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PERSONALITY CHARACTERISTICS OF ALCOHOLICS IN A RELIGIOUS TREATMENT PROGRAM.

LYN M. GOLDENTHAL
University of Windsor

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LA THÈSE A ÉTÉ MICROFILMÉE TELLE QUE NOUS L'AVONS RECEUE
PERSONALITY CHARACTERISTICS OF ALCOHOLICS
IN A RELIGIOUS TREATMENT PROGRAM

by

Lyn M. Goldenthal
M.A. University of Waterloo, 1977

A Dissertation
Submitted to the Faculty of Graduate Studies
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ABSTRACT

Alcoholics Anonymous (A.A.) is a spiritually-based alcoholism treatment program and, as such, its members should differ from other alcoholics (who are either receiving a secular form of treatment or who are untreated), and from non-alcoholics.

Forty-nine alcoholics who were members of A.A., 11 alcoholics who were not affiliated with A.A., and 45 nonalcoholics were given a questionnaire consisting of demographic information and several personality scales. Among the personality dimensions measured by these scales were need for affiliation, tolerance of ambiguity (cognitive structure), emotional dependence (sycorax), dogmatism and authoritarianism (general and rightist authoritarianism, respectively), locus of control (and the subdimensions comprising it), purpose in life, and religiosity (and the subdimensions comprising it). All of the above personality variables are somehow related to traditional religiosity, which presumably distinguishes A.A. members from nonmembers.

There were no significant differences between A.A. and non-A.A. alcoholic groups on the relevant personality dimensions. The A.A. alcoholics were significantly more controlled by impulses, more external on the locus of control dimension, and more religious than the nonalcoholic group. The non-A.A. alcoholics were more emotionally dependent, more external,
and more religious than the nonalcoholics. Age, purpose in life, and the religious ideological, intellectual, experiential, and total religiousity dimensions were all significantly correlated in a positive direction with length of affiliation with A.A. The negative correlation between length of A.A. membership and control by impulses approached significance, and A.A. members' age and control by impulses were significantly correlated in a negative direction. The discriminant analysis did the best job of classification when the A.A. members were compared to the nonalcoholics.

The implications of the present study and directions for future research were discussed.
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CHAPTER I

INTRODUCTION

In general, alcoholism programs may be classified into those programs which have as their basis a secular format, and those programs which are based on a religious format. Secular forms of treatment may be based on physiological and biological models (e.g., hospitalization, drug therapy), psychological models (e.g., psychotherapy, counselling, behaviour modification), and/or sociocultural models (e.g., halfway house settings, milieu therapy, job counselling, family therapy). Armor, Polich, and Stambul (1978) classify types of treatment into 10 major categories, which are grouped into three settings: hospital setting, (inpatient hospitalization, partial hospitalization, detoxification); intermediate setting (halfway house, quarterway house, residential care); and outpatient setting (individual counselling, individual therapy, group counselling, group therapy).

In principle, secular treatment reflects adherence to one of the general etiological models (physiological, psychological or sociocultural). In practice, treatment delivery for alcoholism tends to be based on one of two common policies. In some treatment centres, a single modality is available (e.g., a drug treatment such as Antabuse or Disulfiram, traditional
insight therapy, etc.) and is uniformly implemented with each patient seeking help. Other treatment centres employ an opposite strategy: patients are exposed to a wide variety of treatments in the hope that something may work.

Religiously-oriented treatment programs use religious belief or require the individual to invoke his "Higher Power" as a prelude to successful treatment.

It is an interesting fact that several successful programs use a religious format as the basis for their treatment of alcoholism or drug addiction. The LeDain Commission, in its Final Report, concluded:

"Religious faith obviously has an important role to play in relation to non-medical drug use. This faith, and the strength that derives from it, can assist the individual in his struggle to avoid or overcome dependence on drugs. Its force has been demonstrated in the work of Alcoholics Anonymous. Involvement in groups of a mystical, altruistic or religious tendency has apparently permitted many persons to renounce the excessive use of certain drugs. For example, a small proportion of drug users have found in certain eastern religious disciplines the inspiration which has helped them to abstain from drug use or at least to use drugs with more moderation" (p. 237).

