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BELIEF SYSTEMS OF ALCOHOLICS
AND PROBLEM DRINKERS

by

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ABSTRACT

Alcohol dependence is a complex condition which may be construed as both a disease and a behavioral problem. This study investigated the possibility that deviant drinkers themselves choose one of these options, that this choice is related to general beliefs about control, and that both specific and general beliefs change during a stay in a four week residential treatment program.

A questionnaire was constructed to measure differences between behavior and disease oriented beliefs about alcohol dependency. This questionnaire was tested on a group of 104 clients at two alcohol treatment centres. It was established that the instrument fulfilled some of the criteria for psychometric soundness, notably, an acceptable level of internal consistency, and some discriminatory ability.

A volunteer sample of 59 men was then tested at these same treatment centres. They were divided into two groups: alcoholics and problem drinkers, depending on which role label they preferred. Everyone received a pre test and a post test. On each occasion, they completed the Beliefs About Alcohol Dependence questionnaire, the Rotter Locus of Control test, the Michigan Alcoholism Screening test, and a demographic information questionnaire.

Results indicate that there were some differences in belief systems between the two groups. Self defined alcoholics had more disease oriented beliefs and a greater tendency to perceive themselves in control of their environment. Self defined problem drinkers had more behavior oriented

beliefs and a greater tendency to perceive themselves to be controlled by their environment. While specific beliefs about dependence did not change during treatment, general beliefs about control over the environment did.

The implications of viewing the alcohol dependent population as variable with respect to belief systems are discussed.

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CHAPTER I

SCOPE OF THE STUDY

Background: Opposing Views of Alcohol Dependence

There are many theories about the etiology of the phenomenon labelled, by various writers, "alcoholism", "alcohol dependence", "deviant drinking", and "problem drinking" (Tarter and Sugerman, 1976; Core Knowledge in the Drug Field, 1979). However, it is the contention of this study that it is worthwhile to construe this phenomenon in two ways: as a disease entity and as a learned behavior pattern. The first approach construes what is then termed "alcoholism" as a unitary phenomenon, explained through a paradigm much like the "mental illness" model (Sarbin and Mancuso, 1981). The second approach, the "problem drinking" model, describes a lifestyle problem best understood in terms of environmental variables.

For many years the "disease concept of alcoholism" has been the most popular, indeed the only, paradigm, both scientifically and popularly. The Alcoholics Anonymous (AA) movement has, since the 1930's, advocated the conception of alcoholics as sick people rather than as moral degenerates, which was the prevailing paradigm before that time. Alcoholism is thus a disease, which the "alcoholic" is predisposed to develop, probably through the mechanism of an inherited metabolic deficiency. Alcoholics are therefore not responsible for contracting this condition and are powerless to control it, any more than diabetics can control their reaction to sugar. Alcoholics must therefore admit they have this irreversible condition and commit themselves to lifelong abstinence.

The scientific body of knowledge with respect to the disease theory developed as an adjunct to these popular notions described above. The initial (1946) work of E.M. Jellinek, the most well-known researcher in the field, was commissioned by AA. Using retrospective data from AA members, Jellinek formulated his description of the "phases of alcoholism". This "ages and stages" description of a progressive deterioration is very compatible with a disease model. Jellinek went on to a more detailed formulation of the disease model. He then (1960) suggested that there were at least five "alcoholisms" and that not all fitted the disease model. However, Jellinek's caveats about the limitations of the disease model have largely been ignored; the traditional view of alcoholism is that it is a unitary condition which is best thought of as a disease (Goodwin, 1976 (a); Glatt, 1976).

The popular view of alcohol dependence is consistent with the disease model. The alcoholic is depicted as a sick, helpless victim of a disease process, whose only hope is acceptance of this and total abstinence, usually attained by commitment to the AA way of life (Alcoholics Anonymous, 1939). Scientific books written for popular consumption advocate this view (Marty Mann, 1979; Vernon Johnson, 1973), as do novels (Joyce Rebuta-Burditt, 1977) and TV movies (You've Come a Long Way, Katie).

In recent years a second approach to alcohol dependence has developed. According to the "problem drinking" model, alcohol dependence can best be described as a behavioral or lifestyle problem. Thus, problem drinking is

a learned, adaptive behavior which conforms to the same scientific principles as other voluntary behaviors (Marlatt and Nathan, 1978). Rather than being a response to a popularized view, the problem drinking model was developed as an alternative explanation when experimentally obtained results were found to be inconsistent with disease theory predictions. For example, a significant minority of those once diagnosed as "alcoholic" go back to non-problem drinking (Sobell and Sobell, 1979)¹. Furthermore, an alcoholic's expectations or beliefs about alcohol have been shown to be more important than the amount of alcohol consumed in influencing behavior (Marlatt and Rohsenov, 1980). Some (Cahalan, 1970; Pattison, Sobell and Sobell, 1977) also argue that the problem drinking model is more justifiable than the disease model on conceptual grounds as well as empirically.

The "problem drinker" is thought to have violated social norms with respect to alcohol, either by overdrinking to the point of repeated impairment, physical damage, or psychological or social problems. How this behavior was learned depends on the personality theory of the describer. In any case, harmful drinking is construed as a problem behavior that is no more an irreversible condition of identity than is smoking.

Some writers suggest that both "alcoholism" and "problem drinking" models are correct, and that they apply to two different populations of deviant drinkers. Goodwin (1976 (b)) used the following criteria to distinguish between the two groups:

¹ A recent evaluation by Pendery, Maltzman and West (1982) has challenged the validity of the Sobells' work on teaching controlled drinking to alcoholics.

Problem Drinker: for at least one year, has drunk daily, had six or more drinks two or three times a month, has had problems associated with this, but the problems are insufficient to meet the "alcoholic" criteria.

Alcoholic: drinks the same or more than above, but in addition has problems in three of the four following categories, a) social or marital, b) job or police trouble, c) blackouts, seizures, withdrawal symptoms, d) loss of control, morning drinking.

Although these criteria imply a quantitative distinction between alcoholics and problem drinkers, Goodwin believes there is a qualitative distinction, while Miller and Caddy (1977) seem to argue for a quantitative distinction. They suggest the term "problem drinker" be used to describe all persons "experiencing significant life problems related to alcohol". The term "alcoholic" should be reserved for a small subgroup of problem drinkers, and only those who fit a very specific set of diagnostic criteria.

So far it has been argued that there are two models for explaining alcohol dependence, and that, traditionally, the disease model paradigm has been more widely accepted both scientifically and popularly. However, there is some evidence that this traditional view is being challenged in scientific circles (Tournier, 1977) as well as in more popularly read magazines (Marlatt and Rohsenov, 1981).

Scientific theories, as well as having counterparts on the popular level, become translated into social policy (Paredes, 1976). For example, when alcoholics were thought of as morally weak and lacking in willpower, social policy dictated that they be dealt with within a religious framework or by criminal justice systems. Simply put, the alcoholic's choice was

to be saved or punished. The increasing acceptance of the disease model over the last 30 years has changed social policy. The medical system is now charged with rehabilitating the alcoholic, and treatment is insured under Medicare. Paid sick leave from work is usually authorized for the alcoholic undergoing treatment. It seems a wider acceptance of a behavioral model would have important social implications as well. Alcoholics now often escape sentencing for criminal offences, such as impaired driving, by agreeing to receive treatment. This notion of diminished responsibility might not apply if there were a more popular acceptance for the problem drinking model. This would also result in a social policy that placed more emphasis on prevention than on treatment (Room, 1981).

The Problem: Belief Systems of Deviant Drinkers

If scientific or "objective" theories of alcohol dependence become popularized and translated into social policy, it seems reasonable to assume that deviant drinkers themselves also have this input available, and that they may develop their own "subjective" theories. Few of the classical theories of alcohol dependence imply that these subjective theories are important areas for investigation, perhaps with the exception of the new cognitive behavior models being developed by Marlatt and Rohsenov (1980) and others. Yet their research clearly shows the importance of cognitive factors in predicting alcoholics' behavior. Roman and Trice (1977) also describe how adopting the role of "alcoholic" may become part of the person's implicit personality theory. The person who adopts the label

may come to think of him or her self as "a person who drinks deviantly", and live up to those role expectations. He/she may incorporate the implied "sick role" and may thereby be enabled to give up responsibility for his/her own cure.

George Kelly (1955), in describing "personal construct theory", also criticizes classical personality theorists for not taking into account the possibility that their subjects use the same logical processes they themselves use in describing, explaining, and predicting behavior. Kelly describes man as his own "personal scientist" and the "personal construct system" as the way he anticipates and replicates events. A personal construct system is a set of interrelated discriminations which allow a person to give meaning to his/her experience. This system can be labelled one's "implicit personality theory" since it is the process whereby one's behavior is channelled in a meaningful way. Fransella (1972) has shown how the incorporation of a deviant role within one's construct system has important implications for both the maintenance of the deviant role and for rehabilitation. Others (Hoy, 1973; Heather, Edwards, and Hore, 1975) have shown that some of the implications of personal construct theory apply to alcoholics as well.

It was the intention of this study to further examine the implicit personality theories that deviant drinkers hold about themselves. It was suggested that once a person assumes a label pertaining to deviant drinking, he/she incorporates that role into the existing construct system. Furthermore, it seemed reasonable to assume that the person has a choice regarding the label.

If two "objective" belief systems with respect to alcohol dependence are available, then the deviant drinker can choose between them. One system is represented by the "disease concept of alcoholism" and beliefs about this view closely parallel those about physical diseases. The other system is referred to as a "problem drinking" model and uses a learned-behavior method of description.

Rationale for the Present Study

The above section presents the rationale for assuming that deviant drinkers have two choices in incorporating their drinking role into their existing personality theories. Those who choose the disease theory do so because describing oneself as the victim of a disease process, adopting a sick, patient role, and relinquishing control and responsibility are psychologically advantageous. Those who describe themselves as problem drinkers do so because a behavioral model is more meaningful to them than a medical one. It was therefore necessary to develop an instrument which discriminates between the two belief systems.

George Kelly (1955) suggested that a person will choose those constructs which allow the greatest elaboration and validation of the existing system, i.e., those which are most meaningful. Therefore it seems that the choice between a "problem drinker" and an "alcoholic" belief system may be mediated by a more generalized variable, and that the deviant drinker may choose the one which allows the greater elaboration of the more general construct. A central notion of the disease theory is that it assumes the individual's lack of control over the condition. The behavioral model, on the other hand,

implies a degree of voluntary control. The work of Rotter, Chance, and Phares (1972), and of Phares (1975) suggests that individuals differ with respect to a generalized perception of internal versus external control of their behavior. That is, some people believe that outcomes are, for the most part, contingent upon their own behavior; these people are said to have an "internal" locus of control. Others believe that outcomes are the result of chance, luck, or other situational variables; these people are said to have an "external" locus of control. It seems reasonable to predict that the locus of control construct may be one of the general variables underlying the choice between construing oneself as an alcoholic or as a problem drinker. A scale that has some established validity in measuring locus of control is the Rotter Internal-External Locus of Control Scale (I-E) (Rotter et al, 1972). This scale has been widely used with alcoholic populations (Cox, 1979; Donovan and O'Leary, 1980).

Changes in both specific beliefs about alcohol problems and in general perceptions of control could be expected from a therapy program. The direction of the change would depend on an interaction between the nature of the original beliefs and the type of therapy program. Personal construct theory would predict that a person would be more likely to endorse a belief system that allowed the greater elaboration of his/her pre-existing beliefs. Thus, in a person who believed that he/she was a victim of circumstances, that temperament was largely inherited, and personality a set of irreversible traits, an alcoholism treatment program which elaborated on the disease theory would find a willing adherent.

The question as to whether a treatment program geared to a specific belief system could affect a general construct such as locus of control seemed a worthwhile and interesting one. Several studies (O'Leary, Rohsenov, and Donovan, 1976) have related locus of control to alcohol treatment, but the results are inconclusive. If beliefs about alcohol dependence are related to beliefs about response-outcome contingencies, it seems reasonable that this relationship would interact with a treatment program, particularly if the nature of the program could be established as being at one end of the control continuum or the other.

Therefore, four hypotheses were investigated in this study:

- I Deviant drinkers who prefer the label "problem drinker" rather than "alcoholic" will show a stronger preference for implications associated with a behavioral theory of alcohol dependence than for the implications associated with a disease theory, as measured by the Beliefs About Alcohol Dependence questionnaire. Conversely, deviant drinkers who prefer the label "alcoholic" will show a stronger preference for disease theory implications as measured by the same questionnaire.
- II Self-defined alcoholics and problem drinkers will also differ on beliefs about locus of control, in the direction of greater externality for the alcoholics, as measured by the Rotter Locus of Control Scale.
- III A treatment program which emphasizes a behavioral model of treatment will serve to strengthen behaviorally oriented beliefs, and weaken

disease oriented beliefs, as measured by the Beliefs About Alcohol Dependence questionnaire.

- IV During a stay in a treatment program which emphasizes personal responsibility and self-control over drinking, both alcoholics and problem drinkers will become more internally oriented, as measured by the Rotter Scale.

Assumptions

The major assumption made in this study was that it was justifiable to collapse all of the models of alcohol dependency into two mutually exclusive choices. It was assumed that there were two distinct belief systems, a disease oriented one and a behavioral one, and that they are negatively correlated. This does not preclude the existence of other related constructs, but it was assumed that the two belief systems mentioned would discriminate between two subgroups of the alcohol dependent population.

A second assumption was that the questionnaire as constructed would perform the operation described above, i.e., make the discrimination, and do so in a reliable and valid way. Some psychometric evaluation of the questionnaire was done to establish these criteria.

Delimitations

Several points about sample selection limited the applicability of the study. The subjects and treatment centres were not selected in a random or representative fashion. Rather, the sample consisted of almost all of

the population attending two residential centres during a three month period. The centres were selected on the basis that they were accessible and cooperative. However, the findings may not generalize, since clients are not randomly assigned to treatment centres.

The sample was drawn from an inpatient rather than an outpatient population since it was far more efficient to obtain a large sample from such a "captive" audience. There may not be any reason to assume a difference between these two populations, but this point needs to be investigated.

The sample was restricted to men only, for two reasons. First, many researchers feel that alcohol belief systems of women may be different from those of men (e.g., McLelland, Davis, Kalin, and Wanner, 1972; Marlatt and Rohsenov, 1980). Secondly, women are usually vastly underrepresented in any residential program, so that it would not have been possible to get a sample large enough for analysis within the three month time frame.

The results of the study apply only to those whose troubles with alcohol have been considered serious enough to have warranted treatment in a specialized facility.

Justification

The present study seemed justified on the basis that it allowed extension of the currently accepted alcoholism paradigm to include a problem drinking one, and did this by investigating the importance of the beliefs of deviant drinkers themselves.

Recently, some (e.g., Tournier, 1977, 1979; Pattison, Sobell,

and Sobell, 1977) have called for an extension of the traditional, disease paradigm of alcoholism. Tournier (1977) wrote that this approach has become "counterproductive [in that] it fetters innovation, precludes prevention, and ties us to a treatment strategy that is very limited in its applicability"(p.2). As previously described, some writers have also called for an extension of the alcohol dependent population into at least two categories, but they have done so on the basis of external, objective criteria.

