study.

### Limitations

The following limitations were recognized:

1. The relatively low number of subjects will provide adequate comparisons for some Myers-Briggs Type subgroups, but it does not provide adequate strength for the analysis of the 16 specific Myers-Briggs Type classifications (see Appendix A).

2. The results of this study can be generalized only to like groups of nondiagnosed college students.

3. From statistics on drinkers it is recognized that approximately 10% are "alcoholics." It is acknowledged that the present sample, while being nondiagnosed, also contains this "alcoholic" element and the inclusion of these subjects may influence the results.

## Chapter 2

### REVIEW OF RELATED LITERATURE

Research in the area of alcohol use has almost exclusively been concerned with those individuals labeled "alcoholic." In addition, even though the Myers-Briggs Type Indicator and similar Jungian-based instruments have been available since the mid 1940's, there have been almost no studies of the relationships between psychological type and alcohol use.

Early studies related to personality and alcohol use were designed to identify a single personality type for the alcoholic (Zwerling & Rosenbaum, 1959). This early direction of research has continued until recent years. During the years of this type of research, a variety of measures (both objective and projective) have been employed to identify this personality type (Sutherland et al., 1950; Syme, 1957). Nerviano (1976) notes that after these years of study there has been "no evidence for this single type notion. These studies, as a group, only showed alcohol abuse to be associated with a host of maladaptive factors" (p. 104). In discussing this type of research, Pittman (1962) noted that the behaviors under investigation "give the impression of an 'alcoholic personality,' although they are secondary behaviors superimposed over a large variety of personality types" (p. 367). Pittman (1962) also indicated that the supposed traits under investigation are actually

"largely consequences of the excessive drinking itself" (p. 368). These several researchers seem to agree that when dealing with an alcoholic population it is impossible to separate underlying personality traits from those behaviors caused by the excessive drinking.

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) would seem to be in agreement that this body of research has produced little to support the notion that there is one type of personality which constitutes the alcoholic population. NIAAA (1971) maintains that current methods of assessment have failed to identify a common personality structure of the alcoholic, and that future researchers should change methods. Williams et al. (1980) offer an explanation for this apparent lack of effectiveness of several decades of research. They believe that the primary and perhaps most simple explanation is that the research itself was based on faulty assumptions, the most important of which being that there is such a thing as an "alcoholic" (Williams et al., 1980). In support of this somewhat radical position, Jacobson (1976) has suggested that

the concept of alcoholism as a single disease, a unitary clinical entity based on a medical model, believed to progress along a known or predictable continuum, and measurable in terms of a single common symptom may be an oversimplified representation of a complex multidimensional problem. (p. 15)

Jacobson (1976) reaches the obvious conclusion when he suggests that "it would seem more reasonable and prudent to entertain the idea that there may be several alcoholisms, which, once detected, assessed, and diagnosed, may be amenable to different treatments"



(p. 16). This emphasis on directing different types of treatment to different types of alcoholics would seem to be in line with the present study's suggestion that treatment for different psychological types may well be most effective if tailored to the type of individual in treatment.

Williams et al. (1980) approached this question of multiple alcoholisms in a study utilizing a somewhat heterogeneous population (students, patients at a Mental Health Center, and mental health professionals) and a personality inventory (the Personality Research Form). The results of this study seem to indicate that individuals having a low level of alcohol use obtain a high score on the variable of Play, while having a low score on the variable labeled Aggression. As the level of alcohol use increased in the subjects, the reported scores on Play were seen to decrease and the scores on Aggression increased. Williams et al. (1980) concluded that

it seems that the personality differences detected may be independent of alcohol use per se and reflect the type of person who might easily fit into a specific consumptive pattern. It is conceivable that different personality types drink in specific patterns. If so, it is reasonable to postulate that there are several alcoholic personalities. These alcoholic personalities appear to be directly related to consumptive patterns and, as such, may be predictive of them. (p. 111)

The one area of psychological type which has had some amount of attention in the research literature is the concept of introversion/extraversion. Sutherland et al. (1950) mention four studies which examined the issue of the prevalence of introverts and extraverts among alcoholics (Davidoff & Whitaker, 1940; Hoch, 1940; Norbury, 1942; Wenger, 1944). Three out of four studies identified

the predominant attitude as being extraverted for the alcoholic (over 70% extraverts for each study). The only one not producing similar results was the study by Davidoff and Whitaker (1940) which demonstrated no significant preference for either attitude. This disparity could be the result of the sample being studied, which in this case was a group of 97 alcoholics who had also been diagnosed as being psychotic. It is interesting to note that Hoch's study (1940), which contained 73% extraverts, also examined the issue of recovery (i.e., the effectiveness of treatment for those involved). In his study, 78% of the extraverts were seen as having recovered from their "alcoholic diseases" while only 22% of the introverts recovered (Landis, 1945). One might well argue that whatever treatment modality was employed at the treatment center studied was certainly designed to have the greatest impact on the extraverted types to the detriment of those introverts who sought treatment there.

Popham and Schmidt (1962) reported on another study related to the introversion/extraversion issue, this study having been carried out by M.D. Vogel. Vogel (1959) studied members of an Alcoholics Anonymous group and patients of an out-patient clinic. Popham and Schmidt (1962) report that

essentially, (Vogel's) view is that introverts are more controlled in their behavior than extraverts who tend to be relatively impulsive. From this, it was postulated that a steady or inveterate pattern of alcohol use would tend to predominate in the drinking history of introverted alcoholics, and a pattern of periodic bender drinking in that of the extraversive alcoholics. The results of the study confirmed this hypothesis.  
(p. 17)

In the above study the introversion/extraversion attitude was determined using the Eysenck Personality Inventory. It is noteworthy



that there was no investigation of the prevalence of introverts versus extraverts within this study.

Another study which undertook to examine some personality traits of drinkers was completed by Jones (1968). This was a follow-up study involving a longitudinal sample, the Oakland Growth Group. The 66 male participants in this study were enrolled in the research project 30 years before the Jones study took place. Members of the Growth Study were intensively studied from the age of 10 through graduation from high school, with periodic contact into adulthood. There were a variety of findings in this study. Most important to the current investigation is the finding by Jones (1969) that

among the distinguishing rating for male adult problem drinkers when compared to moderate drinkers and non-drinkers are those which designated uncontrolled and extraversive behavior. (p. 10)

The repeated appearance of extraversion as being connected in some way with alcohol abuse would seem to warrant further examination. Jung (1921) discusses the unconscious processes of the extravert and possible consequences of a variety of maladjustments. Of particular importance is a statement of Jung's (1921) in which he notes "the suppression of infantile and primitive demands (by the extravert) easily leads to a neurosis or to the abuse of narcotics such as alcohol, morphine, cocaine, etc." (p. 340). Although the classification of alcohol as a narcotic does not conform to current systems of classification, the intent of this statement remains clear. Suppression of "primitive demands" by an extravert can easily lead to substance abuse.