Dr. Sol Levine of Toronto Sick Children's Hospital found that many young people in religious communes had a previous history of taking drugs but had since stopped completely (Toronto Star, June 14, 1975). Harder (1973) and Harder, Richardson, and Simmonds (1972) found that "Jesus Freak" members of a religious commune had, before joining the commune, very extensive experience with a wide range of intoxicants and
hallucinogens. Time Magazine (June 21, 1971) has noted the effectiveness of religion in dealing with drug problems.

Examples of religious treatment programs for alcoholics include Alcoholics Anonymous, The Ecumenical Council on Alcohol Programs (TECAP), the Salvation Army, and various church-sponsored programs, while Teen Challenge, the Damascus Church and the Pentecostal Church employ a religious format for the treatment of drug addiction.

TECAP's treatment program is based on extrinsic religious motivation. In other words, individuals receiving treatment from TECAP refrain from alcohol use on religious grounds rather than because of the benefits inherent in sobriety (e.g., a clear mind, good health, etc.). TECAP's guiding principle is:

"We believe that we may all be united on the ground of the virtue of sobriety. This can be practised in two ways. One is by total abstinence from beverage alcohol for religious motives. The other is by true moderation in the use of alcohol, also for religious motives".

Thus, abstinence and moderation are perceived by TECAP as having a religious basis.

Alcoholics Anonymous is one of the largest and most successful of the alcoholism treatment programs, with 15,000 groups and a membership of more than 475,000 in 90 countries as of 1970. While A.A. specifically states that it is not a religion, meaning that it does not undertake to determine a member's relationship with God or the structures whereby he
achieves this relationship, it borrows strength from religious experience and may use existing religious structures. For example, A.A. meetings resemble religious services, with prayers, confessions, and a collection. A.A. is a system in which the member is caught in a struggle between positive opposing forces of good and evil (A.A. vs. alcohol).

The religious aspects of A.A. are embodied in the Twelve Steps:

1. We admitted we were powerless over alcohol—that our lives had become unmanageable.

2. Came to believe that a Power greater than ourselves could restore us to sanity.

3. Made a decision to turn our will and our lives over to the care of God as we understand Him.

4. Made a searching and fearless moral inventory of ourselves.

5. Admitted to God, to ourselves, and to another human being the exact nature of our wrongs.

6. Were entirely ready to have God remove all these defects of character.

7. Humbly asked Him to remove our shortcomings.

8. Made a list of all persons we had harmed, and became willing to make amends to them all.
9. Made direct amends to such people wherever possible, except when to do so would injure them or others.

10. Continued to take personal inventory and when we were wrong promptly admitted it.

11. Sought through prayer and meditation to improve our conscious contact with God as we understood Him, praying only for knowledge of His will for us and the power to carry that out.

12. Having had a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics and to practice these principles in all our affairs.

Bean (1975a) points out that the Twelve Steps actually represent a complex internal process that involves a semi-religious conversion (despair, seeing the light, hope, changed behaviour), a mechanism for assuaging guilt (confession, penance), and an emotional shift from isolated helplessness and dependency that includes a capacity to take responsibility for controlling drinking.