Belief systems of alcoholics and problem drinkers have been investigated and found to be related to a number of variables:

drinking patterns and consumption rates (Mello, 1972;
Marlatt and Rohsenov, 1980);

treatment success (Dillavou, Vannicelli and Ryback, 1977);

change during group therapy (Hoy, 1973);

relapse rate (Heather, Edwards, and Hore, 1975).

However, no study thus far seems to have looked at the differences in belief systems within the alcohol dependent population and attempted to define some of the parameters of these differences.

Definition of Terms

ALCOHOLISM, ALCOHOLICS These terms are used to denote the condition of alcohol dependence or the alcohol dependent person when the disease or traditional model is being described. These terms are also used when they have been used by the author of a study under review. Thus, if the original article referred to "Fifty alcoholics at an alcoholism treatment centre"

those will be the terms used in this paper when referring to the study.

PROBLEM DRINKING, PROBLEM DRINKER These terms are used to denote the condition of alcohol dependence or the alcohol dependent individual when the behavioral or environmental model is being discussed. These terms are also used when they have been used by the author of a study under review.

DEVIANT DRINKING, DRINKER; ALCOHOL DEPENDENCE, ALCOHOL PROBLEMS, ALCOHOL DEPENDENT, or ADDICTED PERSON These terms are used interchangeably and in a generic fashion. Thus their use is meant to indicate alcohol dependence in general is being discussed, without reference to a specific model.

ADDICTION, DEPENDENCY These terms are used interchangeably. As used here, they refer to the condition or process in which an individual's lifestyle is associated in a problematic way with excessive use of alcohol.

PHYSIOLOGICAL or PHYSICAL ADDICTION/DEPENDENCY This term refers to the body's becoming physically dependent on alcohol, as is illustrated by tolerance and withdrawal. "Tolerance" occurs when there is a physiological or metabolic adaptation to alcohol so that the individual needs increasing amounts to get the same effects. "Withdrawal" refers to the occurrence of adverse or unpleasant physical symptoms upon abrupt cessation of alcohol use.

PSYCHOLOGICAL DEPENDENCE This condition is said to be present when an individual's lifestyle is excessively concerned with alcohol use, and when the individual habitually expresses a strong desire for alcohol although

he/she may not be physically dependent.

BELIEF SYSTEMS These are cognitive structures that mediate behaviors. The term is used in a very general sense, i.e., a "personal construct system" is a belief system, and so a "generalized" expectancy for external or internal control.

PERSONAL CONSTRUCT A personal construct is a generalized representation of a conceptual discrimination between events, or between the psychological representations of those events. A construct is more than just the verbal label applied to it, since it includes personal experience which may be non-verbal. Thus the construct "behaves responsibly versus is irresponsible" includes the person's verbal definition as well as his/her idiosyncratic experience of that construct. Constructs are always bi-polar.

PERSONAL CONSTRUCT SYSTEM This term refers to a set of interrelated personal constructs which are the core of each person's experience of life, i.e., they allow decoding and encoding of personal behavior.

GENERALIZED EXPECTANCY FOR EXTERNAL-INTERNAL CONTROL, CONTROL ORIENTATION, LOCUS OF CONTROL These terms are used interchangeably and as described by Rotter et al (1972) and by Phares (1975). Briefly, an externally controlled individual believes that his/her behavior and outcomes are independent, i.e., that goals result from good luck, fate, chance, or intervention of powerful others. An "internal" individual believes he/she has control of reinforcements.

CHAPTER II

LITERATURE REVIEW

Overview

Several areas of psychological investigation have been reviewed in order to provide a background for this study. It was predicted that there are subgroups among the alcohol dependent population which have different belief systems. Therefore, studies were cited which show significant variability in this population, enough to question the concept of alcohol dependence representing a single entity. Cognitive processes are an important variable in describing alcohol related behaviors. Studies resulting from a personal construct theory framework showed that self definition in terms of a deviant role implied an underlying cognitive structure which had predictive value for behavior.

The second hypothesis assumed that there is a relationship between alcoholics' and problem drinkers' subjective theories about their condition and their expectations about control over their environment. Lack of control over drinking is an important characteristic of alcohol dependency, but studies reviewed show that this lack of control is mediated cognitively, not physiologically. If control over drinking is cognitively mediated, there seems to be a rationale for assuming a relationship to a more general perspective on control. Therefore, studies investigating the nature of "locus of control" in this population were reviewed.

The third and fourth hypotheses predicted that belief systems change

during therapy, and studies which provide support for this position were also reviewed.

Variability Among Alcoholics/Problem Drinkers

Jellinek (1946, 1960) was the first researcher to acknowledge that alcoholism was not a unitary phenomenon. He wrote of "species" of "alcoholisms" and described the following five, although he felt there might be more:

- 1) Alpha alcoholism, which is characterized by psychological dependence and psychosocial problems. Physiological dependence is not present.
- 2) Beta alcoholism, in which there is heavy drinking, resulting in physical damage, but neither physiological nor psychological dependency. One could describe the drinking style in France as being of this type.
- 3) Epsilon alcoholism, which features periodic episodes of heavy drinking, but without physical dependence. The drinking style encouraged by Germany's beer fests and that of the "binge drinker" may be representative.
- 4) Gamma alcoholism, which Jellinek felt to be the major type prevalent in North America. It includes both physical and psychological dependence, as well as adverse psychosocial consequences. The typical AA model of alcoholism conforms to this type, with "loss of control" being a chief characteristic.

- 5) Delta alcoholism, which he also thought common on this continent, is characterized by "an inability to abstain" although the amount consumed at any one time may be controlled. Physical dependence is also present, although personal problems may or may not be.

Jellinek thought the "disease concept" should apply only to the latter two types of alcoholism. Evidence of physical addiction should be present, as indicated by the occurrence of withdrawal symptoms upon cessation of alcohol use.

Jellinek's conclusions are based chiefly on clinical observation and one survey study. A questionnaire was distributed to 1,600 AA members through their newsletter, "The Grapevine". Only 98, or six percent of the original number, were used in the data analysis. Nevertheless, Jellinek used this data to formulate his concept of the "phases of the disease process of alcoholism". He analysed the occurrence of 43 symptoms by age of onset and sequence in drinking history and determined that there are three distinct phases. The "promodal phase" is characterized by the onset of blackouts, the "crucial phase" by the "loss of control", and the "chronic phase" by prolonged intoxication. These phases are thought of as sequential and inevitable, and all the symptoms are part of the disease process.

The above data can be criticized on several grounds. The questionnaire items were "loaded"; a sample question was: "At what age did you first experience blackouts?" The sample was not representative either with respect to the general population, or to the AA membership. There were no adequate control or comparison groups. The data collected were retrospective in nature,

and therefore subject to contamination from memory loss, or retroactive inhibition. In other words, respondents could have been "recalling" what they had been taught at AA.

Jellinek was aware of all these limitations, and cautioned against wholesale acceptance of his disease model. Unfortunately, this is what happened, and until the advent of the better controlled studies, "alcoholism" was conceptualized as a unitary phenomenon. Clark and Cahalan (1976) and Pattison, Sobell, and Sobell (1977) review a number of such studies. They can be broken into two categories:

- 1) Attempts to replicate the Jellinek formula of questioning "admitted" alcoholics have not been successful. There is little evidence of distinct phases characterized by specific symptoms. There does seem to be a general functional deterioration that would be expected from chronic heavy alcohol consumption.
- 2) Studies of representative cross sections of the population show the development of "drinking problems" to be variable over time. These longitudinal studies generally use a version of Cahalan's (1976) definition: A "problem drinker" is one who obtains a score of seven or more in eleven categories of personal or social problems associated with drinking. Significant numbers of people move in and out of the "problem" category over a four to 20 year span.

The Cahalan type of study can be criticized on the basis that it does

not study "true alcoholics" and that for this select group a disease process does hold true. Still, the evidence points to the position that most deviant drinkers do not conform to a disease process, and that there is a great deal of variability in this population. Mark Keller, in criticizing the studies that have attempted to pinpoint traits peculiar to an "alcoholic personality" wrote, "alcoholics are different (from non-alcoholics) in so many ways that it makes no difference!" (1977, p.61). It seems that this statement could be rephrased in this way: "alcoholics are different from each other in more ways than they are different from non-alcoholics".

A recent study (Pattison, Coe and Doerr, 1977) shows that it is useful to think of alcohol dependent individuals in several distinct subgroupings. Clients at four different alcohol treatment facilities were compared: an aversion conditioning hospital (ACH), an outpatient clinic (OPC), a halfway house (HWH), and a police work rehabilitation centre (PWC). Measures taken were: personality profiles (MMPI), demographic characteristics, general functioning (health, vocational, interpersonal), and orientation to treatment. Data analysis yielded statistically significant differences between groups on several measures.

Pattison et al suggest that there is enough variation to suggest that four distinct populations were surveyed, and that the main basis for discrimination can be thought of as a "social competence" factor. For example, the ACH population had the highest educational level and socioeconomic status, the best vocational and interpersonal adjustment and no personality conflict. This high social competence score allowed this group to "externalize"

their alcohol dependency, and to think of it as a medical problem such as heart trouble, or a broken leg - something the doctor will "fix". The facility supports this interpretation by treating only the drinking behavior.

The other populations experienced more personal conflict and social disruption, with the OPC, HWH, and the PWC groups ranking second, third and fourth respectively. The OPC group experienced problems of personal adjustment rather than social disintegration, and thus the clients viewed their alcohol dependency as an expression of their internal conflicts. Again, this view is supported by the OPC treatment approach, which emphasized psychotherapy. For the remaining two groups, HWH and PWC, alcohol problems were associated with significant social deterioration and alienation. The key step to rehabilitation seemed to be adherence to the AA model, and a total lifestyle change.

For purposes of the present review, the following interpretations of Pattison et al should be emphasized: alcohol dependent individuals represent a widely divergent population, individuals differ with respect to how they define their alcohol dependency, and these perceptions determine, to some extent, the type of treatment facility to which they will be attracted. One could point out that the interaction between individual and type of treatment is determined more by socioeconomic factors than cognitive ones. A more definite test would relate client perceptions, treatment facility and successful outcomes.

Belief Systems of Alcoholics/Problem Drinkers

Recent years have seen an increased interest in investigating the

relationship between cognitive variables and alcohol dependency. Part of this interest results from the controlled drinking controversy (e.g., Ewing and Rouse, 1975; Miller and Caddy, 1977). More important, however, is the evidence that cognitive factors affect alcohol consumption as well as related behaviors (Marlatt and Rohsenov, 1980); predict treatment choice (Dillavou, Vannicelli and Ryback, 1977); and are associated with relapse (Heather, Edwards and Hore, 1975).

A study by Richard and Burley (1978) showed that a groups of 20 alcoholic inpatients at a hospital identified more closely with the role of "controlled drinker" than that of "total abstainer". The subjects were asked to rate the concepts, "myself" and the two drinking ones on a series of 13 bipolar personality descriptions. (Examples, "escapist-realist"). Each bipolar item was rated on a seven point scale, and separately for the three concepts.

The implication of the above study is that it is easier for a person to adopt a role which has more psychological meaning (Fransella, 1972). Therefore, it would be important at the beginning of therapy to assess the degree of identification with controlled drinking or abstainer role. The therapist then has two choices: conform the therapeutic goal to the client's belief system, or encourage the client to change his/her beliefs to conform to the appropriate goals.

Marlatt and Rohsenov (1980) reviewed several experimental studies using the "balanced placebo" design (Figure 1). This design provides a control condition for cognitive effects as well as for the physiological ones,

Thus, from this type of design, it is possible to assess the importance of four conditions , as illustrated below:

Figure 1

The Balanced Placebo Design: Marlatt and Rohsenov

		Receive Alcohol	
		Yes	No
Expect Alcohol	Yes	both cognitive and physiological effects present	cognitive effect only
	No	physiological effects only	neither effect present

In one study described by Marlatt and Rohsenov a matched group of non-abstinent alcoholics and social drinkers were asked to participate in a "taste test". Subjects in the "expect alcohol" condition were led to believe they were comparing three brands of vodka. Half of this group actually received tonic only. Subjects in the "expect no alcohol" condition were told they would be comparing three brands of tonic water. Half of these got tonic and vodka, the others got tonic only. All subjects were provided with a full decanter of beverage and the amount consumed was measured. For both alcoholics and social drinkers, the expectancy of alcohol determined the amount drunk, the actual presence of alcohol was not a significant factor.

The above design has been used to study the effects of alcohol on experimental analogues of emotional and sexual behaviors, as well as on motor

and cognitive abilities. In one study, aggression was defined as the number of shocks ¹ subjects gave, when provoked, to another subject who was in fact a confederate of the experimenter. Subjects were heavy drinkers, and placed in one of four treatment conditions described in Figure 1. The results were clearcut. Subjects who believed they had received alcohol were significantly more aggressive than those who did not believe they had, regardless of actual alcohol content in their drinks.

Marlatt and Rohsenov suggest the following relationship between drinking and aggression: there is an existing cultural belief that alcohol "produces" aggression and this expectancy will be strongest in heavy drinkers. These individuals would be likely to indulge in aggressive behavior after consuming alcohol, and attribute responsibility for this behavior to the alcohol rather than to themselves. Furthermore, in the face of heavy cultural sanctions against aggression, some individuals, when provoked to anger, may fail to assert themselves and consume alcohol instead. Drinking may then be followed by aggression, which in turn can then be attributed to the alcohol, rather than to the earlier provocation.

The above review gives strong evidence for the importance of cognition in predicting the behavior of deviant drinkers. The crucial effect of cognitive expectancies has been found in alcohol therapy as well. Dillavou et al examined the relationship between scores on the Rotter I-E Scale and acceptance

¹ The confederate subjects were not really shocked, they were hooked up to a machine which made it seem as if they were.

of treatment intervention by 45 alcoholics at an inpatient facility. It was hypothesized that internal alcoholics would be more attracted to insight oriented therapy, as measured by staff ratings of involvement. It was also predicted that external alcoholics would be more accepting of external treatment intervention such as AA, Antabuse¹, and Aftercare. Results were found to be in the expected direction: there was a significant negative² correlation between Rotter I-E scores and insight therapy involvement ($r = -.25$ $p < .06$). There was a significant positive correlation between Rotter score and AA acceptance ($r = .27$ $p < .05$).³

Although the above correlations are significant, only about seven percent of the variance in treatment preference can be accounted for by I-E scores. Rotter (1975) would argue that this is the degree of predictive power to be expected when a general factor is used to account for behavior in a specific situation. Thus the results of Dillavou et al do indicate that the locus of control dimension is one of the factors that is associated with differential response to treatment.

It is well established that cognitions are important determinants of alcoholics' behavior. These cognitions are involved either through general

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- ¹ A drug which, when taken in conjunction with alcohol, produces severe and uncomfortable symptoms, such as nausea, heart palpitations, and sweating. It is prescribed to encourage abstinence.
 - ² High scores on the Rotter Scale indicate externality; low scores, internality.
 - ³ Other correlations between I-E scores and external treatment approached significance.

factors such as perception of control, or through specific expectancies with respect to alcohol. It follows that the state, or condition, of alcohol dependence could also be studied as a cognitive process rather than a physiological one.