Investigation of this hypothesis was undertaken by Dewinne and Johnson (1976) using an experimental sample of drug addicts. Within the control group, extraverts and introverts were found to be distributed almost equally (11 extraverts and 10 introverts). The distribution was not equal, however, for the test group of addicts, which contained 16 extraverts and five introverts. The chi-square value was found to be significant at the .05 level. Dewinne and Johnson (1976) concluded that

the value of making the extravert-introvert distinction in addition to the pathological distinction lies in its potential to aid in the making of decisions with regard to differential treatment for addicts. It is clear that therapists who work with groups of addicts should plan therapy so that the experience of both introverts and extraverts will be therapeutic rather than destructive. (p. 746)

One recent study in this area which stands at odds with the above reported research is a study by O'Hara (1980) which attempted to identify the "hypothesized alcoholic personality as identified by the Jungian-based Myers-Briggs Type Indicator" (p. 5). In this study three groups were examined: (a) an "alcoholic" group, (b) a "recovered alcoholic" group, and (c) a "non-alcoholic" group. The personality profile for both the "alcoholic" and "recovered alcoholic" groups was found to be introverted-sensing-feeling (ISF<sub>1</sub>). The sample size of each group (56) makes it difficult to justify this degree of specificity. Given the disparity between these results and the indications of previous research, the validity of these results remains in doubt. It is hoped that the present study may be able to shed some light on this question.

## Chapter 3

### DESIGN OF THE STUDY

In this chapter, the research design is discussed and the subjects of the study are described. In addition, the instruments used for collecting data are examined and their reliability and validity are explored. The statistical procedures which were employed in the analysis of the data are also discussed.

#### Description of Research Design and Subjects

The purpose of this study is to discover the relationships between psychological type and alcohol use patterns. To determine psychological type, subjects were administered the Myers-Briggs Type Indicator (MBTI). Patterns of alcohol use were measured through the administration of the Alcohol Use Inventory (AUI). Testing was conducted in groups following the recommended procedures as set forth by each instrument. The MBTI was computer scored and the AUI was scored according to the procedures outlined in the AUI manual (Wanberg et al., 1980).

Subjects for this investigation were 123 undergraduate students from Appalachian State University (see Table 1). An attempt was made to obtain a random sample of the student body, however, due to the low response rate of selected subjects, additional subjects were recruited from several Introductory Psychology and Human Relations



Table 1  
Subjects by Class and Sex

Group	Sex	Number
Freshmen	Male	18
	Female	<u>42</u>
	Total	60
Sophomores	Male	15
	Female	<u>18</u>
	Total	33
Juniors	Male	6
	Female	<u>11</u>
	Total	17
Seniors	Male	4
	Female	<u>9</u>
	Total	13

Courses. For the 123 subjects, the mean age was 19.7 (with 78% of the subjects being 20 or less) and the majority were freshmen and sophomores. These two classes accounted for 76% of the total.

To aid in the determination of the relationships between psychological type and patterns of alcohol use, Myers-Briggs Type classifications were considered in several ways. Relationships between the AUI scores and MBTI results were explored for the following Myers-Briggs Type subgroups:

1. Specific MBTI classifications (e.g., INFP, ESTJ)
2. Extraversion versus introversion
3. Sensing versus intuiting
4. Thinking versus feeling
5. Judging versus perceiving
6. Primary function (thinking, feeling, sensing, or intuiting)

In addition, because Jung (1921) proposed a relationship between the sex of an individual and his/her type, sex was included as a variable under examination.

#### Data Gathering Instruments

Two instruments were used in this study to gather information about the subjects' psychological types and their patterns of alcohol use. Presented below is a detailed examination of these instruments.

#### Myers-Briggs Type Indicator (MBTI)

The subjects' psychological type was determined through the use of the Myers-Briggs Type Indicator (MBTI), Form G (Myers, 1962). The MBTI is a self-report personality inventory designed to measure



four personality variables: (a) the individual's preferred orientation to life, (b) the preferred way of perceiving things, (c) the preferred way of making decisions, and (d) the preferred way of dealing with the outer world.

The MBTI is Isabel Briggs Myers' attempt to operationalize Jung's theory of psychological types. In Psychological Types, Jung (1921) described two basic attitudes of living: extraverted and introverted. These he referred to as attitude-types. The distinction between the two was noted by Jung (1921) as being the "direction of their interest, or of the movement of libido" (p. 330). Jung (1921) described the extravert as one who "thinks, feels, acts, and actually lives in a way that is directly correlated with the objective conditions and their demands" (p. 333). The introvert was described by Jung (1921) as being one who "interposes a subjective view between the perception of the object and his action, which prevents the action from assuming a character that fits the objective situation" (p. 373).

Jung (1921) also described two pairs of psychological functions, being the thinking-feeling pair and the sensing-intuiting pair. He indicated that one of these functions tends to be dominant in any given individual. An individual whose thinking function predominates was described by Jung (1921) as a person whose life "is mainly governed by reflective thinking so that every important action proceeds, or is intended to proceed, from intellectually considered motives" (p. 346). When feeling is the dominant function the individual is seen to use "feelings as a guide throughout life" (Jung,

1921:356). Sensing is that function which mediates the perception of physical stimuli. This is seen by Jung as being conscious perception, in contrast to the function of intuiting, which he described as being unconscious perception.

Jung (1921) described the thinking-feeling function pair as being rational functions. He noted that they are "characterized by the supremacy of the reasoning and judging functions" (Jung, 1921: 359). The sensing-intuiting pair was described by Jung as the irrational pair. Jung (1921) considered them to be "based not on rational judgment but on the sheer intensity of perception" (p. 370).