A.A. is not for everyone. Only 5 to 10 per cent of American alcoholics use A.A. (Bean, 1975a). Most treated
alcoholics have been exposed to A.A., at least once, though exact figures are unavailable, since A.A. members are anonymous. Many alcoholics have responded to A.A. upon first exposure, often without subsequent "slips", while others react neutrally, or even antagonistically, and remain unattracted to the group and its program. For example, Jellinek (1946) speaks of some alcoholics as "being those types who are attracted to A.A.", but does not indicate what constitutes these types. Ritchie (1948) asks, "How does the factor of selectivity operate with reference to the types and classes of people who become A.A.'s", but does not offer an answer. Edwards et al. (1967) state that not much is known about who goes to A.A. Even today, many questions about A.A.'s membership still go unanswered. Bean (1975a) asks:

"Who goes to A.A.? Which alcoholics? Do any non-alcoholics go? Who stays away? Who goes but leaves? Who does well, and who has trouble? Who uses it extensively, and is this correlated with success? Who becomes a leader? The answer to these questions would be of tremendous value in understanding alcoholism and its treatment. As they are not available, we are left with anecdotal information and insubstantial claims..." (p. 20).

It has often been maintained that A.A. members can be distinguished from nonmembers on the basis of personality factors. Brown (1950) divided a sample of alcoholics into neurotics and psychopaths on the basis of the M M.P.I., and hypothesized that "the neurotic drinker may be more likely to
respond to the supportive group measures offered by A.A. 
which involve religious conversion and interdependency. The 
neurotic alcoholic appears to be more closely related in the 
nature of his problems to the nonalcoholic neurotic than he 
is to the alcoholic who has psychopathic behavioral problems. 
Chambers (1953) states that "most of those who become A.A. 
members have been lonely, isolated people who in the course of 
their abnormal drinking lives have lost their friends and con-
tact with society". It has been suggested that nonaffiliates 
have difficulty merging with a group pattern. Jackson and 
Connor (1953) even suggest that A.A. may be more successful 
with the Skid Row alcoholic "because it manipulates the pat-
tern of group behavior which he already possesses toward a 
new end, sobriety". Trice (1957) concludes his study of the 
process of affiliation with A.A. by noting:

"But probably the basic significance of the findings 
lies in the discovery that factors can be isolated 
that discriminate between affiliates and nonaffili-
ates. If the search for differentiating items should 
be pressed so that generalized predictions might be 
extended to new samples, it seems possible that the 
rate of affiliation with this highly effective group 
could be materially increased" (p. 54).

The purpose of the present study is to determine differences on a number of personality dimensions among alcoholics in a treatment program with a religious orientation (i.e., Alcoholics Anonymous), alcoholics in a secular treatment program (i.e., the Connaught Clinic), alcoholics not presently receiving treatment and nonalcoholics.
Variables which may help to distinguish between A.A. affiliates and nonaffiliates include locus of control, tolerance of ambiguity, emotional dependence, authoritarianism and dogmatism, need for affiliation, religiosity, and purpose in life. This constellation of personality variables consists of dimensions which are related to traditional religiosity. In other words, the person with strong traditional religious beliefs may also be expected to be intolerant of ambiguity (the world is seen in terms of good and evil, God and the Devil), external on the locus of control dimension (God is seen as controlling everyone's destinies), emotionally dependent (on both God and the religious peer group), high in purpose in life (religion provides meaning or direction in life), high in need for affiliation (the religious or church group provides a social outlet), and high in authoritarianism or dogmatism (the religious individual is often unquestioningly obedient to authority and ethnocentric).

The present study will hopefully offer a personality profile of members of Alcoholics Anonymous in comparison to other alcoholics and nonalcoholics. In other words, this study will offer some indication of the type of alcoholic who is suited to the A.A. treatment model and will indicate which of the above personality traits are most predictive of alcoholism in general, and A.A. membership in particular. Since the A.A. group is based on a religious model, religiosity should be the strongest predictor of A.A. membership.
Relevant Personality Variables