Alcohol Dependence as a Cognitive Process

One of the central hypotheses under investigation is that two objective theories of alcohol dependence can become the basis for the subjective theories of deviant drinkers. A theoretical basis for this position comes from personal construct theory (e.g., Kelly, 1955; Bannister and Fransella, 1971; Fransella, 1972). According to this model, the crucial determinant of behavior is a system of cognitive structures called "personal constructs". A construct is a subjective representation of a generalized discrimination between two events. Constructs are thus bipolar. "Warm, giving/selfish" would be an example of a personal construct, but it is important to remember that this is just a verbal label given to a conceptual process, and the process includes more than just a verbal discrimination.

Several other characteristics of constructs are important; an individual's personal constructs are interrelated, and some are subordinate to others. The construct system has functional value in that it allows the individual to derive meaning and make predictions. For example, a 14 year old at his first co-ed dance has been told that if a girl smiles and nods at him, she will agree to dance, but if she frowns and looks away, she will refuse. The nervous 14 year old spends the first hour discriminating the smiling,

nodding girls from the frowning, looking-away ones. He is trying to assimilate this new construct, make it meaningful by relating it to the way in which he already construes. So, he judges that the girl who smiled and nodded at him is the one he's noticed in class as being outgoing and friendly, and he predicts that she will probably dance with him. He feels excited, warm and pleasant. He looks at the girl who frowns and looks away, remembers her as the shy one who lives next door, and predicts she will refuse. He feels cold, afraid and nervous. If his predictions are correct, the construct, "smiles, nods/frowns, looks away" may become an important way of construing events concerning girls.

An approach resulting from personal construct theory has been used to show that people have an elaborate construct system associated with a deviant role. Fransella (1972) used the "Imp-Grid" method to show that a group of 20 stutterers had significantly more psychological meaning attached to being a "stutterer" than to being a "fluent speaker". This relationship was changed through therapy, so that being a "fluent speaker" carried a more elaborate construct system, and the rate of fluent speech improved dramatically.

The theory states that a person stutters because it is from that stance that the world is more meaningful. Thus, the teenager at the dance, had he been a stutterer, would have construed the situation in this way: "That girl is smiling and nodding at me; even though she knows I stutter, she'll probably dance with me." In the Fransella study, it was predicted that the rate of fluency would improve only if "being a fluent speaker" became

more meaningful than "being a stutterer". Thus, during therapy, the clients were required to construe every episode of fluent speech they experienced, and in great detail. Results show that the average rate of disfluent words, for a group of 20 stutterers, decreased from 85 per test occasion to eight.

To show that the underlying construct system had also changed, Fransella tested each client several times during the course of therapy, using the "Imp-Grid" method. The client was shown two photographs of people, and a card on which was written, "The sort of person people see me as being when I'm stuttering". One photograph would elicit one pole of construct, the other picture would prompt the opposite pole. Thus, person "A" might see me as "warm, giving" while "B" might see me as "resentful of others' demands". This process was then repeated, this time using the two photographs with the stimulus card reading, "The sort of person people see me as being when I'm not stuttering". Thus two grids were constructed at each session. At the beginning, the "stutterer" construct system was much "richer", in terms of the number of, and interrelationships among, constructs than the "fluent speaker" one. At the end of therapy, the construct system associated with self as fluent speaker was the psychologically richer one.

A study by Christiansen, Reich, Obitz and Bauman (1980) shows that alcoholics do construe others differently when the other is alcoholic than when he isn't. After watching a videotaped role-play, male alcoholics were told either that a job candidate was an alcoholic or that he was a student. The alcoholic subjects judged that the "alcoholic's" behavior in the job interview was influenced by situational, or external, factors, while the

"non-alcoholic's" behavior was more influenced by dispositional, or internal, factors. Thus one of the expectations that alcoholics seem to have for the "alcoholic" role is an external locus of control. If an alcoholic sees another alcoholic as being controlled by external factors, wouldn't he have the same "attribution theory" about his own behavior?

Personal construct theory would state that a deviant drinker develops a construct system about alcohol dependency, and that this internal psychological process is more important to investigate than the process of physiological addiction. Furthermore, if the "objective" or external models of alcohol dependency represent a psychological difference, then the individual will choose those that have the most psychological meaning. It is a premise of this study that the "disease theory of alcoholism" is so popularly known that the "alcoholic or problem drinker" distinction does represent a real choice. Persons choosing to construe themselves as "alcoholics" know what they are buying into. Persons choosing to construe themselves as "problem drinkers" may not as much know what is being chosen as what is being rejected.

One could now ask the question, "What are the differing implications of the disease theory and the problem drinking one, and how might these be translated into what the alcoholic/problem drinker believes?"

Pattison, Sobell and Sobell (1977) identify six premises inherent in the disease theory:

- 1) Alcoholism is thought of as a distinct entity, a dichotomous choice, i.e., one has it or one doesn't.

- 2) The condition progresses through a series of distinct phases, and is fatal if not arrested. During each phase, the alcoholic suffers from characteristic "symptoms", which are decrements in physical and psychosocial functioning.
- 3) Alcoholics are qualitatively different from non-alcoholics. This difference is often thought of as biological or metabolic, but many believe there is a distinct "alcoholic personality".
- 4) Alcoholics suffer from irresistible cravings, or compulsions, to drink alcohol.
- 5) Alcoholics suffer from a phenomenon called "loss of control"
This means that, having taken the first alcoholic drink, they are powerless to resist the rest.
- 6) Alcoholism is a permanent and irreversible condition. An alcoholic is spoken of as "arrested" or "recovering", never as "cured".
This "remission" requires total and permanent abstinence from alcohol.

Sobell and Sobell (1978) and Pattison et al propose the following premises to be consistent with a learned behavior, or environmental model of problem drinking:

- 1) "Alcohol dependence" is a term applied to a variety of behavior patterns associated with problematic use of alcohol.
- 2) There is no dichotomy between problem drinkers and others, it is more useful to think of a continuum of alcohol use, ranging from non-problem to problematic.

- 3) The development of problematic drinking is so variable as to disallow the concept of "progression".
- 4) Abstinence bears no necessary relation to rehabilitation.
- 5) Psychological and physical dependence are established, but not related, phenomena. An individual may experience a strong need to drink in some situations, but there is no evidence for "loss of control", "compulsions", or "physical cravings".
- 6) The problem drinking population is multivariant, with more differences than similarities.
- 7) Alcohol problems are more strongly related to environmental influences than to biological predispositions.
- 8) Alcohol problems are usually associated with other life problems.

For Cahalan (1976) a problem drinking model also implies description on an environmental level, not a medical one. Rather than a drug affecting a biologically predisposed individual, problem drinking is conceptualized as the result of a complex interaction between an individual and his/her culture.

It follows that the deviant drinkers can also construe their alcohol dependency in one of two ways. Those who perceive themselves as alcoholics may believe they are the helpless victims of a disease process. They may expect to be treated as patients, and by doctors or members of the medical profession. They would believe they could never learn to control their use of alcohol, and would expect to fail if they tried. They might characterize themselves as being "different" from other people, but identify strongly with other alcoholics. They might make statements such as, "All of us alcoholics

are good manipulators". They might not experience guilt over antisocial behavior associated with alcohol impairment. They would expect to be "alcoholics" for the rest of their lives.

Problem drinkers might also choose that label because the characteristics of that model hold more appeal for them than do those of the disease model. They would then see their drinking as an excessive, or harmful behavior which produces distressing consequences, and over which they seem to have lost control. They probably see their drinking problem as due to personal problems, and would want therapy to address those issues as well as the drinking per se. They may experience distress and guilt over drinking related antisocial behavior, since our culture deems an individual to be blameworthy if knowledge and volition are present.

Control Orientation in Alcohol Dependence

If a person perceives a difference between the two models of alcohol dependence, and finds one more meaningful than the other, she/he must do so because one is more compatible with her/his existing beliefs. Perhaps the compatibility lies in the relationship between specific beliefs about control over one's dependency and generalized expectation of control over the environment.

A central difference between the disease model and the problem drinking model is the concept of "control". According to the former model, an alcoholic has no control over his/her condition. It is caused by an external agent, the alcoholic is said to suffer from a "compulsion" to drink,

and "loss of control" in stopping. Rehabilitation is not under self control, either; rather one must rely on "powerful others". The problem drinking model does imply that the drinker has voluntary control (at least potentially so) over initiation and moderation of drinking. Rehabilitation is a process of learning and reinforcing this control.

Although traditionally "loss of control" over alcohol was thought to be mediated by physiological variables, the work of Marlatt and others has shown that cognitive factors are more important. That is, it is the deviant drinker's belief that he/she has consumed alcohol which initiates excessive drinking, cravings, aggressive behavior, anxiety reduction and, even at low doses, decrements in motor and cognitive behaviors.

Therefore, it may be that a person is attracted to the notion that alcohol produces "loss of control" because of a general perception of not being in control of the environment. The concept of "control orientation" as being an important personality trait comes from social learning theory, as described by Rotter, Chance, and Phares (1972), and by Phares (1975). In predicting behavior in a given situation, a significant variable is the person's expectation that the behavior will be successful, i.e., will produce the desired outcome. "Control orientation" is one of the factors that mediate this expectation. An individual's control orientation, or "locus of control", is somewhere on a continuum from "internal" to "external". Someone with an "internal locus of control" has a high expectancy of control over the environment, i.e., they believe in response-outcome dependence. An internal person will attribute success to his/her own efforts or enduring personality

characteristics. This individual would agree with statements such as, "Life is pretty much what you make of it." In contrast, the person with an "external locus of control" has a generalized belief that outcomes are independent of behavior and mainly the result of luck, chance, or the intervention of powerful others. This person would agree with statements such as, "The little guy can have no say in politics these days."

Because of the obvious similarity between Rotter's "locus of control" concept and the notion of "loss of control" in alcohol dependence, the dimension of Internality-Externality has been investigated extensively in this population. The main instrument used has been the Rotter Internal-External Locus of Control Scale (I-E Scale) as described by Rotter et al (1972, Chap. 4 - 6) and Phares (1975, Chap. 4). The scale consists of 29 forced choice items; scoring is in the external direction (see Appendix B).

Studies comparing locus of control of various groups of deviant drinkers with that of comparison groups have yielded equivocal results. Two reviewers (Rohsenov and O'Leary, 1978; Cox, 1979) agree that the problem with earlier studies lay in the inadequacy of the comparison groups. Alcoholic groups have been compared for externality to college students, church members, and ex-alcoholic counsellors, and have been found to be more internal in all cases. However, factors other than alcohol can account for the unexpected direction of the I-E differences, since all of these comparison groups have characteristics which could be associated with an external locus of control.

Butts and Chotlos (1973) compared a group of 74 alcoholics in treatment with a group of 68 men of comparable age, education, and socioeconomic class.

The alcoholic group was found to be significantly more external on the Rotter I-E Scale. This is at variance with results reported by Donovan and O'Leary (1975). They matched a group of 23 alcoholic patients with other (medical) patients and staff. No significant difference on the I-E Scale was found. Still, the two review articles (Rohsenov et al; Cox) conclude that, in cases of matched comparison groups, alcoholics do tend to be more externally focused than non-alcoholics.

Another explanation for the inconsistent results described above could lie in the characteristics of the alcohol dependent population itself. Perhaps the within group variability on control orientation is so large as to obscure differences from other groups. The review by Rohsenov and O'Leary reported mean I-E scores for 12 studies comparing alcoholics with various control groups. The means range from 4.7 to 8.28 for the alcoholic groups, and from 2.3 to 9.5 for the comparison groups. Thus there is considerable range and overlap, supporting the interpretation of intragroup variance. Therefore, it might be a more useful task to investigate the nature of locus of control within the alcohol dependent population and to ask, "What are the differences between internal and external alcoholics/problem drinkers?"

In this vein, the study by Dillavou et al described earlier illustrates that it is useful to divide deviant drinkers into "internals" and "externals" at least on the basis of differential response to treatment. The implication here is that pretreatment assessment of locus of control should be one of the determinants of type of treatment. Further investigation is needed of the interaction between degree of internality type and success of therapy.

A study by Bowen and Twenlow (1978) found that I-E scores were not related to dropout from treatment. Ninety alcoholic patients at a residential facility offering biofeedback training completed the Rotter I-E Scale, but it was not possible to predict those who left treatment before the end of the six-week period from their scores. This is not particularly surprising. As the authors admit, internally oriented individuals and externally oriented ones may both leave treatment, but for different reasons. The former may leave because they believe they can control drinking without therapeutic intervention. The latter may leave because they feel compelled by some pressure.

The above study, as well as several others, found that degree of internality increased during treatment. However, O'Leary, Rohsenov, and Donovan (1976) found that increased internality during treatment was associated with greater dropout from the aftercare program. Still, the use of the I-E dimension to predict treatment dropout represents misuse of the construct. The question to be asked is, "What led to the greater dropout rate from aftercare for those who showed the greatest decrease in I-E scores during treatment?" It may be that the aftercare program had features inconsistent with a perception of internal control, and the internal clients found these features unacceptable and perhaps threatening. Phares (1975) reviews evidence to show that internal individuals often reject information they consider to be "propaganda". Aftercare programs are often heavily AA oriented, and clients are inundated with information about

the disease model, which they are told to accept and not question. It seems consistent with Phares' findings to predict that internal clients would find this type of program untenable.

Rotter (1975) cautions against the use of a general construct, such as control orientation, to predict behavior in specific, highly familiar situations. In these cases, behavior is more predictable from situational variables, such as reinforcement history for that specific behavior, and from motivation. This line of reasoning has prompted the development of a locus of control scale specifically for drinking. The "Drinking Related Locus of Control Scale" (DRIE) measures an individual's perception of control over alcohol. The test format is the same as that of the Rotter I-E Scale, with 25 forced choice items. One choice reflects a belief that it is possible to have self control over drinking, while the other choice reflects a belief that drinking is under the control of external factors (Donovan and O'Leary, 1978; Oziel, Obitz and Keyson, 1972).

A detailed investigation by Donovan and O'Leary does indicate that the DRIE has validity for use with alcohol dependent populations. Alcoholics tested on the DRIE obtained significantly higher, i.e., more external scores than a matched comparison group. Factor analysis of the scores indicated that the variance was the result of three factors. These were labelled intra-personal control, e.g., control over adverse emotional states; interpersonal control, e.g., control over peer pressure to drink; general control. The first two factors were found to be the most powerful.

Changes in Cognitions During Alcohol Therapy

It has been shown that therapy for alcohol dependence was associated with changes in the underlying cognitive structures, although the relationship to outcome was unclear. Heather, Edwards, and Hore (1975) showed that alcoholics changed their construct system related to alcohol dependency during a 10 to 12 week inpatient treatment program. The measuring instrument used was a form of the repertory grid described by Bannister and Fransella (1971). The elements presented to the subjects consisted of 10 roles relating to self perception and drinking. Ten bipolar constructs were elicited by asking subjects to describe how two roles were similar and also different from a third. Subjects were then asked to rate each role on each construct, according to a seven point scale. A 10 x 10 grid was thus generated, a portion of which is illustrated in Figure 2. Two grids were completed with each of the 40 subjects in the study; one at admission, the other at discharge. Subjects were followed up six months later.