Myers' intention for the MBTI is to provide a measure of the above attitudes and functions. The MBTI determines an individual's attitude towards living (either extraverted or introverted) and the relative preference for each of the function pairs. Myers added an additional pair of attitudes which Jung never directly defined, but which he seemed to imply throughout his writing (and which are evident in the previous definitions of the rational and irrational function pairs). This pair is the judging-perceiving preference, and is intended to indicate which of the two pairs of functions (the judging pair of thinking-feeling or the perceiving pair of sensing-intuiting) the individual prefers to use in relation to the external environment. The MBTI produces a four letter code, indicating the individual's preference on each of the four pairs. Table 2 provides a listing of the preference pairs and their associated letters.

Table 2

## Myers-Briggs Type Indicator Preference Pairs\*

Index	Preference as between	Affects individual's choice of
E-I	Extraversion or Introversion	Whether to direct perception and judgment upon environment or ideas
S-N	Sensing or Intuiting	Which of these two kinds of perception to rely on
T-F	Thinking or Feeling	Which of these two kinds of judgment to rely on
J-P	Judgment or Perception	Whether to use judgment or perceptive attitude in dealing with the environment

\*Adapted from the Myers-Briggs Type Indicator Manual, 1962.



Reliability of the MBTI. A number of reliability studies have been conducted with the MBTI since its development and a number of statistical procedures have been employed. The most frequently cited sources are Myers (whose data are published in the MBTI manual, 1962) and Stricker and Ross (of the Educational Testing Service and the University of Western Australia respectively). Carlyn (1977) has suggested that these sources represent the conservative and liberal extremes of estimations of reliability, with Myers being rather liberal.

Stricker and Ross (1963) utilized a procedure which produced a lower-bound estimate of reliability without presenting an upper-bound one as well. Another procedure they utilized was to estimate split-half reliabilities by calculating phi correlation coefficients and applying the Spearman-Brown prophecy formula. Carlyn (1977) has suggested that both these procedures were biased in that they produced underestimates of reliability.

Myers' (1962) approach was to calculate tetrachoric correlation coefficients and then to apply the Spearman-Brown prophecy formula. Carlyn (1977) reported that this procedure would result in unrealistically high levels of reliability, as the underlying assumption for this procedure is that the scores are normally distributed across each index, which is not the case with the MBTI.

There appears to be a wide range between the conservative and liberal estimates of reliability. Reported phi coefficients have ranged from .55 to .65 (E-I), .64 to .73 (S-N), .43 to .75 (T-F), and .58 to .84 (J-P) (Myers, 1962; Stricker & Ross, 1963). Tetrachoric coefficients have ranged from .70 to .81 (E-I), .82 to .92

(S-N), .66 to .90 (T-F), and .76 to .84 (J-P) (Myers, 1962). If the assumption is made that actual reliability falls somewhere between the two extremes, then it does appear that the reliability of type category is satisfactory.

Validity of the MBTI. Three areas of validity are to be examined here: (a) content validity, (b) predictive validity, and (c) construct validity.

The area of content validity has a great deal of support from several sources. As Carlyn (1977) notes

Myers' extensive account of the construction of the Indicator includes the criteria used for choosing and scoring items, and provides considerable evidence for the instrument's content validity. (p. 468)

Stricker and Ross (1964) examined the issue of content validity through the use of item analysis. They concluded that the S-N and T-F scales were largely consistent with their definitions, but that the E-I and J-P scales may well measure something quite different from their conceptual definitions.

Two studies (Bradway, 1964; Stricker & Ross, 1964b) seem to contradict the above suggestions. Bradway (1964) tested 28 Jungian analysts with the MBTI after they had classified themselves according to the E-I, S-N, and T-F scales. There was 100% agreement on the E-I scale, 68% agreement on the S-N scale, and 61% agreement on the T-F scale. On all dimensions, the proportion of agreement was significantly higher than would be expected by chance alone. Stricker and Ross (1964b) seemed to refute their own suggestions in a study that compared the MBTI with the Gray-Wheelwright Questionnaire (Gray-Wheelwright, 1946), another personality inventory



designed to identify Jungian types. The results of this study showed that the two inventories' E-I scales exhibited a .79 correlation, the S-N scales showed a .58 correlation, and the T-F scales showed a .60 correlation. All these correlations were significant at the .01 level. These results would seem to support Myers' contention that "both tests are reflecting the same basic realities, that is, the Jungian opposites which both were designed to reflect" (p. 22).

Four studies have been conducted which examine the predictive validity of the MBTI (Conary, 1966; Goldschmid, 1967; Saunders, 1957; Stricker et al., 1965). These studies investigated such areas as college major selection, achievement while in college, and the potential for dropping out of college. There was some variation, but overall the studies suggested that the MBTI has moderate predictive validity in these areas.

There exists a wealth of material examining the construct validity of the MBTI. Researchers (Richek & Brown, 1968; Ross, 1966; Saunders, 1960) have used factor analyses to investigate the relationships between the MBTI and other tests measuring similar constructs and correlational studies have been conducted examining areas such as vocational choice (Laney, 1949; McCaulley, 1974; Miller, 1966; Stricker & Ross, 1964b). From the results of these studies it would appear that the level of construct validity is more than adequate. Carlyn (1977) states that the numerous studies in this area suggest that:

the individual scales of the Myers-Briggs Type Indicator measure important dimensions of personality which seem

to be quite similar to those postulated by Jung. The Indicator appears to be a reasonably valid instrument which is potentially useful for a variety of purposes. (p. 471)

### The Alcohol Use Inventory (AUI)

The subjects' alcohol use patterns were determined using the Alcohol Use Inventory (AUI), developed by Wanberg et al. (1977). This is a 147 item survey which measures 16 primary factors, four second-order factors, and one broad alcoholism indicator. The items cover three distinct areas: (a) styles of alcohol use, (b) unfavorable consequences of drinking, and (c) beneficial consequences of drinking. The AUI results include scores for each of the primary and secondary scales and one overall score indicating the general level of alcoholism. Scales 15 and 16 were eliminated from the AUI for this study, as they related to marital problems following or being provoked by drinking (less than 5% of the subjects were married).