1. Locus of Control  Locus of control refers to the extent that the individual perceives contingency relationships between his actions and outcomes. "Internals" believe that at least some control resides within themselves, while "externals" believe that their outcomes are controlled by factors or agents external to themselves (e.g., chance, luck, fate, powerful others). According to social learning theory, alcoholics might logically be expected to be more external than nonalcoholics on the locus of control dimension, since alcoholics are presumably more controlled by their impulses (i.e., their impulse to drink). However, most studies have found that alcoholics are highly internal (Goss and Morosko, 1970; Gozali, 1971; Di Stefano, Pryer and Garrison, 1972; Costello and Manders, 1974). It has been hypothesized that the perceived internality of opiate addicts is narcotic-engendered: prior to their addiction, addicts probably were externally oriented but, as a result of the tranquil state effected by their narcotic intake, they are afforded a "sense" of self-control - a temporary means to alleviate frustration, tension, anxiety, and so on (Berzins and Ross: 1973; Calicchia, 1974). Such an explanation may hold for alcoholics as well. Rotter (1975) has also hypothesized that the relative internality of alcoholics could indicate a sense of guilt which they might wish to disinhibit by the use of alcohol, or
a desire to appear socially desirable. Trice and Roman (1970) have shown proneness to guilt to be a significant predictor of successful affiliation with an A.A. group.

Both strong religious belief and alcoholism or drug addiction appear to involve relinquishing control. Thus, the individual who quits drinking because of his affiliation with A.A. may, at least initially, simply be substituting one type of external control for another. Twemlow and Bowen (1977) point out:

"...a person who has been able to obtain support from a religious belief may be demonstrating the capacity to rely on the opinions of others for help. For example, Alcoholics Anonymous' philosophy depends largely upon the acknowledgement of a power greater than that which resides in the person (alcoholic)" (p. 597).

Each A.A. member is specifically instructed to invoke his Higher Power, since he alone cannot exorcise the demon of alcohol. The precise nature of the Higher Power and the person's relationship to it are deliberately not spelled out.

The proposition that A.A. members are switching external supports and controls from alcohol to religion is supported by the results of a study of London A.A. groups by Edwards et al. (1967). The authors claim that A.A. excludes those pathological drinkers whose behaviour does not conform to one of the "out of control" syndromes which form the A.A. stereotype of alcoholism (the gamma or omega alcoholic; according to Jellinek's classification). Three quarters of A.A.
members are over 40, with 42% in the 40-49 age group. The authors suggest that A.A. may be systematically excluding young alcoholics because pathological drinking in a subject's twenties may not have gotten so far as total "loss of control". Thus, Trice and Roman (1970) failed to show that ego strength and self-reliance were predictors of successful affiliation with A.A.

One of the external supports and controls which A.A. shares with religious systems is a shift of responsibility away from oneself through assumption of a dependency stance towards an authority figure (the Third Step). Another is the use of forgiveness to restore continuity between a transgressor and the social context in which the individual moves towards his ideal (the Fifth through Ninth Steps). Bean (1975a) notes this analogue between A.A. and religion.

"In those religions in which concepts of sin are emphasized, the sinner comes to the absolver; God grants absolution through the priest, and the person usually performs a restorative act. The person's attachment to God and the community is renewed, his relationships are restored, and he is freed from guilt... In A.A., people confess their past transgressions first to themselves, secondly to another person, and thirdly to a public gathering... Admitting the behaviour may defuse the affect associated with it, assuaging guilt and making stigma more bearable... The needs for punishment and admiration are both met by the not-very-secret meeting where the speaker degrades himself by public confession and description of his alcoholism..." (p. 100).

Alcoholics are high in perceived internal control, though they have actually relinquished control to alcohol. However,
A.A. members may not have the luxury of perceived internality because they are required to confront their treatment. The member adopts A.A.'s two beliefs, that he is powerless and that there is a power external to him. The artificial sense of internality is replaced by a more realistic external orientation. Thus, alcoholics who are affiliated with A.A. may be expected to possess a relatively external orientation, reflecting the world view which A.A. fosters.