The important measure considered was the "psychological distance" between any two roles, i.e., how similarly they were construed, how this changed during therapy, and whether this change was related to outcome. The most significant changes in construing during therapy occurred in relation to self-perceptions, in that subjects moved to closer identification with socially approved drinking roles and further away from socially disapproved roles. An overall change factor, which was interpreted as concern with "deviance over respectability" was related to relapse. Both maximal and minimal change (toward respectability) were predictive of relapse.

Figure 2 - Portion of Repertory Grid

Constructs	Roles (elements)				
	My ideal self	Typical alcoholic	Social drinker	Self as others see me	
Gay/pompous					
Lives life/misses out					
Relaxed/anxious					

The relapse rate of the "minimal" change group was not surprising, since it was related to their perceived social deviancy. That the group which experienced the greatest change in self construction also had a poor prognosis was explained by their "over identification" with normalcy, and hence a desire to be social drinkers.

Two points about the above study are worth emphasizing: 1) the change in self construction observed to occur during therapy cannot be said to be the result of therapy, since there was no control group; 2) the changes in construction of drinking related roles were minimal, i.e., subjects apparently did not elaborate their discriminations among constructs related to drinking. They appear to have moved from aligning themselves with deviant roles to identifying with socially approved roles. This adaptation could be the result of the particular therapy program, which appears to have been quite traditional and AA oriented.

Summary

It seems worthwhile and justified, on the basis of previous research, to investigate alcohol dependence as a cognitive as well as a physiological process. Alcoholics and problem drinkers are influenced by their expectations about alcohol as well as by their self perceptions. There is a large amount of evidence to indicate that deviant drinkers do not constitute an homogeneous population. One interesting speculation is that a subgrouping could be made on the basis of the nature of their implicit theory about their alcohol dependency. It has been shown that cognitive factors are associated with differential response to therapy, and this could also be the case for alcohol dependency beliefs.

- b) eliminate females from the analysis
- c) provide basic demographic data for comparison purposes
- d) establish drinking role preference

Two versions of this questionnaire were used; a 10 item one on the pretest and a six item one on the post test.

Procedure

All subjects were tested in groups of varying sizes, ranging from about 12 to 30. At facility B, the investigator collected all of the data. At facility A the investigator collected data from one group, and the staff of the facility completed data collection on two other groups. The nature of the study was explained in general terms, and it was stressed that participation was voluntary and confidential. The instructions as described in Appendix B were then given. Subjects generally completed the questionnaires in 15 minutes; no one took longer than half an hour.

The questionnaires were presented, stapled together, in one of two orders: 1) Alcohol Beliefs, Locus of Control Scale, MAST, demographic questions. 2) Locus of Control Scale, Alcohol Beliefs, MAST, demographic questions. These orders were given out randomly, so that about half the subjects completed the Alcohol Beliefs questionnaire and about half did the Locus of Control scale first.

A pilot study was conducted to assess the psychometric soundness of the Alcohol Beliefs questionnaire, while the main study was performed to test the four hypotheses. Data were collected for these two studies in the following way:

1. Pilot Group: There was a total of 104 men and women in this group.

Thirty-five of them were tested during the last week of their program. Eleven

were tested in the middle. These 46 subjects received only one test. Fifty-nine male subjects were tested twice, once at the beginning, and once at the end of their program. Only the scores from the first session were used in the analyses for the pilot study.

2. Main study: This study was done using the pre and posttest data from the subjects described above.

CHAPTER IV

RESULTS

The results are presented in two sections: 1) The results of the psychometric operations performed on the "Beliefs About Alcohol Dependence" questionnaire, and the resulting decisions made. 2) The results of the study pertaining to the four hypotheses under investigation. All statistical analyses were done by computer, using the "Statistical Programs for the Social Sciences" package (SPSS). All calculations were rounded off to two decimal points; percentage figures were rounded off to the nearest whole number.

1. Beliefs About Alcohol Dependence Questionnaire

These results were based on a sample of 104 people, six women and 98 men, from the two treatment facilities. These subjects were tested at various points in their treatment program; 59 completed at the beginning, 11 in the middle, and 34 in the final week. Appendix C (1) contains a description of how the sample answered the MAST and the demographic questions. The average client can be described as male, 37 years old, with an income of about \$25,000 a year. He considers his drinking to have been a problem for about 11 years, and scores in the expected range for alcoholics in the MAST. He is not a regular AA attender and prefers the label "alcoholic" rather than "problem drinker" to describe his drinking role.

The "Beliefs" questionnaire was assessed on reliability and validity criteria.

Nunnally (1978) writes that the most critical measure of reliability for a new test is its internal consistency, which can be represented by measuring how well the items correlate with each other. A high level of internal consistency indicates that the test items come from the same population and that respondents are answering on a similar basis, i.e., a high level internal consistency thus means low levels of internal and external sources of measurement error. The measure of internal consistency used in this study was the K-R 20 version of coefficient alpha, as computed by the SPSS version 8 program, "Reliability" (K-R is the model for point-biserial data).

The 40 item Belief About Alcohol Dependence questionnaire was scored as two separate subscales, a 20 item "Disease" scale and a 20 item "Behavior" scale. The initial run on the computer program produced alphas of $\alpha=.58$ for the Disease, and $\alpha=.47$ for the Behavior scales, respectively. These scores are below acceptable levels, according to Nunnally, since he advises that other reliability coefficients are usually lower.

Therefore, a number of measures were considered as criteria for retaining reliable test items. Each individual item was considered in terms of its mean score, standard deviation, distribution, and item-total correlation. These data are presented in Appendix D(1), and are more accurately described below:

Mean Score: "True" responses were encoded "1". "False" responses were encoded "0". The possible range of mean scores is 0 - 1.

Standard Deviations: Range 0 - 1.

Frequency Distribution: The percentage of time an item was responded to as true or false.

Item-total Correlation: Expressed as a point biserial coefficient, the probable level of each coefficient's chance occurrence was also determined (Glass and Stanley, 1970).

The item-total correlation is a measure of consistency between a response on a particular item and the total score. As such, it is an important criterion for item selection. Nunnally states that an item-total correlation which has a 10% or less probability of occurring by chance is acceptable in an exploratory study. For this sample size, according to Glass and Stanley, an item-total correlation of $r = .16$ is significant at $p = .10$. Fifteen disease items and 11 behavior items met this criterion. Of these 26 items, five had less than optimal frequency distributions and standard deviations. These five were answered as either true or false more than 80% of the time, and had Sd's below .40, which would lead to these items having poor discriminating power. All 26 items are contained in Table 1.

Several tests of validity were applied to the Beliefs questionnaire. According to the rationale upon which it was constructed, this scale consists of two different sub tests which should be negatively correlated. That is, people who adhere to disease beliefs should tend to disavow behavior beliefs. Table 3 contains the mean scores and standard deviations obtained by the total sample on each subscale. A "t" test for correlated samples indicated a significant difference between the means ($t=8.20, p<.01$). Behaviorally oriented beliefs were far more popular than disease ones. As predicted, there was a significant negative correlation between the two subscales (Pearson product-moment $r=-.31, p<.01$). Thus, the stronger the expressed adherence to behavioral

TABLE 1

"Alcohol Beliefs" Items which Met Item-total Criterion

Disease Items

- D-1 A person like me can never learn to drink socially.
- D-3 I feel I am different from non-alcoholics.
- D-4 I cannot feel good unless I am drinking.
- D-6 The saying, "One drink, one drunk" applies to me totally.
- D-7 Maintaining sobriety is my chief goal in life.
- D-8 My drinking problem can best be described as a disease.
- D-9 Only another alcoholic can really understand what I am going through.
- D-10 We alcoholics metabolize alcohol differently than others do.
- D-12 Staying sober is largely a matter of luck and getting the right breaks.
- D-13 I feel powerless to control my drinking.
- D-15 I am sometimes forced into drinking by circumstances beyond my control.
- D-16 Alcoholics like me are born, not made.
- D-17 Being an alcoholic is just something I'll have to live with the rest of my life.
- D-18 We alcoholics are sick people and should be treated as such.
- D-19 I believe I was born with an addiction-prone personality.

Behavior items

- B-2 With the proper help, I could learn to drink socially.
- B-3 There are just as many differences between me and the next alcoholic as there are between me and the next non-alcoholic.
- B-4 There is no such thing as an overpowering desire for alcohol, I know I just choose to give in.

- B-6 My alcohol addiction is not the result of a physical difference.
- B-9 I don't think I have to be an alcoholic for the rest of my life.
- B-11 I think a program of learning controlled drinking would be more effective for me than taking antabuse.
- B-12 I often blame myself for not learning better self control when it comes to drinking.
- B-13 Alcoholics like me are made, not born.
- B-14 It's no good saying other people force you to drink, I know only I can decide when and how much to drink.
- B-16 Sometimes I feel very guilty over my lack of self control over alcohol.
- B-18 In this day and age anyone could become an alcoholic like I did.

TABLE 2

"Alcohol Beliefs" Items which Discriminated Between
Alcoholics and Problem Drinkers

Disease Items

- D-1 A person like me can never learn to drink socially.
- D-6 The saying, "One drink, one drunk" applies to me totally.
- D-7 Maintaining sobriety is my chief goal in life.
- D-8 My drinking problem can best be described as a disease.
- D-11 Often, other people drive you to drink.
- D-13 I feel powerless to control my drinking.
- D-17 Being an alcoholic is just something I'll have to live with the rest of my life.

Behavior Items

- B-2 With the proper help, I could learn to drink socially.
- B-5 My drinking problem is due to a social cause, such as family upbringing.
- B-9 I don't think I have to be an alcoholic for the rest of my life.
- B-11 I think a program of learning controlled drinking would be more effective for me than taking Antabuse.
- B-19 Therapy for my other personal problems is probably just as important as learning to control my drinking.

TABLE 3

Mean Score and Standard Deviations Obtained by Total Sample
on Alcohol Beliefs Scale

Disease Items			Behavior Items			
n	\bar{x}	Sd	\bar{x}	Sd	"t" ¹	r
104	9.19	2.88	12.75	2.59	8.20*	-.31*

* $p \leq .01$

¹ All "t" tests were two-tailed

beliefs, the weaker the adherence to disease beliefs. Scores on the behavior items accounted for 9.61% of the variance in disease scores.

The "Alcohol Beliefs" questionnaire should also discriminate between self-defined alcoholics and self-defined problem drinkers. Therefore, the sample of 104 was divided into two groups on the basis of their stated preference in drinking role. This yielded 72 "alcoholics" and 32 "problem drinkers". Table 4 contains the mean sub test scores and standard deviations obtained by these two groups on the "Alcohol Beliefs" test.

"T" tests for independent samples indicated that the alcoholics' mean disease score was significantly higher than that of the problem drinkers ($t = 2.67$; $p < .01$). The "t" test also showed that the problem drinkers scored significantly above the alcoholics on behavioral items ($t = 2.81$; $p < .01$). In terms of total sub scale scores, therefore, the Beliefs About Alcohol Dependence test discriminated between self-defined alcoholics and problem drinkers.

Individual test items should also be valid, i.e., they should discriminate between alcoholics and problem drinkers. Thus, the mean scores for both groups on each individual item were computed. Mean scores and standard deviations for each test item in both the behavioral and the disease sub scales are presented separately for each group in Appendix E. Mean scores for alcoholics and problem drinkers on each test item were compared using a "t" test for independent samples. A criterion level of $p = .10$ was again used in determining which means were significantly different. According to this criterion seven disease items and five behavioral ones discriminated between

TABLE 4

Mean Scores and Standard Deviations Obtained by
Alcoholics and Problem Drinkers on Alcohol Beliefs Scale

Group	Disease			Behavior	
	n	\bar{x}	Sd	\bar{x}	Sd
Alcoholics	72	9.69	2.72	12.26	2.37
Problem Drinkers	32	8.06	2.90	13.84	2.76

¹ $t = 2.67^*$

$t = 2.81^*$

* $p < 0.1$

¹ All "t" tests were two-tailed

alcoholics and problem drinkers. These 12 items are described in Table 4. By chance, one would expect two discriminant items out of 20 at the 10% level. Therefore, obtaining seven out of 20 for the disease scale and five out of 20 for the behavior scale exceeds the chance expectation.

It was decided to use the "item-total correlation" as the single criterion for item selection in the "Alcohol Beliefs" questionnaire. Item-total correlations significant at the 10% level are described by Nunnally as sufficient in an initial, exploratory study for selecting test items. This procedure yielded 26 items for analysis, a 15 item disease scale, and an 11 item behavior scale. Five items of the 26 selected did not have optimum standard deviations and frequency distribution. However, this may have resulted in part from the discrepancy in the size of the two groups, i.e., there were twice as many alcoholics as problem drinkers. If these numbers were equalized, perhaps responses to these items would be more equally distributed.

There are three test items which discriminated between alcoholics and problem drinkers, but did not meet the item-total correlation criterion, and they were thus excluded. Of these, item D-11 in fact could be regarded as a behavioral item, since it was agreed to significantly more often by the problem drinkers than the alcoholics. Item B-5 was excluded because the obtained item-total correlation was negative, although significant ($r = -.18$, $p = .10$). Thus, while problem drinkers agreed with this statement and alcoholics disagreed, they did so according to a different basis from which they answered the rest of the test. The third item, D-19, obtained an item-total correlation which approached significance ($r = .11$; where $r = .16$, $p = .10$).

The SPSS (version 8) program "Reliability" was again used to compute the internal consistency of the 26 item Alcohol Beliefs test. The analysis was done separately for the 15 item disease scale and the 11 item behavior scale. Appendix D (2) presents the item-total correlation of each item, the overall subscale alpha and, for each item, the total subscale alpha if that item were deleted. As can be seen, the overall internal consistency is improved considerably over the 40 item test, particularly for the behavior scale (26 item behavior $\alpha=.62$, disease $\alpha=.60$). Nunnally indicates that, depending on test usage, alphas of .70 or .80 are desirable, but it was felt the obtained scores made the instrument acceptable for use in an exploratory study.

According to the revised "Reliability" program, three of the 26 items did not meet the established item-total criteria, i.e., they were below $r = .16$, $p = .10$. As can be seen from the table in Appendix D (2), the deletion of these items would not result in any discernible improvement in the overall internal consistency of the test. Two items, if deleted, would not affect the alpha at all, while the deletion of the third would improve the internal consistency by $\alpha=.01$. These items were therefore retained.

2. Results of the Main Study

These results were based on a sample of 59 men who completed their four week treatment program and were given a pretest and a posttest. Demographic characteristics of this sample are described in Appendix C (2). The samples for the two treatment centres are described separately. On all

but one of the variables there was no noticeable difference between these two groups. This sample does not appear different from the sample of 104 subjects used in the pilot study, and the description applied to those subjects appears valid for the smaller as well.

There was a difference between facilities A and B in stated drinking role preference. Subjects from the former group by far preferred the "alcoholic" label (69% of the time) to the "problem drinker" label (31%). Subjects from the latter group chose both labels equally often. The reasons for this difference were not investigated, but the discrepancy may have influenced some of the results, as will be discussed later.