Wanberg et al. (1977) state that the AUI is designed to:

provide a basis for a variegated approach to diagnosis, an approach that has a foundation in measurement. (It) provides information pertaining to symptoms, benefits, behaviors and styles of alcohol use. The AUI scales provide an operational definition of multiple manifestations of alcohol problems. (p. 541)

The AUI had as its earliest stage a set of items known as the Drinking History Questionnaire (Wright, 1966). This survey went through a number of rewritings, factor analyses, and subject samples. The result is the current AUI, the final analysis of which was based on 1030 patients admitted to the Fort Logan Mental Health Center between July 1969 and December 1971. Later studies were conducted



to investigate the psychometric properties of the AUI from 1971 to 1973. A listing of the scales of the AUI appears in Table 3. For a detailed description of the scales refer to Appendix B.

Reliability of the AUI. A test-retest reliability procedure was implemented by Wanberg et al. (1977). In this procedure, 76 subjects were retested after one week of therapy. All scales except number 16 obtained adequate test-retest reliability. The authors suggested that the difference in scale 16 (Drinking Provokes Marital Problems Scale) was perhaps due to the results achieved during therapy. The difference in reports on scale 16 seem to indicate a greater willingness on the part of patients to admit that drinking has caused marital problems after receiving treatment. Additional changes in reports over time are suggested by the authors to be a result of specific scales measuring state conditions versus trait conditions. Wanberg et al. (1977) address this issue by noting that:

a state condition versus a trait condition is one which is dependent upon existing conditions or situation of a person at the time and may be evanescent. A trait condition is resistant to change, endures over time and is not dependent upon the current situation of the individual. (p. 536)

Validity of the AUI. An attempt was made to assess the level of validity of the AUI. To demonstrate this effort, Wanberg et al. (1977) tested three different patient samples (defined by diagnostic criteria) using the AUI. Sample A was comprised of 150 admissions to an outpatient program. This group was judged by clinical staff to have minimal to moderate problems associated with alcohol use.

Table 3

## The Scales of the Alcohol Use Inventory\*

Code	Scale Name
1.	Drink to improve sociability-social benefit scale
2.	Drink to improve mental functioning-mental benefit scale
3.	Gregarious versus solitary drinking scale
4.	Obsessive-compulsive drinking scale
5.	Continuous, sustained drinking scale
6.	Postdrinking worry, fear, and guilt scale
7.	Drink to change mood scale
8.	External support to stop drinking scale
9.	Loss of behavior control when drinking scale
10.	Social-role maladaptation scale
11.	Psychoperceptual withdrawal scale
12.	Psychophysical withdrawal scale
13.	Use of drugs other than alcohol scale
14.	Quantity of alcohol used scale
15.	Drinking followed marital problems scale
16.	Drinking provokes marital problems scale
A.	Self-enhancement drinking scale
B.	Obsessive, sustained drinking scale
C.	Anxiety related to drinking scale
D <sub>1</sub> .	Alcohol-use disruption scale
D <sub>2</sub> .	Alcohol-use disruption (adjunct)
G.	General alcoholism scale

\*From Wanberg et al. (1977)



Sample B was comprised of a group of 154 first admissions to a residential treatment program. These subjects were judged to have significant alcohol-related problems. Sample C contained 154 individuals who were seen by the clinical staff to be chronic severe alcoholics, most of whom had a history of treatment for alcoholism. It was hypothesized that the scores of these samples on the AUI, if the AUI is a valid measure of the level of alcohol use impairment, should increase from Sample A to Sample C. This was expected to occur especially on the scales measuring psychological or social disruption, dependence on alcohol, severity of symptoms, and on the broad alcoholism scales. Examination of the scores of these samples, as reported by Wanberg et al. (1977), supports the above hypothesis, and seems to point to the validity of the instrument insofar as its ability to differentiate between various diagnostic levels of alcohol abuse. Additional studies are currently being conducted by the authors of the AUI to investigate its predictive validity, for which there has been some level of support in preliminary studies (Wanberg et al., 1977).

#### Statistical Procedures

Data gathered from the administration of the MBTI and the AUI consisted of discrete, dichotomous variables from the MBTI and numerical scores for each of the scales of the AUI. The initial procedure was to group the AUI scores into Low, Moderate, and High groups. The procedure followed to accomplish this was the one recommended by Wanberg et al. (1977). Scores below one standard deviation from the mean were grouped in the Low category, those

within one standard deviation (plus or minus) of the mean were considered to be in the Moderate group, and those falling above one standard deviation from the mean were labeled High. This procedure was implemented for every scale of the AUI.

To determine the presence of significant relationships between the Myers-Briggs and sex variables and the patterns of alcohol use, a chi-square test of statistical significance was computed for each AUI scale (for the Low, Moderate, and High groupings) on each of the variables. The .05 level of significance was required for rejection of the null hypotheses.

#### Summary

A total of 123 undergraduate students from Appalachian State University were employed in this study to discover the relationships between psychological type and alcohol use patterns. Psychological type was determined using the Myers-Briggs Type Indicator (Myers, 1962), a self-report personality inventory. Alcohol use patterns were measured through the administration of the Alcohol Use Inventory (Wanberg et al., 1977), which measures 16 primary factors, four second-order factors, and provides one broad alcoholism indicator.

The Myers-Briggs Type variables were expanded to include broad categories of type as well as specific classifications, and the sex of the subjects was introduced as an additional variable. The presence of significant relationships between the variables was determined through the use of a chi-square test of significance and the .05 level of significance was required for rejection of the null hypotheses. The scores on the Alcohol Use Inventory scales were

grouped into Low, Moderate, and High categories, according to the procedure recommended by Wanberg et al. (1977) to facilitate analysis.



## Chapter 4

### DATA ANALYSIS

The results of the chi-square tests are presented below for all Alcohol Use Inventory (AUI) Scales which were shown to have a significant relationship with one or more of the variables under investigation. For those scales not listed below, no significant relationships were discovered to exist and the null hypothesis was not rejected.

#### Scale 2: Mental Benefit Scale

No significant relationships were found to exist with any of the Myers-Briggs subgroups. However, the relationship between the scores on this scale and the sex of the subjects was shown to be significant at the .04 level (see Table 4). For the relationship between the Mental Benefit Scale and the sex variable the null hypothesis was rejected. Examination of the data disclosed that female subjects accounted for 81% of the Moderate and High scores (100% of the High scores), while the percentage of females for the sample was only 65%. From this it can be seen that female subjects reported a significantly higher mental benefit from drinking than did male subjects.