2. Emotional Dependence

A.A. specifically appeals to, and may perpetuate, emotional dependence (Bean, 1975). A.A. members must assume the sick role and its implied dependency (what Bean calls "a permanent, regressed, dependent stance"). The Twelve Steps emphasize abdication of personal responsibility and passivity in the hands of God, following an admission of powerlessness over alcohol. Thus, Trice (1957; 1970) found that affiliation with A.A. at 18 months from admission was positively correlated with group dependency needs, but did not correlate with ego strength, since A.A. assumes low capacity for change, and attempts to provide external strength rather than develop autonomy. In addition, two studies (Bonacker, 1958; Machover et. al., 1959) have indicated that A.A. members tend to be more feminine in their personality profiles, and rapidly become psychologically dependent on the group.

A.A.'s emphasis on religion has been equated with depend-
ency. Cato (1969) examined differences between drug users in religiously oriented after-care programs and drug users in secular after-care programs, and found that drug users in two kinds of programs differed in their degree of dependency. Dependency may be a part of A.A.'s approach, but the question is more complex than that, involving response to ritual, hierarchy, affiliation with a group felt to possess power or knowledge, and evangelization. In A.A., there are people who have matured and no longer need the external supports and controls, but A.A. rejects this possibility, betraying its limited respect for man's capacity to change. The dependence that works so well to facilitate early establishment of sobriety becomes a weakness or constraint for someone in the later stages of recovery. As McCarthy (1975) points out, the key to rehabilitation is enmeshed in such concepts as motivation, decision-making, responsibility and freedom.

3. Authoritarianism and Dogmatism In general, authoritarianism refers to a personality characterized by unquestioning obedience to authority rather than individual freedom of judgement and action. Adorno, Frenkel-Brunswik, Levinson, and Sanford (1950) describe this personality type as antidemocratic, potentially fascist, and ethnocentric. The authors believe that nine characteristics constitute the authoritarian syndrome: conventionalism (a rigid adherence to conventional middle-class values); authoritarian submission (a submissive
uncritical attitude toward idealized moral authorities of the ingroup); authoritarian aggression (a tendency to be on the lookout for, and to condemn, reject, and punish people who violate conventional values); anti intracception (an opposition to the subjective, and imaginative tender-minded); superstition and stereotypy (the belief in mystical determinants of the individual's fate, the disposition to think in rigid categories); power and "toughness" (a preoccupation with the dominance-submission, strong-weak, leader-follower dimension, exaggerated assertion of strength and toughness); destructiveness and cynicism (a generalized hostility); projectivity (the disposition to believe that wild and dangerous things go on in the world; the projection outwards of unconscious emotional impulses); and sex (exaggerated concern with sexual "goings-on"). General authoritarianism, which Rokeach (1960) called "dogmatism", is characterized by intolerance of ambiguity and rigidity. Himmel (1975) has shown high dogmatism scores to be negatively correlated with internal locus of control.

Butts and Chotlos (1974) found that alcoholics were more closed-minded than nonalcoholics, as measured by the Rokeach Dogmatism Scale. The authors suggest that the most effective way of treating alcoholics may be to focus on helping them socialize their needs for power so that they would not feel isolated and helpless. In other words, alcoholics would develop a socially appropriate sense of power which could be
channeled for self-improvement. By gaining a sense of power, alcoholics should become less closed-minded and therefore be open to re-evaluating their self-concepts and the nature of their relationships with others. However, Cutter, Boyatzis, and Clancy (1977) found that Power Motivation Training (a procedure designed to help alcoholics feel strong and effective without drinking) decreased the frequency of intoxication in nonauthoritarian patients, while the standard alcoholism treatment (i.e., affiliation with A.A., Disulfiram, weekly group therapy meetings, individual counselling) was more successful with authoritarian patients.

Only a couple of studies have examined the relationship between authoritarianism and A.A. affiliation, and the results of these studies have been mixed. Canter (1966) found that there was a positive relationship between authoritarian attitudes and attendance at A.A. The more authoritarian patients preferred A.A., whereas those accepting group therapy or Disulfiram showed more conscious recognition and acceptance of the drinking problem and expressed the need for help.