The sample was further compared by dividing subjects into self-defined alcoholics and problem drinkers. Appendix C(3) compares these two groups on the demographic variables, age, income, problem history, MAST scores, and AA involvement. "T" tests for independent samples were performed to compare the mean scores for the two groups on all of these variables. Two "t" values approached significance, indicating that on two independent variables the two groups may have come from different populations. Problem drinkers tended to be younger ($t = 1.93$; $p = .06$) and reported a shorter problem history ($t = 1.92$; $p = .06$) than the alcoholics. The two variables could be related, since younger people may have been drinking for a shorter period of time. It is interesting to note, however, that the severity of alcohol problems, as measured by the MAST, was not different for the two groups.

TABLE 5

Mean Scores of Alcoholics and Problem Drinkers
on the Behavior Sub Scale

Group	Pretest			Posttest		
	n	\bar{x}	Sd	\bar{x}	Sd	"t"
Alcoholics	37	7.54	1.77	7.14	1.64	1.59
Problem Drinkers	32	8.59	2.11	8.18	1.50	.96

¹ t 1.96*

2.50**

* p < .10

** p < .05

¹ All "t" tests were two-tailed

TABLE 6

Mean Scores of Alcoholics and Problem Drinkers
on the Disease Sub Scale

Group	Pretest			Posttest		
	n	\bar{x}	Sd	\bar{x}	Sd	"t"
Alcoholics	37	9.05	2.54	7.43	1.97	1.87*
Problem Drinkers	22	5.96	2.65	5.77	2.72	.34
<hr/>						
	¹ t	2.99***		2.50**		

* p < .10

** p < .05

*** p < .01

¹ All "t" tests were two-tailed

Hypothesis I: Self-defined problem drinkers will score higher than self-defined alcoholics on the behavioral items of the Beliefs About Alcohol Dependence questionnaire. Alcoholics will score higher on the disease items of this questionnaire.

The mean scores and standard deviations obtained by both alcoholics and problem drinkers on the behavioral items of the "Alcohol Beliefs" test are described in Table 5. Both pretest and posttest scores are given. "T" tests for independent sample were done to compare mean scores, pre and post for both groups. On the pretest, the difference between the alcoholics' mean score and that of the problem drinkers approached significance ($t = 1.96$; $p = .06$). On the posttest the difference between the two groups was significant ($t = -2.50$; $p = .02$). In terms of absolute differences, the alcoholics scored an average of one test item below the problem drinkers on both pretest and posttest. However, the behavior sub scale contained only 11 items, and the mean difference between the two groups was consistent enough to reach statistical significance.

Scores obtained by alcoholics and problem drinkers on the pretest and posttest of the disease items are reported in Table 6. The disease sub scale contained 15 items, and the differences between groups are larger than those obtained on the behavior sub scale. On the pretest, the mean difference between the two groups would have occurred by chance less than one in 100 times ($t = 2.99$; $p = .005$). Alcoholics scored, on the average, about three items above the problem drinkers on the pretest, and almost two items higher on the posttest ($t = 2.50$; $p = .02$).

There would appear to be a clearer distinction between alcoholics and

problem drinkers on the disease items than there is on the behavior items.

Hypothesis II: Self-defined problem drinkers will score significantly below self-defined alcoholics on the Rotter Locus of Control Scale, indicating a greater degree of internality for problem drinkers.

Mean scores on pretest and posttest of the Rotter Scale for alcoholics and problem drinkers are reported in Table 7. "T" tests for independent samples were performed to compare the two groups on both the pretest and the posttest. On the pretest, alcoholics scored significantly below the problem drinkers ($t = 2.23$; $p = .03$). On the posttest the difference between the means was also significant ($t = 2.80$; $p = .01$). Thus, in fact, the results were opposite to those predicted, i.e., alcoholics showed a much greater degree of internality than did problem drinkers.

Part of the rationale for investigating locus of control scores for deviant drinkers was that it was assumed that there was a relationship between specific beliefs about alcohol dependence and general beliefs about control over response-outcome contingencies. Thus, there should be correlations among the three independent variables, drinking role preference, alcohol beliefs, and locus of control. This proved not to be the case, as is illustrated by Table 8. Locus of control scores did not correlate significantly with either disease belief items or behavior belief items on the Beliefs About Alcohol Dependence questionnaire. Tests of correlation were performed between total locus of control scores and total belief scores, for pretest and posttest data, and separately for each facility. The same operations were performed to correlate locus of control scores and behavioral scores. The

Pearson product-moment correlation test for continuous data was used in all instances. None of the chance probabilities associated with any of the correlations in Table 8 reached significance at the 10% level. Thus the relationship diagrammed in Figure 1, Chapter III, is more correctly represented by Figure 1 in this chapter. While drinking role preference was related to alcohol beliefs and locus of control, the latter two variables were not related to each other.

Hypothesis III. Both alcoholics and problem drinkers will show significant increases in behavior beliefs during the treatment program, as measured by the Beliefs About Alcohol Dependence questionnaire. There will be minimal or negative change in the disease beliefs as measured by the same questionnaire.

Pretest and posttest scores for both groups were compared using a "t" test for correlated samples. Table 5 describes the results for the behavior belief items. Neither alcoholics nor problem drinkers showed any significant change from pre to posttesting (alcoholics, $t = 1.59$; problem drinkers, $t = .96$). Table 6 describes the results of "t" tests performed on pretest and posttest means for the disease belief items. The problem drinkers showed no significant change ($t = .34$). The difference in mean scores for the alcoholics' group approached significance ($t = 1.87$; $p = .07$). Thus, the alcoholics tended to decrease their preference for disease oriented beliefs about alcohol dependence during treatment. The changes in behavior beliefs during treatment are illustrated graphically in Figure 2, while Figure 3 illustrates changes in disease beliefs.

In summary, very little support was found for the third hypothesis.

TABLE 7

Means and Standard Deviations of Locus of Control Scores
for Alcoholics and Problem Drinkers

Group	n	Pretest		Posttest		
		\bar{x}	Sd	\bar{x}	Sd	t
Alcoholics	36 ¹	5.89	3.77	3.25	3.03	4.89**
Problem Drinkers	22	8.41	4.39	6.09	4.11	4.46**
		t = 2.23*		t = 2.80**		

* $p \geq .05$

** $p \geq .01$

Note: All "t" tests were two-tailed

¹ Scores for one subject were not usable.

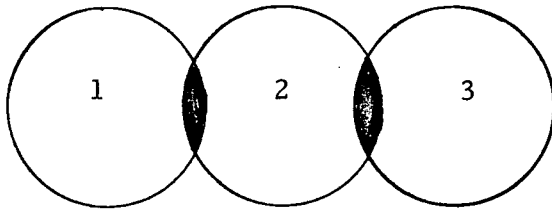
TABLE 8

Correlations Between Locus of Control Scores \
and Disease Belief Scores, and Between
Locus of Control Scores and Behavior Beliefs Scores

Facility	Disease Beliefs		Behavior Beliefs	
	Pretest	Posttest	Pretest	Posttest
A	$r = .05$	$r = .03$	$r = .20$	$r = .12$
B	$r = .11$	$r = .08$	$r = .21$	$r = .02$

FIGURE 1

Schematic Representation of Relationship Among
Drinking Role, Beliefs About Alcohol,
and Locus of Control



1. Drinking Role Preference
 2. Beliefs About Alcohol Dependence
 3. Locus of Control
- Commonality

FIGURE 2

Changes in Behavior Belief During Treatment

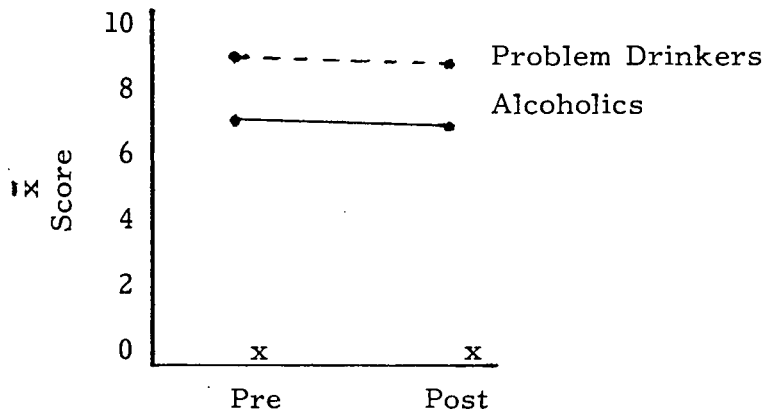
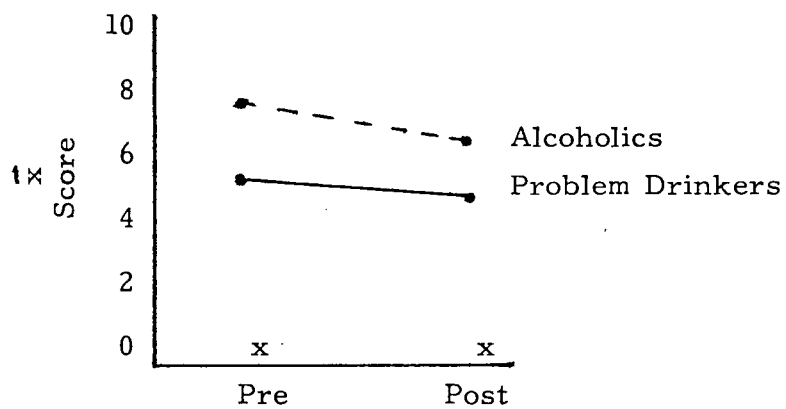


FIGURE 3

Changes in Disease Beliefs During Treatment



Behavioral beliefs did not change for either group. There was a minimally significant decrease in disease beliefs for the self-defined alcoholics, but this was not the case for the problem drinkers. Reasons for these results will be discussed in Chapter V.

Hypothesis IV. Both alcoholics and problem drinkers will show significant increases in internality during treatment, as measured by the Rotter Locus of Control Scale.

The fourth hypothesis was supported: both groups became significantly more internally oriented during treatment. Table 7 describes the mean scores and standard deviations on pretest and posttest locus of control scores, for both alcoholics and problem drinkers. The changes in mean scores on pretests and posttests are illustrated graphically in Figure 4. (Note that on the Rotter test, lower scores indicate an internal locus of control, higher scores are indicative of an external locus.) "T" tests for correlated samples were performed to compare pretest and posttest means for both groups. The differences in pretest and posttest scores were highly significant for both alcoholics ($t = 4.89$, $p < .001$) and problem drinkers ($t = 4.46$, $p < .001$).

The mean locus of control scores obtained by both groups on the pretest are similar to scores reported for deviant drinkers elsewhere (Rohsenov and O'Leary, 1978). The mean score of the problem drinkers on the posttest is also within that range (8.28 - 4.70). However, the alcoholics' mean posttest score ($\bar{x} = 3.25$) seems unusually low.

To investigate further the relative effects of drinking role preference and treatment location on locus of control scores, two analyses of variance were performed, one on the pretest data, and one on the posttest. Tables

9 and 10 present the results of these analyses.

The ANOVA on the pretest scores indicated a significant main effect for drinking role preference. Alcoholics as a group were significantly more internal than problem drinkers, regardless of which treatment centre they came from. The differences between the two drinker groups was significant at the 4% level, which was consistent with the "t" test results described in Table 7. There was no effect for treatment centre, and no interactive effect. Thus, on day one alcoholics at facilities A and B had significantly lower scores ($n = 26$, $\bar{x} = 5.73$, and $n = 10$, $\bar{x} = 6.0$) than problem drinkers at facilities A and B ($n = 12$, $\bar{x} = 7.75$, and $n = 12$, $\bar{x} = 9.2$ respectively).

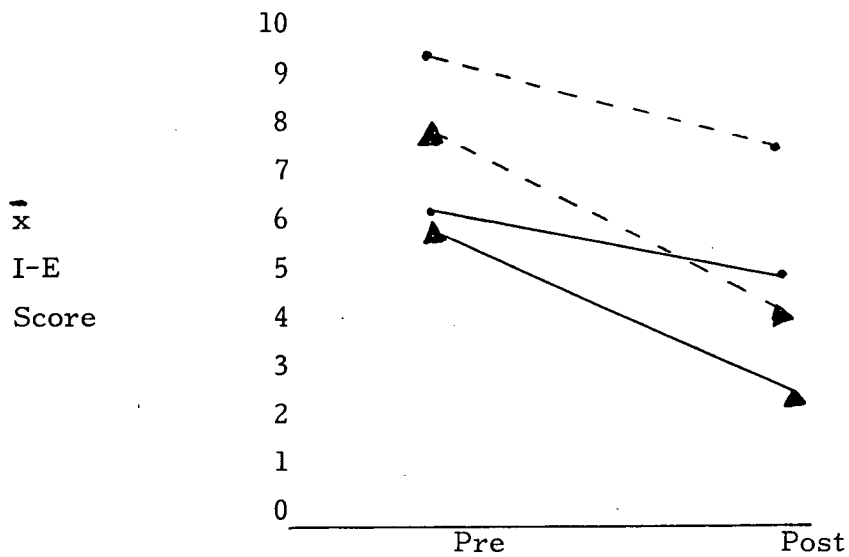
On the posttest ANOVA, both main effects were significant at the 1% level. Clients from facility A scored significantly below clients from facility B, indicating the former groups were more internal. Alcoholics were significantly more internal than problem drinkers, as had been the case on the pretest. There was no interactive effect between the two variables. Thus, the most internal group were the alcoholics at facility A ($n = 26$, $\bar{x} = 2.58$). The most external group were the problem drinkers at facility B ($n = 10$, $\bar{x} = 7.9$). The mean score of the problem drinkers at facility A was almost the same as that of the alcoholics at facility B ($n = 12$, $\bar{x} = 4.58$, and $n = 10$, $\bar{x} = 5.00$ respectively).

It is of interest to note the differences between the explained amounts of variance on the two ANOVAs. On the pretest ANOVA, the amount of variance explained by the two independent variables was not significant when compared to the amount of error variance. However, on the posttest scores the two independent variables do account for a significant amount of the variance in scores. It could be concluded that, after treatment, clients become a more

homogeneous group with respect to how they scored on the locus of control test.

The change in I-E scores during treatment does in part seem to be a specific treatment effect rather than due to nonspecific factors, such as general health. This conclusion was reached by examining the differences between treatment centres. While there was no difference in I-E scores between facility A and facility B on the pretest, there was such a difference on the posttest. Thus, the difference between the two centres, in favour of greater internality for facility A clients on the posttest, can be said to result from a treatment effect.