Table 4

Significant  $X^2$  Values for Myers-Briggs Type Subgroups,  
Sex and Alcohol Use Inventory (AUI) Scales

Comparison	df	$X^2$	Level of Significance
AUI Scale 2 - sex	2	6.59	.04
AUI Scale 5 - intuiting types	2	6.99	.04
AUI Scale 5 - feeling types	2	6.10	.05
AUI Scale 5 - intuiting dominant	6	14.90	.02
AUI Scale 7 - sensing types	2	7.31	.02
AUI Scale 11 - judging types	2	11.36	.01
AUI Scale 12 - judging types	2	6.11	.05
AUI Scale 14 - extraverts	2	6.12	.05

Scale 5: Continuous, Sustained Drinking Scale

The relationship between the scores on this scale and the sensing-intuiting subgroup was found to be significant at the .04 level (see Table 4). For the relationship between the Continuous, Sustained Drinking Scale and the sensing-intuiting subgroup, the null hypothesis was rejected. Examination of the data revealed that 83% of the High scores were recorded by intuiting types, while these types accounted for only 34.9% of the sample. Intuiting types reported significantly higher levels of continuous, sustained drinking than did sensing types.

A significant relationship at the .05 level was also found to exist between the scores on this scale and the thinking-feeling subgroup (see Table 4). For this relationship the null hypothesis was rejected. Examination of the data revealed that 100% of the High scores were from feeling types, while they accounted for only 66.7% of the sample. Feeling types reported significantly higher levels of continuous, sustained drinking than did thinking types.

For the breakdown by dominant function, a significant relationship was found to exist with the scores on this scale at the .02 level (see Table 4). For this relationship the null hypothesis was rejected. Examination of the data revealed that subjects whose primary function was intuiting accounted for 83.2% of the High scores, while they comprised only 22.2% of the sample. Individuals with a primary function of intuiting reported significantly higher levels of continuous, sustained drinking than did individuals with any other primary function.

#### Scale 7: Drink to Change Mood Scale

A significant relationship was found to exist between the scores on this scale and the sensing-intuiting subgroup. This relationship was found to be significant at the .02 level (see Table 4). For this relationship the null hypothesis was rejected. Examination of the data revealed that sensing types accounted for 100% of the High scores, while they accounted for only 65% of the sample. From these results it can be seen that sensing types reported a significantly higher tendency to use alcohol as a means of changing mood than intuiting types.

#### Scale 11: Psychoperceptual Withdrawal Scale

The relationship between the judging-perceiving subgroup and the scores on this scale was found to be significant at the .01 level (see Table 4). For this relationship the null hypothesis was rejected. Examination of the data revealed that judging types accounted for 59.7% of the High responses, although they were only 46% of the sample. Judging types reported significantly higher levels of psychoperceptual withdrawal than did perceiving types.

#### Scale 12: Psychophysical Withdrawal Scale

The scores on this scale were found to have a significant relationship at the .05 level with the judging-perceiving subgroup (see Table 4). For this relationship the null hypothesis was rejected. Examination of the data revealed that 74% of the High scores were accounted for by judging types, while they made up only 46% of the sample. From this it can be seen that judging types reported



significantly higher levels of psychophysical withdrawal than did perceiving types.

#### Scale 14: Quantity of Alcohol Used Scale

The relationship between the introversion-extraversion subgroup and the scores on this scale was found to be significant. This relationship was found to be significant at the .05 level (see Table 4). For this relationship the null hypothesis was rejected. Examination of the data revealed that (a) introverts accounted for 71.6% of the Low responses (while accounting for only 44.4% of the sample), and (b) extraverts accounted for 72.5% of the High scores while making up only 55.6% of the sample. From this it can be seen that extraverts reported significantly higher levels of alcohol use than did introverts.

#### Summary of Analysis

The following is a summary of the significant relationships which were identified by the use of the chi-square test for significance.

##### 1. Scale 2: Mental Benefit Scale

Female subjects reported a significantly higher mental benefit from drinking than did male subjects.

##### 2. Scale 5: Continuous, Sustained Drinking Scale

(a) Intuiting types reported significantly higher levels of continuous, sustained drinking than did sensing types.

(b) Feeling types reported significantly higher levels of continuous, sustained drinking than did thinking types.

(c) Subjects with a dominant function of intuiting reported significantly higher levels of continuous, sustained drinking than did subjects with any other dominant function.

3. Scale 7: Drink to Change Mood Scale

Sensing types reported a significantly higher tendency to use alcohol as a means of changing mood than did intuiting types.

4. Scale 11: Psychoperceptual Withdrawal Scale

Judging types reported significantly higher levels of psychoperceptual withdrawal than did perceiving types.

5. Scale 12: Psychophysical Withdrawal Scale

Judging types reported a significantly higher level of psychophysical withdrawal than did perceiving types.

6. Scale 14: Quantity of Alcohol Used Scale

Extraverts reported significantly higher levels of alcohol use than did introverts.

## Chapter 5

### SUMMARY AND CONCLUSIONS

In this chapter, the results of the study are summarized and conclusions are drawn. In addition, the problem addressed by the study is restated and the procedure is described. Finally, recommendations for further investigation are suggested.

#### Restatement of the Problem

The goal of this study was to answer the question of whether or not there exist any relationships between psychological type and patterns of alcohol use. The concept of psychological type was expanded to encompass not only specific classifications of types, but several broad categories of type as well. The variable of sex was also introduced for analysis. The null hypothesis for all the relationships under investigation stated that there was no significant relationship between the pattern of alcohol use as measured by the Alcohol Use Inventory (AUI) and the Myers-Briggs Type subgroup and the variable of sex. The significance level was set at the .05 level to reject the null hypothesis.

#### Description of Procedure

Subjects for this study were partially selected at random and partially recruited from several Psychology and Counselor Education and Research classes at Appalachian State University. The resultant



N was 123. The subjects' psychological type was determined by the administration of the Myers-Briggs Type Indicator. The Alcohol Use Inventory was administered to obtain information about the subjects' alcohol use patterns. Scores on the scales of the AUI were grouped into Low, Moderate, and High categories. Each scale of the AUI was subjected to a chi-square test of significance across each of the Myers-Briggs subgroups and for the variable of sex:

### Major Findings

Presented below are the major findings for each of the Myers-Briggs subgroups and for the variable of sex. These findings are discussed in relationship to Jungian theory and to the impact of the findings on individuals.