Templer, Ruff, and Armstrong (1973) attempted to replicate Canter's results, and to relate dogmatism to A.A. attendance. Since A.A. uses clearly specified rules and principles, it was expected that A.A. participation would be positively associated with dogmatism. Patients who went to every A.A. meeting available to them were compared to patients who missed one
or more meetings. No significant differences were found between the two groups' scores on the California F-Scale of authoritarian attitudes and Rokeach's (1960) Dogmatism (D) Scale. The authors concluded that scores on the F and D Scales were unrelated to A.A. attendance.

Canter may have obtained significant differences on the authoritarianism dimension because he was, in effect, comparing alcoholics who attended A.A. with alcoholics who chose other treatment modalities. Templer et.al., on the other hand, simply compared alcoholics who attended every A.A. meeting with alcoholics who attended less frequently.

Alcoholics appear to have child-rearing patterns which were either authoritarian or permissive (McCarthy, 1975). The authoritarian environment creates rigid, domineering personality types, while the permissive tends to produce poor leadership and followership qualities. Excessive permissiveness may create the inability to delay gratification and generate impulsive behaviour, which may turn the individual into the compulsive adult associated with addiction. A.A., with its rules and principles, should appeal more to the alcoholic with an authoritarian background than to the alcoholic with a permissive background.

4. Tolerance of Ambiguity Though definitions of ambiguity tolerance overlap considerably, no common definition has been accepted. Budner (1962) views intolerance of ambiguity as a
general tendency to perceive ambiguous material or situations as threatening. Conversely, tolerance of ambiguity implies that contact with ambiguity is desirable (MacDonald, 1970). English and English (1958) state that low ambiguity tolerance is shown by the desire to have everything reduced to black and white.

Strong religious belief involves a dichotomous world-view (God vs. the Devil: good vs. evil). Thus, Lansky and Pihl (1976) found that followers of Hare Krishna and Guru Maharaj Ji were significantly less tolerant of ambiguity than members of the control group. A.A. members are taught to view their lives in black and white. Alcohol is regarded as an evil of tremendous power, while A.A. is seen as powerful, noble, and good. Each A.A. member is aware that two powerful forces are contending for possession of his life (A.A. vs. alcohol: good vs. evil). As Karp et al. (1970) suggest in discussing drug therapy:

"... a field dependent alcoholic might come to the clinic because he is having difficulty in holding a job, is being told by family and friends to stop drinking, and is having arguments with his wife. What he may be seeking is someone to provide him with specific answers to these problems (external structure). What he may receive is a set of specific instructions regarding medication, but no specific answers to his problems. Thus, the drug therapy structures would be completely irrelevant to his needs" (p. 82).

However, a religious treatment program such as A.A. would be able to meet such a person's needs. This type of alcoholic would have a low tolerance for ambiguity.
5. **Need for Affiliation**  A relatively high "need for affiliation" has been associated with attraction to A.A. in previous research studies. A.A. requires that an alcoholic becomes integrated into a relatively permanent social group to attain and maintain sobriety. Groesbeck (1958) differentiated subsamples on the degree of affiliative orientation, and found that certain personalities are resistant to affiliation with a group and absorption into it, while others are highly responsive to such opportunities.

Studies by Button (1956) and Trice (1957) have shown that those who join A.A. possess the social skills to cope with A.A.'s spontaneous, emotion-sharing small group format. Trice (1957) found that those who belong to A.A. had conceptions of themselves as people who could readily share their problems with others and had participated on an intimate level in dyadic and group settings previous to joining A.A.

Three studies (Hanfmann, 1951; Trice, 1959; Mindlin, 1964) have shown that those who affiliate with A.A. have higher "affiliation needs" than those who do not. Trice (1959) showed that people who joined had the habit of sharing feelings, concern with friendship, acceptance, and more anxiety about separation and rejection than nonaffiliates. Trice and Roman (1970) found that successful A.A. affiliates were characterized by affiliative and group dependency needs.