FIGURE 4
Changes in Locus of Control Score,
By Treatment Location and Drinking Role Preference



Legend:

- | | |
|---------|-----------------------------|
| ● — ● | Facility B alcoholics |
| ● - - ● | Facility B problem drinkers |
| ▲ — ▲ | Facility A alcoholics |
| ▲ - - ▲ | Facility A problem drinkers |

TABLE 9

ANOVA Results for Locus of Control Scores (Pretest)

Source of Variation	Sum of Squares	DF	Mean Square	F
Main effect	98.13	2	49.06	2.98*
Treatment Cen.	11.70	1	11.40	.69
Drinking Role	73.12	1	73.12	4.44**
Interaction				
T-centre x drinker	2.41	1	2.41	.15
Explained	100.54	3	33.51	2.03
Residual	889.059	54	16.46	
Total	989.597	57	17.36	

* p = < .10

** p = < .05

TABLE 10

ANOVA Results for Locus of Control Scores (Posttest)

Source of Variation	Sum of Squares	DF	Mean Square	F
Main effect	210.13	2	105.07	9.85*
Treatment Cen.	99.92	1	99.92	9.37*
Drinking Role	72.62	1	72.62	6.81*
Interaction				
T-centre x drinker	2.48	1	2.48	.23
Explained	212.61	3	70.87	6.64*
Residual	576.16	54	10.67	
Total	788.77	57	13.83	

* $p \leq .01$

CHAPTER V

DISCUSSION

This study was undertaken to investigate whether different beliefs about alcohol dependency exist within an addicted population, and what some of the parameters of those differences may be. While some significant results were found, their interpretation and significance is limited by factors peculiar to this study. In this section, the meaning of the results, as well as their limitations, are discussed.

Differences Between Alcoholics and Problem Drinkers

Twelve items on the Beliefs About Alcohol Dependence questionnaire clearly discriminated self-confessed alcoholics from problem drinkers. Alcoholics indicated that they believed they have an irreversible disease, that they have no control over their drinking, and that their only choice is abstinence. Taken together, these statements seem to fit with the disease theory implications, particularly as regards "loss of control" and a disease process. In comparison, problem drinkers had a less irreversible view of their dependency. They believed their drinking problems were learned behaviors, related to other personal problems, and saw social drinking as an alternative. Perhaps the tendency to "behavioral versus disease oriented" views of their problems is illustrated by the pattern of responding on item D-11. Although constructed as a disease item, problem drinkers more often agreed with the statement, "Often, other people drive you to drink." Since alcoholics believe that it is the disease that "causes" their drinking, they would not blame other people. The higher endorsement of this item by the problem drinkers

is consistent with an environmental view of alcohol dependency.

There were fifteen test items that did not discriminate between the two groups. Alcoholics and problem drinkers agreed that the initiation of drinking is largely a matter of personal choice and responsibility. Both groups indicated that they experience guilt over poor self control, but they also felt alcohol dependency could happen to anyone, and that it is not an inherited condition. On other items, both groups were concerned with perceived differences from non-alcoholics.

Alcoholics achieved higher total disease belief scores than did problem drinkers. The latter obtained higher behavioral scores. These differences, although statistically significant and in the predicted direction, were of small magnitude. It appears that, while there are differences among deviant drinkers, the belief systems involved are complex and multivariant, and perhaps the preferred role label is only one factor in these differences.

The Complexity of Control

The conclusion that the belief systems of alcohol dependent persons are multivariant is perhaps best illustrated by a discussion of the concept of "control". Control, both in the sense of specific beliefs about control over drinking behavior, and in the sense of general beliefs about control over the environment, is a complex issue. Alcoholics, i.e., those who believe they have a disease with associated loss of control over drinking, also perceived themselves to be in control of other spheres of their lives. In comparison with problem drinkers, alcoholics scored significantly more toward the internal extreme of the Rotter Locus of Control test. In fact,

their scores seemed extreme when compared with other reference groups as well. It may be that the alcoholics are overcompensating for their perceived difficulties with alcohol. Construing all the unmanageable parts of their lives as part of a disease process leaves them free to expect that they are in control of everything else. It is as if they say to themselves, "Once this alcoholism is cured, the rest of my life will be under my own control." It seems that this construction of the meaning of control would have functional value to the individual, because it allows the maintenance of self esteem, some reduction in guilt, and the possibility for change to a less troublesome life.

The compensatory explanation could account for the apparent discrepancy between the alcoholics' belief that they control the initiation of drinking, but that they have no control over the amount drunk. Thus, the disease "takes over" after drinking has begun, but the person is still in charge up to that point. This line of reasoning is congruent with the AA folklore, which teaches that the alcoholic chooses the first drink, but suffers from "loss of control" after that. It is also an important rationale for the belief that abstinence is necessary. Thus, this study indicates that some deviant drinkers do indeed have a highly polarized construct with respect to expectations about control over alcohol.

There is still a sizeable group of deviant drinkers for whom the control construct is not as clearly crystallized. In this study they were those clients who preferred the role label "problem drinker" to describe their dependency. They were not as clear about what part of the drinking process was under their control, and their general expectation about their ability to control their

lives ranged from low to average. It is interesting to note that the average age and length of problem history reported by this group was lower than that reported by the alcoholics, although the severity of alcohol involvement was the same. This may lead one to suspect that it is length of exposure to the disease model which produces the adherence to its views.

Changes During Treatment

Specific beliefs about alcohol dependency did not change during the treatment program, while general beliefs about control did. Two factors may have contributed to this finding: the limitations of the "Alcohol Beliefs" test, and the nature of the treatment programs themselves. Based on the investigator's personal experience, as well as on examination of the literature provided, it seems that the programs may offer more education in self control than in models of alcohol dependence. This seems particularly true of the program at Facility A, which also had the highest increase in internality. The program at this treatment centre appears to place a major emphasis on the individual's ability to make choices and to accept responsibility for those choices.

Limitations

Generalizations about the results of this study are limited by the nature of the sample used and by the psychometric soundness of the "Alcohol Beliefs" questionnaire. Alcohol treatment centres tend to vary widely in the nature of the programs they offer, and with respect to the type of clients they admit. Therefore, both the pre and post treatment differences observed may not have occurred with a different sample of treatment centres. The study did not

consider women subjects, or drop outs from treatment, except on the pilot study. Lastly, the majority of clients in the sample were in the moderate to severe range of alcohol dependence, and the results may have been different had a more mildly involved population been tested. For example, it would be interesting to assess the alcohol dependence beliefs of a sample of clients at an outpatient facility offering a controlled drinking program.

Although some attempts were made to establish validity and reliability for the Beliefs About Alcohol Dependence questionnaire, this test can only be considered an exploratory one at this stage. This limitation could have contributed to the small magnitude of the differences found, both between the alcoholics and problem drinkers groups, as well as to the lack of significant pre/post treatment differences. Therefore, although this questionnaire points to the possibility that some interesting differences exist, it needs further development before it would be useful in either research or clinical settings.

Implications for Future Study

The results of the present study add to the empirical knowledge base about the belief systems involved in alcohol dependence, but the clinical implications need to be investigated experimentally. This future research would be a two stage process, consisting of refinement of the measuring instrument, and hypothesis investigation.

To develop a questionnaire that is valid in assessing self perceptions related to alcohol dependence, a rigorous psychometric process needs to be followed. A large pool of test items needs to be developed, and piloted on a large sample of alcohol dependent populations. A wide range of reliability

and validity criteria needs to be applied to the items, and appropriate test items selected for the final scale. This scale would then be further tested on a sample population, to determine normative scoring patterns. The results would also be factor analyzed to determine whether there is a statistical basis for grouping clusters of items. These groups of items and the resulting "factors" would then describe the main constructs of the belief systems that deviant drinkers have about their alcohol dependency.

The second stage would involve experimental manipulation of clinical behaviors. The test would be used to divide an appropriately selected alcohol dependent sample into two groups, those who have a disease oriented view of their dependency and those who have a behaviorally oriented view. Half of each group would be randomly assigned to a therapeutic program congruent with their beliefs, while half would be assigned to an incongruent program. Outcomes for all four groups would be compared to determine whether belief systems are an important determinant of treatment effectiveness. A post treatment measure would also include possible changes in belief systems, and a possible treatment/belief interaction.

Summary

This study suggests that the alcohol dependent population is heterogeneous with respect to what they believe about their addiction. Further research is needed to investigate the clinical usefulness of this finding. Current research in the addictions field seems to be increasingly focussed on the relationship between clients' beliefs and treatment fit (e.g., Gossop, Eiser, and Ward, 1982; Lyons, Welte, Brown, Sokolow, and Hynes, 1982). Hopefully, all

these investigations will contribute to the development of improved assessment techniques for clients with alcohol and drug problems.

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APPENDIX A

Literature provided by the Two Treatment Centres



VICTORIA LIFE ENRICHMENT SOCIETY

211 - 101 Island Highway

Victoria, B.C. V9B 1E8

RESIDENTIAL PROGRAMMES 1982

The Victoria Life Enrichment Society is a non-profit society. The goals of the Society, as stated in its constitution, are as follows:

- (a) To promote programmes for change for people who are dissatisfied and unhappy and/or who become ill because of the way they live.
- (b) To promote programmes for change for people who must modify their life styles due to illness or natural process.
- (c) To train professionals and others in methods of helping people to change.

The programmes presented are designed with emphasis on the relationship between life style and health. We believe that the individual's attitudes and approach to life is as important to health as is the presence or absence of any specific illness. The Society defines health, not in relation to illness or disease, but in relation to personal fulfillment. In the individual, this means that "health" is always something more than the absence of a diagnosable illness and likewise "family health" is always something more than the absence of sickness in one or more of its members. From the V.L.E.S. point of view, people and families could be considered healthy when they are doing "the best they can with what they have got".

The Victoria Life Enrichment Society is currently offering residential programmes to chemically dependent people and to those with marital problems. In addition, the Society conducts workshops on chemical dependence, counselling, stress management and a 10-week course on counselling the chemically dependent.

The following is a detailed description of the four-week residential programme for people who have developed a damaging dependency on alcohol and/or other drugs.

PROGRAMME PHILOSOPHY

A Definitions

1. Chemical dependency - The use of a chemical as a means of altering one's experience of self and the world.
2. Harmful chemical dependency - dependency that interferes with effective functioning and/or causes damage to the user or to those around him.
3. Problem drinking - is any use of alcohol that results in damage to the drinker and/or others and/or interferes with effective functioning.
4. Health or well being - doing the best you can with what you have got.

B Basic Assumptions

i About Human Nature

Our bias about people is that they are at their best when they experience themselves as being in control of their lives. We believe it is good for people to experience themselves as being free or self directing. We take the position that for the most part people choose to do the things they do and that it is reasonable that they should be accountable for the fair and logical consequences of their decisions. At V.L.E.S. we believe that people need to recognize that they are responsible to one another and responsible for themselves. Being responsible to others we call Social Responsibility and being responsible for ourselves we designate Personal Responsibility. The programme

places its greatest emphasis on Personal Responsibility which is - "the awareness that what I am and will become is mostly up to me". [Another assumption about people that is influential in this programme is the belief that when a person is clearly and accurately aware of her/his motives and the available alternatives, she/he will be more inclined to make decisions that are personally constructive and usually acceptable to others.]

ii Nature of the Problem

The programme is based on the belief that the most useful way of conceptualizing chemical dependency is as a life style problem. The abuse of alcohol or other chemicals may be the most dramatic and identifying feature of this way of life but it is only one and not the most important. In our view, the most difficult problem faced by people who pursue a chemically dependent approach to life is their capacity for self deception. The most common problem is denial of their power to choose their behaviour and/or a refusal to be responsible for the choices they make. Viewing chemical abuse as a life style problem implies that stable recovery requires much more than a simple separation from the chemical. In most instances it requires a fundamental change in the person's approach to life. Consistent with the above, we believe that while chemically dependent people do not choose to become chemical abusers or problem drinkers, they do choose to behave in a manner which maintains their problem, and that they have the capacity to make different choices.

Drugs do not maintain dependency - people do.

iii Nature of Treatment

Most, if not all, treatment or change programmes are based on the assumption that change is possible. This means believing that given the right set of circumstances an individual can and

will make different choices. The change programme is in fact a systematic attempt to influence the individual to recognize the need for change and then to start making a different set of choices.

In addition to the above, the V.L.E.S. programme makes the further assumption that accurate awareness of self and the world around self is the key to constructive change. The change programme, therefore, must create opportunities for the development of accurate awareness. The programme does not do the changing - it creates the opportunity for change to occur.

Programme Goals

1. To promote awareness of the fact that how one lives determines one's state of health.
2. To work with those residents who are willing to commit themselves to the discovery and practice of a health promoting way of life. (Health means doing the best you can with what you have got.)

C The V.L.E.S. Approach

i Conduct in the V.L.E.S. Community

The ability of people to relate to one another in an effective manner depends on, among other things, a willingness to adhere to a common set of values. The values or standards which are used as a guide for conduct in the V.L.E.S. community are:

- (a) acceptance of the idea of personal responsibility as defined earlier
- (b) regard for self and others
- (c) honesty with self and others
- (d) a commitment to the programme goals

There is no list of rules and regulations to be found at V.L.E.S. just the governing principles outlined above.

No attempt is made to legislate problems out of existence or to control behaviour through a set of rules. The programme tries to deal with problem behaviour as it occurs using it as an opportunity for learning. Any person whose behaviour persistently violates the basic principles of the community will have the opportunity of explaining her/his conduct to his peers and facing their judgement.

When it becomes apparent that a resident has no intention of living by the values of the community and/or has no intention of trying to change his/her approach to life then he/she will be given the opportunity of explaining to the group why he/she should remain in the community.

ii The Role of Staff and Significant Others

A chemical dependent approach to life does not develop in a vacuum or occur overnight. It evolved through interaction with others over a long period of time. Change, therefore, will also take time and require interaction with others. It is difficult for any individual to bring about a significant change in her/his life without understanding and support from others. The V.L.E.S. programme creates opportunities for the involvement of the parents, spouse, children, (where appropriate) employers and any other significant people in the person's life. We consider it a great value to the process of recovery (change) if all the significant people will respond or relate to the recovering person in a consistent fashion.

iii Relating to the Problem Person

At V.L.E.S. we believe it is helpful to approach the troubled person in such a manner as to constantly frustrate any attempts on his/her part to pursue a dependent and irresponsible approach to life. This can best be accomplished when the staff of the programme and all other significant people in the person's life take the following approach:

- 1) Staff and others should refuse to do anything for the individual that he/she is capable of doing for him/her self. (Small favours reflecting goodwill excepted)
- 2) Staff and others should refuse to relate to the individual in terms of him being sick or helpless.
- 3) Staff and others should refuse to provide or condone mood modifying chemicals. (i.e. stimulants, tranquilizers, sleeping pills, alcohol, etc.)
- 4) Staff and others should refuse to accept or appear to accept any rationalization for something less than a total commitment of the individual to her/his programme of recovery.
- 5) Apart from questions pertaining to the provision of information, staff should refuse to answer all questions, particularly, "should I?" questions.
- 6) Staff should constantly emphasize the individual's power and right to choose.
- 7) Staff and others should ensure that the individual has the opportunity of facing, immediately, the fair and logical consequences of his choice.
- 8) Staff and others should respect the individual's right to choose to reject the values of the programme, namely responsibility, honesty, respect for self and others and his/her right to choose a drunken life style. (The fair and logical consequences of such a decision would be to ask the individual to leave the programme.)
- 9) Staff should consistently frustrate the individual's attempt to pretend he has no choice or to make choices and evade their consequences.