#### Extravert-Introvert Subgroup

One significant relationship was found to exist between this subgroup and the scales of the AUI, that being on Scale 14: Quantity of Alcohol Used Scale. Extraverts reported a significantly higher level of alcohol use than did introverts. These findings may be seen by some as serving to support Jung's (1921) notion that extraverts are susceptible to substance abuse when their primitive needs are not met. However, the lack of a significant relationship between extraversion and Scale 13: Use of Drugs Other Than Alcohol Scale makes this a questionable conclusion. It is also important to note the absence of a significant relationship between extraversion and Scale 3: Gregarious versus Solitary Drinking Scale. It would be expected that there would be a significant relationship between these two variables if the explanation for extraverts' reporting of

higher levels of alcohol use were due to the gregarious (i.e., extraversive) nature of the drinking occasions. If the explanation lies not in the postulation that extraverts are more susceptible to substance abuse, nor in the gregarious nature of the extravert, to what can the relationship between extraversion and a high level of alcohol use be attributed? Perhaps it lies in the external orientation of the extravert. Higher levels of alcohol consumption produce more noticeable external effects than do lower levels (Verella, 1970). For the extravert who spends little time reflecting on the internal world of consciousness, the mild effects of low levels of consumption would go almost unnoticed. If the extravert is drinking for the subjective effects of the alcohol, it would seem almost necessary that greater quantities be consumed.

#### Sensing-Intuiting Subgroup

Two significant relationships were found to exist between this subgroup and the scales of the AUI: those being with Scale 5: Continuous, Sustained Drinking Scale and Scale 7: Drinking to Change Mood Scale. Intuiting types were found to report significantly higher levels of continuous drinking than did sensing types, and sensing types reported a significantly greater use of alcohol as an agent to change mood than did intuiting types. There was no significant relationship found between intuiting types and the scores on Scale 14: Quantity of Alcohol Used Scale, so the relationship noted above would seem not to be one of a continuous high level of alcohol consumption. These results point to the possibility that intuiting types are more likely than sensing types to use

alcohol as a part of their daily lives. This usage is, however, not in abnormally large quantities.

To explain the relationship between sensing types and the use of alcohol to change moods, it is helpful to refer to the AUI manual (Wanberg et al., 1977). A high score on Scale 7 is seen by Wanberg et al. as being indicative of a tendency to use alcohol as a stress reducer. For sensing types, one could hypothesize that stress may be perceived as coming from specific objects, people, or events, all out of the control of the individual. One way to alleviate this stress would be via the ingestion of a drug (alcohol) which has the ability to change one's mood.

#### Thinking-Feeling Subgroup

One significant relationship was found to exist between this subgroup and the scales of the AUI, that being with Scale 5: Continuous, Sustained Drinking Scale. The results indicated that feeling types reported a significantly higher level of continuous drinking than did thinking types. Again, the lack of a significant relationship between this subgroup and Scale 14: Quantity of Alcohol Used Scale is noted. Thus it can be seen that feeling types incorporate the use of alcohol into their daily lives to a greater degree than do thinking types, but still not at a significantly higher level of use. This relationship appears similar to the one between intuiting types and Scale 5. Perhaps due to their feeling nature, feeling types are more sensitive to the subtle effects that alcohol has on one's emotions even when ingested in small amounts.



### Judging-Perceiving Subgroup

Two significant relationships were found to exist between this subgroup and the scales of the AUI: those being with Scale 11: Psychoperceptual Withdrawal Scale and Scale 12: Psychophysical Withdrawal Scale. Judging types were found to report significantly low or high levels on each of the Withdrawal Scales. Judging types report either the experiencing of little or no withdrawal symptoms, or they report a high level of symptoms. For judging types there appears to be little desire to "sit on the fence" between two choices.

### Dominant Function Subgroup

One significant relationship was found to exist between this subgroup and the scales of the AUI, that being with Scale 5: Continuous, Sustained Drinking Scale. Individuals with intuition as their dominant function reported a significantly higher level of continuous drinking than did those with other dominant functions. There is no significant relationship between this dominant function and Scale 14: Quantity of Alcohol Used Scale so, as in the case of intuiting types in general, those subjects whose dominant function is intuiting have seemingly incorporated alcohol use into their daily lives at moderate levels.

### Sex Variable

One significant relationship was found to exist between this variable and the scales of the AUI, that being with Scale 2: Mental Benefit Scale. Women reported a significantly higher level of

mental benefits from drinking alcohol than did men. The question to consider is: do these data suggest that women believe that they improve their mental functioning by drinking alcohol or do they indicate that, when drinking alcohol, women are more able to accept their intellectual side, which has been traditionally viewed as non-feminine? The current study does not provide sufficient data to answer this question.

### Conclusions

The question under investigation in this study (i.e., is there a relationship between psychological type and patterns of alcohol use?) seems to have been answered in the affirmative. Seven significant relationships have been identified between categories of psychological type and several patterns of alcohol use as measured by the AUI. Also, one significant relationship was discovered between the variable of sex and a reported benefit from drinking.

It appears evident that some categories of psychological type do use alcohol in significantly different patterns. Given that the sample under investigation was a nondiagnosed one, it would seem appropriate to conclude that the relationships demonstrated between psychological type and patterns of alcohol use were a result of typology and not an effect of excessive alcohol use. Should future researchers (a) better define the various forms of alcoholism and (b) operationalize these definitions along the lines of the AUI, psychological type may well be a significant factor in helping to predict high risk individuals for those specified forms of "alcoholism."

### Recommendations for Further Investigation

Future researchers in the area of psychological type and patterns of alcohol use should consider the following:

1. Sample size should be sufficiently large to provide for evaluation of the individual MBTI classifications.

2. Sample composition should be, ideally, a random one. This would make generalization from the sample to the population possible.

3. Further investigations should be considered in the areas which have been isolated as having significant relationships within this study. Perhaps utilizing the continuous score option for the MBTI would provide meaningful information about the strength of the relationships which have been identified.

4. Further investigation should be considered in the area of the amount of alcohol needed to achieve a perceived effect by extraverts and introverts.

5. A correlational study is recommended to explore the relationship between women's scores on Scale 2: Mental Benefit Scale and their level of acceptance of their intellectual selves.