The attitude of the staff will reflect their willingness to be responsible to the client as opposed to being responsible for

him/her. They will assume no responsibility for the client's recovery. They should, however, be willing to share themselves, their knowledge, experience and opinions with him/her.

iv The Staff

The staff is composed of seven individuals who are deeply committed to the principles on which the programme is based and highly experienced in the field of chemical dependency. Professionally, they consist of 3 psychologists, 2 part-time physicians, and two trained lay counsellors and one secretary-receptionist.

v Programme Structure

Every effort is made within the constraints of the facility to create a therapeutic community based on the values previously mentioned. All behaviours are judged and dealt with in relationship to stated programme values. The approach to the individual is holistic so that all his behaviour will be considered legitimate data to be dealt with.

The initial recovery process has a duration of approximately twelve months, consisting of four major phases or emphasis. The in-residency period will be for four weeks and will normally cover the first three phases, which are:

- a) Recognition and acceptance - The emphasis during this phase is to help the individual to recognize and then accept his current style or approach to life. The work during this phase is aimed at increasing awareness of the current situation by identifying damaging defences and destroying the system of rationalization. This is considered a crucial phase as the beginning of change starts with the recognition and acceptance of "what is". In most instances, this phase has started before the individual enters the programme.

- b) Exploration and discovery - The emphasis during this phase is to encourage the individual to explore his potential for being different and to discover the effect of a different approach to people within the safe environment of the programme setting.
- c) Taking charge - During this phase, the emphasis is on encouraging the individual to assess and mobilize his resources, to consolidate what he has discovered, to plan for continued growth, and to experience his power to participate in what he will become.
- d) The reconstruction - This is the post-residential phase, during which time the individual is faced with the real life experience of developing, consolidating, and expanding his new approach to life. It is hoped that he will be supported during this phase through attendance at community based resources and self-help groups such as A. A.

(The phases as outlined are rarely clear and distinct, nor does every client proceed through them in a sequential fashion. They are presented as a convenience in communicating the major emphasis to be covered in the programme.)

vi Follow-up

The V.L.E.S. programme offers continued support beyond the residential phase in the form of a newsletter and by making available "renewal experiences" in the year following discharge. The "renewal experience" takes the form of an intensive one, two or three day in-residence experience aimed at the problems encountered in becoming re-established. All residents are referred back to their original referral source and/or are made aware of the resources available to them for on-going support in their own community.

D Programme Methods

Within the general therapeutic milieu, the following specific methods are employed:

- 1) Thorough physical and psycho-social assessment, followed by specific recommendations regarding diet, exercise programme, etc.
- 2) Group therapy - one three-hour session per day, Monday to Friday, for four weeks. These are intensive small group psycho-therapy sessions conducted by staff members.
- 3) Lecture - discussion. Includes information and interchange of ideas on alcohol and drug dependency, personal and social responsibility, inter-personal communication, sexuality, values and new directions for coping with life.
- 4) Yoga exercise and relaxation training (stress reduction)
- 5) Evening programme (4 nights a week, 7 p.m. to 9 p.m.) includes relevant films, self-awareness exercises, introduction to A. A.
- 6) Personal responsibility - planning use of "free-time", keeping daily journal, developing specific plans for the future, organizing a case conference during the third week of the programme.
- 7) Individual and marital counselling.
- 8) Special one week spouse programme (Week #4 for married clients)
- 9) Sixteen A. A. meetings are made available during the course of the programme.

E Admission

The programme is designed to provide help to individuals who have developed a harmful dependency on what we have called the socially acceptable or legitimate drugs, namely alcohol, tranquilizers and sleeping pills.

Factors favouring suitability:

- 1) A reasonably stable work record
- 2) An intact home, if married, or the possibility of achieving one
- 3) A recognition by the applicant of the need for change.
- 4) Absence of any illness likely to interfere with full participation in the programme
- 5) A willingness to live without mood modifying chemicals, at least for the duration of the programme. Refusal to make or keep this commitment will be sufficient reason to deny admission or for expulsion.
- 6) Drug free and not in withdrawal. (Applicants who arrive intoxicated or in withdrawal will not be admitted.)
- 7) Physically and mentally capable and willing to look after self and being responsible for self.

F What the Programme is Not

The V.L.E.S. programme does not offer custodial or medical care. No one who is unable or unwilling to look after himself/herself or who requires any kind of supervision should be referred.

The programme does not believe the problem person is a victim of powers beyond his/her control and, therefore, does not provide a facility appropriate to the needs of the helpless and grossly dependent person.

G Physical Facilities

The programme is housed in the Craigflower Motel, located on the Gorge Waterway, at the intersection of Craigflower and Admirals Road in Victoria.



A RESIDENTIAL TREATMENT CENTRE

Administered By: The Fraser Valley Alcoholism Society

"An agency supported by the Ministry of Health, Alcohol & Drug Commission"

811 - ROYAL AVENUE, NEW WESTMINSTER, B.C. V3M 1K1

PROGRAM DESCRIPTION

Pacifica offers a four week residential treatment program to both men and women who are chemically dependent. The program is suited to those addicted individuals whose lifestyle shows a degree of social stability, usually indicated by current or recent employment.

I. THERAPEUTIC MODEL:

The program is psychosocial in its conceptual framework. Treatment is based upon the belief that behavior is learned and that individuals have the ability to change their behavior.

The factors contributing to change are numerous and sometimes idiosyncratic. Some which we hold as most important are:

- a. an awareness of oneself,
- b. acceptance of responsibility for ones' actions,
- c. a respect and expectation on the therapists part for the clients' ability to make changes,
- d. a translation of values and feelings into behaviors and actions, and
- e. a cooperative effort between client and therapist towards treatment goals.

II. GOALS OF TREATMENT:

The goal of treatment at Pacifica is the development of a satisfying lifestyle free of chemical use (alcohol or other drugs). We believe that abstinence from chemicals is best accomplished as part of a lifestyle change, rather than a single behavioral modification. While we believe that additional lifestyle changes are supportive of abstinence, we do not hold that treatment should "ignore" the addiction by focusing exclusively on other lifestyle issues. Thus considerable time is spent examining the addictive behavior, particularly the consequences of such behavior. Problems of denial are addressed, along with confrontation of the consequences (personal, medical, social, employment) of chemical dependency.

Given the time limits of the program, an ideal outcome of treatment is a client who has a strong commitment to abstinence, is more aware not only in terms of his dependency, but of himself as a person, and has in the latter stages of treatment begun to implement some lifestyle changes directed towards building a satisfying sobriety.

III. THERAPY FORMAT:

Therapy is conducted on a group basis. During the first four to five days all of the individuals admitted on that particular admission remain together for the initial phase of the program. This phase includes orientation, assessment, education regarding dependency problems, and an introduction to group therapy. The large admission group (15 to 19 persons) is then divided into two smaller groups (average size 8 clients) for the remainder of the program. Clients are in group each morning from 9:00 to 12:00, and each afternoon from 2:00 to 4:30. Some evening sessions are also held two or three times a week.

Individual therapy is not offered during the program lest it undermine the group process. However, should a client experience extraordinary difficulty in the program, or be seen to be making no progress, he would be seen on an individual basis to discuss the issue with his counsellor. If the client is an E.A.P. referral, it is often most helpful on such occasions if the referring agent is able to attend a meeting with the counsellor and the client. Should the client or the referral source wish a "Going home conference", such a three-way meeting between the counsellor, client, and referral source may be arranged by contacting the client's counsellor in the second week of treatment.

IV. COMPONENTS OF TREATMENT:

A. Therapeutic Techniques

As noted earlier, the primary mode of therapy at Pacifica is based upon the group process. Depending upon the particular group and the nature of client difficulties, different therapeutic approaches are pursued. Some sessions are highly structured, involving specific exercises to help increase clients' awareness or skill levels. In other instances client centered, gestalt, or behavioral approaches are pursued. No one therapeutic technique is adhered to, to the exclusion of all others. The reason for this is three-fold:

- (1) we believe that not all problems and concerns are best dealt with in the same way
- (2) counsellors possess a variety of skills and techniques
- (3) clients respond differentially to various techniques and approaches

Often it cannot be predicted which particular techniques or experiences will have the greatest impact in an individual case. Thus, without becoming eclectic to the point of being contradictory or self-defeating, we do consciously offer a variety of therapeutic activities in our efforts to assist clients in their recovery.

B. Family Involvement

Inclusion of family members, or others personally involved in the client's life is an important aspect of the program. Such people are

encouraged to participate in the program on at least two specific occasions (currently the second Tuesday and third Friday of treatment). Our aim in this area is not to provide family or marital counselling per se, but to:

- (1) through information increase the family's understanding of the problem, and the process of recovery
- (2) provide counsellors with a clear, and perhaps more accurate picture of the client and his circumstances
- (3) gain material for confrontation if this is appropriate
- (4) by encouraging constructive feedback from families regarding the impact of the client's behavior, assist the client in over-coming denial

In those instances when it is impossible for family members to attend on the specific family days, individual consultations can be arranged.

C. Alcoholics Anonymous

All clients are introduced to A.A. while at Pacifica. Following an orientation to the A.A. program in the first week of treatment, clients are encouraged to attend A.A. meetings in the community while they are completing their residential program.

D. Nutrition and Exercise

Good nutritional habits and regular exercise are basic aspects of a healthy lifestyle. Meals at Pacifica are prepared with reference to a well balanced diet. Nutritious snack foods (fruit, yogurt, cheese) are available between meals along with juices, milk, and decaffeinated coffee.

Exercise is not a mandatory part of treatment, but equipment is available for clients' use. Clients are also encouraged to use community facilities for swimming etc.

Some clients incorporate the classes in yoga, in which all clients are required to participate, as part of their own individual exercise program. Our primary purpose in offering yoga is to provide clients with a non-chemical form of stress management. Instruction sessions are twice weekly. Both the level of complexity and physical demand are tailored to the individual client.

E. Medical Care

Medical coverage is provided to all clients by the program's consulting physician. Each client completes a medical history and is examined by the physician shortly after admission. In some instances where there is concern regarding the individual's medical condition, a consultation with the physician may be arranged prior to admission. Should any medical emergency arise during an individual's stay at Pacifica, it would be handled by the physician and/or by referral to the emergency department of the Royal Columbian Hospital. Medication is rarely prescribed.

APPENDIX B

Questionnaires and Tests Completed by Respondents

- a) Beliefs About Alcohol Dependence
- b) Rotter Internal-External Locus of Control Test
- c) Michigan Alcoholism Screening Test (MAST) (short form)
- d) Demographic Information Questionnaire
- e) Instructions read aloud

Instructions:

The following statements are some beliefs that people may have about their alcohol problems. Please circle "T" if you agree that the statement is what you believe to be true about yourself. Circle "F" if you don't agree that the statement is true about yourself.

- | | | |
|---|---|---|
| 1. A person like me can never learn to drink socially. | T | F |
| 2. There is no such thing as the "alcoholic personality," at least as far as I'm concerned. | T | F |
| 3. With the proper help I could learn to drink socially. | T | F |
| 4. There are just as many differences between me and the next alcoholic as there are between me and the next non-alcoholic. | T | F |
| 5. My drinking problem is due to a physical cause, such as an allergy to alcohol. | T | F |
| 6. I feel that I am different from non-alcoholics. | T | F |
| 7. There is no such thing as an overpowering desire for alcohol, I know I just choose to give in. | T | F |
| 8. My drinking problem is due to a social cause, such as family upbringing. | T | F |
| 9. My alcohol addiction is not the result of a physical difference. | T | F |
| 10. I cannot feel good unless I am drinking. | T | F |
| 11. Denial is one of the main personality characteristics of us alcoholics. | T | F |
| 12. The saying, "One drink, one drunk," applies to me, totally. | T | F |
| 13. Maintaining sobriety is my chief goal in life. | T | F |
| 14. One should not be forced into alcohol treatment against his or her will. If a person chooses to drink, that's his own business. | T | F |
| 15. My drinking problem can best be described as a disease. | T | F |
| 16. I'm not really different from other people who have problems in living, even if they're not alcoholics. | T | F |
| 17. I don't think I have to be an alcoholic for the rest of my life. | T | F |
| 18. Only another alcoholic can really understand what I'm going through. | T | F |

19. We alcoholics metabolize alcohol differently than others do. . T F
20. Often, other people drive you to drink. T F
21. It is always possible to resist temptations to drink. T F
22. I think a program of learning controlled drinking would be more effective for me than taking Antabuse. T F
23. Staying sober is largely a matter of luck and getting the right breaks. T F
24. I feel powerless to control my drinking. T F
25. I often blame myself for not learning better self control when it comes to drinking. T F
26. Alcoholics like me are made, not born. T F
27. Alcoholics like me are such good manipulators that they usually need to be coerced into treatment. T F
28. It's no good saying that other people force you to drink; I know that only I can decide when and how much to drink. T F
29. I am sometimes forced into drinking by circumstances beyond my control. T F
30. Alcoholics like me are born, not made. T F
31. Being an alcoholic is just something I'll have to live with for the rest of my life. T F
32. A counsellor or a therapist, not a medical doctor, should deal with alcohol problems. T F
33. Sometimes I feel very guilty over my lack of self control over alcohol. T F
34. We alcoholics are sick people and should be treated as such. T F
35. I believe my addiction to alcohol is the result of poor learning habits. T F
36. I believe I was born with an addiction-prone personality. T F
37. It's not my fault that I have a drinking problem, so there's no point in feeling guilty about it. T F
38. In this day and age, anyone could become an alcoholic like I did. T F
39. Therapy for my other personal problems is probably more important than learning to control my drinking. T F
40. I know that alcohol is just an excuse for my irresponsible behavior. T F

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Instructions:

This is a questionnaire to find out the way in which certain important events in our society affect people. Each item consists of a pair of alternatives, lettered a or b. Please select the alternative you believe to be more true as far as you are concerned, and circle "a" or "b". This is a test of personal beliefs; there are no right or wrong answers.

1. a Children get into trouble because their parents punish them too much.
b The trouble with most children now-a-days is that their parents are too easy with them.
2. a Many of the unhappy things in people's lives are partly due to bad luck.
b People's misfortunes result from the mistakes they make.
3. a One of the major reasons we have wars is because people don't take enough interest in politics.
b There will always be wars, no matter how hard people try to prevent them.
4. a In the long run, people get the respect they deserve in this world.
b Unfortunately, an individual's worth often passes unrecognized, no matter how hard he tries.
5. a The idea that teachers are unfair to students is nonsense.
b Most students don't realize the extent to which their grades are influenced by accidental happenings.
6. a Without the right breaks one cannot be an effective leader.
b Capable people who fail to become leaders have not taken advantage of their opportunities.
7. a No matter how hard you try, some people just don't like you.
b People who can't get others to like them don't understand how to get along with others.
8. a Heredity plays the major role in determining one's personality.
b It is one's experiences in life which determines what they're like.
9. a I have often found that what is going to happen will happen.
b Trusting to fate has never worked out as well for me as making a decision to take a definite course of action.
10. a In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
b Many times exam questions tend to be so unrelated to the course work that studying is really useless.

11. a Becoming a success is a matter of hard work, luck has little or nothing to do with it.
b Getting a good job depends mainly on being in the right place at the right time.
12. a The average citizen can have an influence in government decisions.
b This world is run by the few people in power, and there is not much the little guy can do about it.
13. a When I make plans, I am almost certain that I can make them work.
b It is not always wise to plan too far ahead, because many things turn out to be a matter of good or bad fortune anyhow.
14. a There are certain people who are just no good.
b There is some good in everybody.
15. a In my case, getting what I want has little or nothing to do with luck.
b Many times we might just as well decide what to do by flipping a coin.
16. a Who gets to be the boss often depends on who was lucky enough to be in the right place first.
b Getting people to do the right thing depends on ability; luck has little or nothing to do with it.
17. a As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
b By taking an active part in political and social affairs the people can control world affairs.
18. a Most people don't realize the extent to which their lives are controlled by accidental happenings.
b There is really no such thing as "bad luck."
19. a One should always be willing to admit one's mistakes.
b It is usually best to cover up one's mistakes.
20. a It is hard to know whether or nor a person likes you.
b How many friends you have depends on how nice a person you are.
21. a In the long run the bad things that happen to us are balanced by the good ones.
b Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
22. a With enough effort we can wipe out political corruption.
b It is difficult for people to have much control over the things politicians do in office.
23. a Sometimes I can't understand how teachers arrive at the grades they give.
b There is a direct connection between how hard I study and the grades I get.

- 24. a A good leader expects people to decide for themselves what they should do.
b A good leader makes it clear to everybody what their jobs are.
- 25. a Many times I feel that I have little influence over the things that happen to me.
b It is impossible for me to think that luck or chance plays an important role in my life.
- 26. a People are lonely because they don't try to be friendly.
b There's not much use in trying too hard to please people, if they like you, they like you.
- 27. a There is too much emphasis on athletics in high school.
b Team sports are an excellent way to build character.
- 28. a What happens to me is my own doing.
b Sometimes I feel that I don't have enough control over the direction my life is taking.
- 29. a Most of the time I can't understand why politicians behave the way they do.
b In the long run the people are responsible for bad government on a national as well as on a local level.

Please circle the correct answer:

- | | | |
|--|-----|----|
| 1. Do you feel you are a normal drinker? | yes | no |
| 2. Do friends or relatives think you are a normal drinker? | yes | no |
| 3. Have you ever attended a meeting of Alcoholics anonymous (AA)? | yes | no |
| 4. Have you ever lost friends or girlfriends/boyfriends because of your drinking? | yes | no |
| 5. Have you ever gotten into trouble at work because of drinking? | yes | no |
| 6. Have you ever neglected your obligations, your family, or your work, for more than two days because of drinking? | yes | no |
| 7. Have you ever had delerium tremens (DTs), severe shaking, heard voices, or seen things that weren't there after heavy drinking? | yes | no |
| 8. Have you ever gone to anyone for help about your drinking? | yes | no |
| 9. Have you ever been in a hospital because of drinking? | yes | no |
| 10. Have you ever been arrested for drunk driving or driving after drinking? | yes | no |

Please answer the following questions; the information will not be used to identify you in any way.

1. Today's date _____
2. Name of facility you are attending _____
3. Date you entered this facility _____
4. Your birthdate _____
5. Sex: Male Female
6. Your average yearly income, or that of your family _____
7. How long, in years, has your drinking been a problem? _____
8. Do you attend AA regularly? Yes No
9. Do you think of yourself as:
 an alcoholic (i.e. a person who suffers from a disease.)
 a problem drinker (i.e. a person who has a behavioral problem.)
 neither
10. Print the first two letters of your last name _____

GENERAL INTRODUCTION

You are being asked to participate in a study of alcohol problems. This study is part of an M.A. thesis being conducted by Joanne Pallett through U.B.C.

The purpose of the study, in general terms, is that it is an investigation of what people in treatment centres believe about various current issues, including alcohol problems. It is hoped that the results will help in providing better assessment procedures for therapists.

Your part in the study would involve two, 30 minute, periods of your time, one now, and one toward the end of your stay here. You would be asked to complete a four part questionnaire.

The questionnaires are filled out anonymously, in a group. Your name does not go on them, and no attempt will be made to identify you.

Any questions? (If people have specific questions about the nature of the study, explain that this would bias their answers, and that such questions can be answered after the second session.)

At this point, those who may wish to do so, may leave. Also, those who are there for the treatment of a dependency problem other than alcohol, may also leave.

SPECIAL INSTRUCTIONS

[Before distributing the questionnaires.]

These are all questions of personal opinions or beliefs. There are no right or wrong answers.

All the questions are of the type that ask you to pick "A" or "B"; "True" or "False". Sometimes it is hard to make a choice, since both alternatives may be true. However, try to pick the one that is what you believe most of the time. Try to answer every question.

The questionnaires are not all in the same order; you are all getting the same questions, just in different orders. Please do them in the order in which they are presented. That is, do page 1 first, then go on to page 2, and so forth.

Please work at your own pace, and hand your questionnaire in when ready.

Thank you.

APPENDIX C

Tables pertaining to description of sample
used in study

Table 1. Description of Sample of 104 Subjects Used in Pilot Study,
by Age and Income *

Facility	Number			Age			Income		
	Male	Female	Total	n	\bar{x}	Sd	n	\bar{x}	Sd
A	59	2	61	60	40.28	9.54	59	3.12	1.31
B	39	4	43	42	38.64	11.57	37	2.57	1.02
Total	98	6	104	102	39.60	12.69	96	2.92	1.23

Table 2. Description of Sample of 104 Subjects Used in Pilot Study,
by Length of Alcohol Problem, MAST, AA Involvement,
and Drinking Role Preference *

Facility	Length of Alcohol Problem			MAST Short form			AA Involvement				Drinking Role Preference			
	n	\bar{x}	Sd	n	\bar{x}	Sd	No	%No	Yes	%Yes	n Alc. **	%	n P.D. **	%
A	60	11.20	8.04	61	19.74	6.25	41	68	19	32	43	75	14	25
B	91	10.98	6.11	43	20.47	5.48	36	84	7	16	24	57	18	43
Total	101	11.11	7.25	104	20.04	5.76	77	45	26	25	67	68	32	32

* The total number of subjects in each category did not always reach 104, since some subjects did not answer some of the questions on the demographic questionnaire.

** Alc. = Alcoholic, P.D. = Problem Drinker

Table 3. Description of 59 Subjects Used in Main Study

Facility	Age		Income		Length of Dependency			MAST			* AA Involve.			Drinking Role				**	
	n	Sd	n	\bar{x}	Sd	n	\bar{x}	Sd	n	\bar{x}	Sd	n	\bar{x}	Sd	n	%	n		%
A	39	41.10	9.97	39	2.95	1.23	39	11.54	8.83	39	18.72	6.55	39	.26	.44	27	69	12	31
B	20	39.95	11.46	20	2.45	1.19	20	11.25	7.19	20	20.40	5.36	20	.10	.31	10	50	10	50

AA involvement was encoded : 0 = "no", 1 = "yes".

Alc. = Alcoholic, P.D. = Problem Drinker.

Table 4. Description of Alcoholics and Problem Drinkers

Drinking Role	n	Age		Income		Lgth. of Depen'cy		MAST		AA Involve.*	
		\bar{x}	Sd	\bar{x}	Sd	\bar{x}	SD	\bar{x}	Sd	\bar{x}	Sd
Alcoholics	37	42.75	9.58	3.02	1.13	12.92	8.64	20.49	5.83	.24	.44
Problem Drinkers	20	37.27	11.06	2.50	1.26	8.95	7.05	17.73	6.57	.14	.35

* AA involvement was encoded: 0 = "no", 1 = "yes".

The following is a more detailed description of the demographic variables in Tables 1, 2, 3 and 4.

Age This was encoded as the subject's age in years on the first day of the month of the test.

Income For convenience's sake, yearly income was encoded in the following way:

Yearly income	-	Code
< \$10,000	-	1
> \$10,000 < \$20,000	-	2
> \$20,000 < \$30,000	-	3
> \$30,000 < \$40,000	-	4
> \$40,000	-	5

Length of Alcohol Problems This was encoded as the number of years respondents indicated their drinking had been a "problem".

MAST (short form) This test was used as an index of severity of alcohol problems. Pokorny, Miller and Kaplan (1972) reported that 55% of the alcoholics they tested scored in the 18 - 25 point range. Only 11 of their 60 subjects scored below that range.

AA Involvement Subjects were asked whether they considered themselves to be regular AA attenders, to ascertain degree of commitment to it. While the vast majority (77% of the total sample) said they were not regular AA members, virtually all of the sample indicated they had been to at least one AA meeting (this is one of the MAST questions). In Table 1, AA involvement is simply encoded as percentages of "yes" and "no" answers. In Tables 2 and 3, AA involvement was encoded numerically - zero indicated "no" and one, "yes".

Drinking Role Subjects had three choices: "alcoholic", "problem drinker", or "neither". The first two labels were elaborated by definitions (Questionnaire D, Appendix B). The majority chose the "alcoholic" label. Furthermore, this was a remarkably stable choice. For those who completed two tests, only two subjects out of 59 changed their drinking role preference after three weeks. These subjects were labelled as "alcoholics" since that was their choice at the pretest. Of the 59 subjects who has a pretest and a posttest, a further three did not make a choice on the pretest. Two of these chose the "alcoholic" label on the posttest, while one made no choice on either test. These three subjects were all encoded by the computer as alcoholics.

APPENDIX D

Reliability Estimates for "Beliefs About Alcohol Dependence" Scale

Table D (1)

Reliability Estimates for 40 Item "Alcohol Beliefs" Scale,
computed in data obtained from 104 subjects

Disease Sub Scale						Behavior Sub Scale					
Item	Mean ¹	Sd ²	Frequency ³ %:F	T	Item - ⁴ Total Correlation	Item	Mean	Sd	%:F	T	Item- Total Correlation
1	.72	.45	28	72	.25***	1	.31	.46	69	31	.00
2	.15	.36	85	15	.13	2	.22	.42	78	22	.21**
3	.64	.48	36	63	.24**	3	.69	.46	31	69	.23**
4	.20	.40	80	20	.26***	4	.54	.50	46	54	.27**
5	.80	.40	20	80	.07	5	.27	.45	73	27	-.18*
6	.51	.50	49	51	.25***	6	.74	.44	26	74	.21**
7	.78	.42	22	78	.19**	7	.82	.39	18	82	.01
8	.78	.42	23	78	.25***	8	.78	.42	22	78	-.07
9	.62	.49	38	61	.19**	9	.60	.49	40	60	.26***
10	.53	.50	47	53	.34***	10	.56	.50	43	57	.14
11	.30	.46	69	31	-.01	11	.39	.49	61	38	.31***
12	.05	.22	95	5	.21**	12	.87	.34	13	86	.41***
13	.45	.50	55	45	.32***	13	.79	.41	21	79	.26***
14	.64	.48	36	63	.11	14	.92	.27	8	92	.21**
15	.18	.39	82	18	.18*	15	.84	.37	16	84	.08
16	.16	.37	84	16	.17*	16	.91	.17	3	97	.21**
17	.68	.47	32	68	.18*	17	.38	.49	62	37	.06
18	.66	.48	34	66	.17*	18	.77	.42	23	77	.17*
19	.26	.44	74	26	.29*	19	.57	.50	43	57	.11
20	.19	.30	90	10	-.04	20	.76	.43	24	76	.07

K-R 20 α = .58

K-R 20 α = .47

Standardized α = .57

Standardized α = .50

Mean - The arithmetic mean for each item ranges from 0 to 1. "False" responses were encoded "0", "True" responses were encoded "1".

Standard deviation - range 0 - 1.

Frequency - The percent of time a n item was answered "True" and "False".
All figures rounded to the nearest whole number.

* $p \leq .10$; ** $p \leq .05$; *** $p \leq .01$

TABLE D(2)

Reliability Estimates on 26 Selected Items for "Alcohol Beliefs" Scale,
computed on data obtained from 104 Subjects

Disease Scale			Behavior Scale		
Item	Item-total ¹ correlation	α if item deleted	Item	Item-total correlation	α if item deleted
1	.24**	.58	2	.30***	.59
3	.20**	.59	3	.22**	.61
4	.27***	.58	4	.35***	.58
6	.28***	.57	6	.23**	.61
7	.24**	.58	9	.44***	.56
8	.28***	.59	11	.45***	.56
9	.21**	.58	12	.41***	.58
10	.29***	.57	13	.22**	.61
12	.22**	.59	14	.21**	.61
13	.33***	.57	16	.13	.62
15	.12	.60	18	.11	.63
16	.18*	.59			
17	.21**	.59			
18	.16*	.60			
19	.26***	.58			

K-R 20 α = .62

Standardized α = .62

K-R 20 α = .60

Standardized α = .60

¹ * $p \leq .10$; ** $p \leq .05$; *** $p \leq .01$

APPENDIX E

Individual Item Scores Obtained by Alcoholics
and Problem Drinkers
on "Beliefs About Alcohol Dependence"

Table E(1)

Individual Item Scores Obtained by Alcoholics
and Problem Drinkers on Beliefs Scale

Scale	Alcoholics		Problem Drinkers		"t" ³
<u>Disease</u>	1	Sd ²		Sd	
1	.88	.33	.38	.49	5.24**
2	.15	.36	.16	.37	-.04
3	.65	.48	.59	.50	.56
4	.21	.40	.19	.40	.24
5	.82	.39	.75	.44	.77
6	.63	.49	.25	.44	3.88***
7	.85	.36	.63	.49	2.29**
8	.85	.36	.63	.49	2.29**
9	.63	.48	.59	.50	.30
10	.56	.50	.47	.51	.81
11	.19	.40	.56	.50	-3.65***
12	.03	.16	.09	.30	-1.18
13	.51	.50	.31	.47	1.97**
14	.65	.48	.59	.50	.56
15	.15	.36	.25	.44	-1.10
16	.15	.36	.19	.40	-.42
17	.73	.44	.56	.50	1.68*
18	.71	.46	.56	.50	1.40
19	.26	.44	.25	.44	.15
20	.10	.30	.09	.30	.06
<u>Behavior</u>					
1	.28	.45	.38	.49	-.95
2	.09	.30	.50	.51	-4.18***
3	.65	.48	.78	.42	-1.38
4	.50	.50	.63	.49	-1.19
5	.21	.40	.41	.50	-1.97**
6	.71	.46	.81	.40	-1.18
7	.83	.38	.78	.42	.60
8	.82	.38	.69	.47	1.39
9	.51	.50	.78	.42	-2.81***
10	.58	.50	.53	.51	.49
11	.29	.46	.59	.50	-2.92***
12	.85	.36	.91	.30	-.87
13	.79	.41	.78	.42	.12
14	.94	.23	.88	.34	1.06
15	.86	.35	.78	.42	.94
16	.99	.12	.94	.25	1.07
17	.33	.48	.47	.51	-1.28
18	.76	.43	.78	.42	-.19
19	.51	.50	.69	.47	-1.70*
20	.76	.43	.75	.44	.15

¹ Mean scores - range 0 (False) to 1 (True)

² Standard deviation, range 0 to 1

³ * $p \leq .10$; ** $p \leq .05$; *** $p \leq .01$