REFERENCES

## REFERENCES

- Bradway, K. Jung's psychological types: classification by test versus classification by self. Journal of Analytical Psychology, 1964, 9, 129-135.
- Carlyn, M. An assessment of the Myers-Briggs Type Indicator. Journal of Personality Assessment, 1977, 41, 461-473.
- Conary, I.M. An investigation of the variability of behavioral response of Jungian psychological types to select educational variables (Doctoral dissertation, Auburn University, 1965). Dissertation Abstracts, 1966, 26, 5222-5223.
- Davidoff, E. & Whitaker, C.A. Prepsychotic personality in alcoholic psychoses. Psychiatric Quarterly, 1940, 14, 103-120.
- Dewinne, R. & Johnson, R. Extraversion-introversion: the personality characteristics of drug abusers. Journal of Clinical Psychology, 1976, 32, 744-746.
- Goldschmid, M.L. Prediction of college majors by personality type. Journal of Counseling Psychology, 1967, 14, 302-308.
- Gray, H. & Wheelwright, J.B. Jung's psychological types: their frequency of occurrence. Journal of General Psychology, 1946, 34, 3-17.
- Hoch, P.H. Personality factors in alcoholic psychoses. Psychiatric Quarterly, 1940, 14, 338-346.
- Jacobson, G.R. The alcoholisms: detection, assessment, and diagnosis. New York: Human Services Press, 1976.
- Jones, M.C. Personality correlates and antecedents of drinking patterns in adult males. Journal of Consulting Psychology, 1968, 32, 2-12.
- Jung, C.G. Psychological types. Princeton, N.J.: Princeton University Press, 1971 (originally published in 1921).
- Landis, C. Theories of the alcoholic personality. In Alcohol, science and society. New Haven, Conn.: Journal of Studies on Alcohol, Inc., 1945.
- Laney, A.R. Occupational implications of the Jungian personality function-types as identified by the Myers-Briggs Type Indicator. Unpublished Master's thesis, George Washington University, 1949.

- McCaulley, M.H. & Natter, F.L. Psychological type differences in education. In F.L. Natter & S.A. Rollin (Eds.), The governor's task force on disruptive youth. Tallahassee, Fla.: Office of the Governor, 1974.
- Mendelsohn, G.A. Review of the Myers-Briggs Type Indicator. In O.K. Buros (Ed.), Sixth mental measurements yearbook (3rd ed.). Highland Park, N.J.: Gryphon Press, 1965.
- Miller, P.V.R., Jr. The contribution of noncognitive variables to the prediction of student performance in law school (Doctoral dissertation, University of Pennsylvania, 1965). Dissertation Abstracts, 1966, 26, 7159.
- Myers, I.B. Manual: the Myers-Briggs Type Indicator. Princeton, N.J.: Educational Testing Service, 1962.
- National Institute on Alcohol Abuse and Alcoholism. Alcohol and health. First special report to the U.S. Congress, DHEW, Rockville, MD, 1971.
- Nerviano, V.J. Common personality patterns among alcoholic males: a multivariate study. Journal of Consulting and Clinical Psychology, 1976, 44, 104-110.
- Norbury, F.G. Some mental mechanisms in alcoholism. Journal of the American Medical Association, 1942, 118, 25-28.
- O'Hara, S. Core constellation elements of the hypothesized alcoholic personality as identified by the Jungian-based Myers-Briggs Type Indicator (Doctoral dissertation, University of Southern California, 1980). Dissertation Abstracts, 1980, 40, 5796.
- Pittman, D.J. Society, culture, and drinking patterns. New York: John Wiley & Sons, Inc., 1962.
- Popham, R.E. & Schmidt, W. A decade of alcoholism research. Toronto: University of Toronto Press, 1962.
- Richek, H.G. & Brown, O.H. Phenomenological correlates of Jung's typology. Journal of Analytical Psychology, 1968, 13, 57-65.
- Ross, J. The relationship between a Jungian personality inventory and tests of ability, personality, and interest. Australian Journal of Psychology, 1966, 18, 1-17.
- Saunders, D.R. Evidence bearing on the existence of a rational correspondence between the personality typologies of Spranger and Jung (ETS RB 60-6). Princeton, N.J.: Educational Testing Service, 1960.



- Stricker, L.J. & Ross, J. An assessment of some structural properties of the Jungian personality typology. Journal of Abnormal and Social Psychology, 1964, 68, 62-71.
- Stricker, L.J. & Ross, J. Intercorrelations and reliability of the Myers-Briggs Type Indicator scales. Psychological Reports, 1963, 12, 287-293.
- Sutherland, E.H., Schroeder, H.G. & Tordella, C.L. Personality traits and the alcoholic: a critique of existing studies. Quarterly Journal of Studies on Alcohol, 1950, 11, 547-561.
- Syme, L. Personality characteristics and the alcoholic: a critique of current studies. Quarterly Journal of Studies on Alcohol, 1957, 18, 288-302.
- Verella, A. The role of personality in alcohol abuse. In R.R. Popham (Ed.), Alcohol and alcoholism. Toronto: Addiction Research Foundation, 1970.
- Vogel, M.D. Introversiion-extraversiion in an A.A. and a clinic group of alcoholics. Canadian Journal of Psychology, 1959, 13, 76-83.
- Wanberg, K.W., Horn, J.L. & Foster, M.A. A differential assessment model for alcoholism: the scales of the Alcohol Use Inventory. Quarterly Journal of Studies on Alcohol, 1977, 3, 512-533.
- Wenger, P. History of a drinking habit in 400 inmates of a penal institution. New York State Journal of Medicine, 1944, 44, 1898-1904.
- Williams, R.L., Gutsch, K.U., Kazelskis, R., Vergstegen, J.P. & Scanlon, J. An investigation of relationships between level of alcohol use impairment and personality characteristics. Addictive Behaviors, 1980, 5, 107-112.
- Wright, J. The drinking history questionnaire. Denver: Fort Logan Mental Health Center, 1965.
- Zwerling, I. & Rosenbaum, M. Alcohol addiction and personality. In S. Arieti (Ed.), American handbook of psychiatry. New York: Basic Books, 1959.

APPENDIX A

Myers-Briggs Type Indicator Type Table

For Subjects Under Investigation

Myers-Briggs Type Indicator Type Table  
For Subjects Under Investigation

SENSING TYPES		INTUITIVE TYPES		
with THINKING	with FEELING	with FEELING	with THINKING	
<b>ISTJ</b> N = 12 % = 9.8	<b>ISFJ</b> N = 11 % = 8.9	<b>INFJ</b> N = 7 % = 5.7	<b>INTJ</b> N = 0 % = 0	JUDGING
				INTROVERTS
<b>ISTP</b> N = 5 % = 4.1	<b>ISFP</b> N = 15 % = 12.2	<b>INFP</b> N = 2 % = 1.6	<b>INTP</b> N = 3 % = 2.4	PERCEPTIVE
				EXTRAVERTS
<b>ESTP</b> N = 5 % = 4.5	<b>ESFP</b> N = 15 % = 12.2	<b>ENFP</b> N = 17 % = 13.8	<b>ENTP</b> N = 4 % = 3.3	PERCEPTIVE
				JUDGING
<b>ESTJ</b> N = 10 % = 8.1	<b>ESFJ</b> N = 7 % = 5.7	<b>ENFJ</b> N = 6 % = 4.9	<b>ENTJ</b> N = 4 % = 3.3	



APPENDIX B

The Scales of the Alcohol Use Inventory

The Scales of the Alcohol Use Inventory<sup>a</sup>

## Scale 1: Drink to improve sociability-social benefit

This scale represents use of alcohol for the purpose of enhancing one's ability to relate socially. Persons obtaining high scores on this scale are saying in effect that alcohol helps them to relax socially, to overcome shyness, to meet people and to relate in a social setting. A person with virtually no history of problem drinking could obtain a high score on this scale.

## Scale 2: Drink to improve mental functioning-mental benefit

This scale measures the person's reported belief that alcohol benefits his intellectual functioning. The higher scoring respondent apparently believes that some drinking helps to improve mental functioning. This appears to be a substantial benefit pattern reported by some problem drinkers.

## Scale 3: Gregarious versus solitary drinking

This scale indicates both a category of benefit from alcohol use and a style of drinking. A person who obtains a high score on this scale reports that he drinks primarily under convivial, gregarious conditions, in gatherings with friends and acquaintances. Low scores on the scale indicate a withdrawn, nonsocial lifestyle associated with drinking.

## Scale 4: Obsessive-compulsive drinking

This scale indicates a preoccupation and compulsion in drinking. A high score indicates a person's inability to resist the attraction of alcohol, inability to stop when once started and surreptitious behavior associated with drinking. This scale measures a style of alcohol use that is associated with problem drinking.

## Scale 5: Continuous, sustained drinking

A high score on this scale indicates sustained, continuous drinking; at the low end the measure is of a periodic binge pattern of drinking. Attention should be given the score on scale 14 (quantity of alcohol used) to determine the level of use/abuse.

## Scale 6: Postdrinking worry, fear and guilt

A person with a high score on this scale is saying that drinking has caused noticeable fear, depression, anxiety, worry, remorse, resentment; and there is an avoidance of talking to others about drinking behavior.

Scale 7: Drink to change mood

This scale measures the use of alcohol to relieve symptoms of tension, depression, worry, fear and despair. Those who score high on this scale are saying that they use alcohol as a stress reducer and as a way of coping with depression and anxiety.

Scale 8: External support to stop drinking

This scale provides an indication of the extent to which the person has made prior attempts to use established facilities and procedures to cope with problems associated with drinking.

Scale 9: Loss of behavior control when drinking

This scale measures a pattern of loss of behavior control, as indicated by belligerency, blackouts, passing out, gulping drinks, stumbling, staggering, weaving, and the infliction of physical harm on others and to oneself.

Scale 10: Social-role maladaptation

This scale is descriptive of what is sometimes referred to as the Skid Row syndrome. Persons who score high on this scale are unemployed, have been jailed or detained for public drunkenness, live alone and lack family involvement, all associated with excessive drinking.

Scale 11: Psychoperceptual withdrawal

Scale 11 measures the perceptual distortions of alcohol withdrawal. A high score may indicate the patient has experienced symptoms associated with, although perhaps not as extreme as, full-blown delirium tremens.

Scale 12: Psychophysical withdrawal

This scale measures the presence of physical symptoms related to withdrawal, such as experiencing 'shakes,' hangovers, vomiting, rapid heart beat, sweatiness and feverishness, when in a process of sobering up.

Scale 13: Use of drugs other than alcohol

This scale represents a pattern of symptoms often associated with excessive drinking. High scores may indicate a history of substance misuse or habitual involvement with drugs, while low scores represent no use or only sporadic use.

Scale 14: Quantity of alcohol used

This is an a-priori scale which gives an approximation of the amount of alcohol used per day.

Scale 15: Drinking followed marital problems

A high score on this scale describes a condition in which the person reports his drinking to be an outgrowth of marital discord and conflict.



Scale 16: Drinking provokes marital problems

This scale measures the belief that marital problems have resulted from excessive alcohol use.

Dimension A: Self-enhancement drinking

This scale measures the use of alcohol for the purpose of improving psychological and social adjustment. A high score on this dimension indicates a person's acceptance of the use of alcohol as a part of a lifestyle.

Dimension B: Obsessive, sustained drinking

This scale indicates compulsive and sustained drinking, a preoccupation with alcohol and an inability to leave it alone. This scale is bipolar, in that a high score indicates the above, whereas a low score may be indicative of binge drinking.

Dimension C: Anxiety related to drinking

This dimension provides a measure of anxiety associated with drinking, regardless of whether the anxiety is perceived to occur before or after substantial alcohol use.

Dimension D<sub>1</sub>: Alcohol-use disruption

A high score on this dimension represents broad alcohol-related disruption in the physical, psychological and social areas of functioning.

Dimension D<sub>2</sub>: Alcohol-use disruption (adjunct)

This scale was constructed to provide a cross-check on D<sub>1</sub>. It is also a measure of deterioration or disruption associated with alcohol use.

Dimension G: General alcoholism

This dimension is comprised of items pertaining to all of the basic categories of alcohol use and misuse, via, alcohol-use benefits, styles and symptoms.

<sup>a</sup>Adapted from Wanberg et al., 1977.

## VITA

Barry Warren Shreve was born in Abington, Pennsylvania, on July 9, 1952. He graduated from Upper Dublin High School, Ft. Washington, Pennsylvania, in 1970. In 1975 he graduated from Millersville State College with a B.A. in psychology. Upon graduation he accepted a position with the Lancaster (Pa.) Crisis Intervention Center as a counselor. In 1978 he transferred to the Lancaster County MH/MR Administrative Office where he worked as the Director of the Division of Operations Research.

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