Wextermeyer and Walzer (1975) have explained the connection among drug use, religion, and need for affiliation as
follows:

"For some persons certain traditional activities, such as church attendance, function as a major means for relating to other people. Bereft of this ordinary means an individual might employ other means, drug usage for example, as a focus for social intercourse" (p. 494).

Conversely, many alcoholics use drinking as a focus for social intercourse, and bereft of this means of relating to others following cessation of drinking, turn to a social-religious outlet such as A.A., which relies heavily on the power of the group to effect and support change. In A.A. there is an intimate net of friendships, and group solidarity is developed by sharing. Sobriety depends on commitment to the group (Bales, 1944).

Hoffman (1970) found that alcoholics who completed the Personality Research Form (PRF) had high scores in Affiliation, the enjoyment of being with people; Nurturance, the readiness to help others; and Succorance, the wish for protection, love, and reassurance from others. These scores indicate that in the area of interpersonal orientation, alcoholics seem to need personal contact. A.A. meets this need.

6. Religiosity A.A. does not try to determine a member's relationship with God, though such a relationship is considered necessary, since the member alone cannot free himself from alcohol. A.A. is a middle-class organization with an inspirational tone and a rather rigid and dogmatic method. A.A. members are primarily middle-aged and middle class (Edwards et al., 1967; Bean, 1975). Adolescents often find the Twelve
Steps, including the religious cast, repellent. There is also the problem of adolescent rebellion, which is normal in this age group. If going to A.A. means renouncing rebellion, the adolescent, when he feels impelled to rebel, may leave A.A. and return to self-destructive drinking.

The demographic characteristics of A.A. members, combined with the religious model on which A.A. is based (development of religious feeling is considered a safeguard against damaging narcissism, resentment, and self-pity), suggest that traditional religious beliefs are prevalent among members. A religiously oriented treatment program would also be expected to attract more individuals possessing traditional religious beliefs than would a secular treatment program. Thus, Cato (1969) found that drug users in religiously oriented aftercare programs have more traditional religious beliefs than drug users in secular programs.

7. *Purpose in Life* Fränkl (1972) assumes that the primary motivational force in man is his need to find and fulfill meaning and purpose in life; failing in this, man experiences an "existential vacuum" marked by feelings of life's futility, emptiness, and meaninglessness. The Purpose in Life Test (PIL) was developed by Crumbaugh (1968) to measure this "existential vacuum". Crumbaugh found that alcoholics had significantly lower PIL scores than a control group of nonalcoholics. Padelford (1974) found that purpose in life was significantly higher for students reporting no drug involvement.
than for students reporting high drug involvement. However, results of a study by Jacobson, Ritter, and Mueller (1977) suggest that one effect of comprehensive rehabilitation may be an increased sense of "purpose" or "meaning" in life for rehabilitated alcoholics.

Jacobson, Ritter, and Mueller (1977) point out the lack of research on purpose in life and alcoholism:

"Despite the implicit and explicit emphasis placed on spirituality, belief in a Higher Power, and related constructs among Alcoholics Anonymous groups and other traditional treatment approaches, a survey of the professional literature revealed an almost total absence of information with regard to purpose and meaning in life and personal value among adult alcoholics" (p. 315).

The authors found that, just before discharge from a 30-day inpatient treatment program for alcoholics, Purpose in Life score was significantly related to Religious scale score on the Allport-Vernon-Lindzey Study of Values.

Religion provides direction, or meaning. A religious treatment program such as A.A. attracts alcoholics who are seeking direction. Thus, most A.A. members have had the experience of "hitting bottom" previous to affiliation, and A.A. emphasizes this. Trice and Roman (1970) also failed to find evidence of social stability for successful A.A. affiliates previous to joining A.A. It is therefore expected that A.A. members have lower Purpose in Life scores in the early stages of affiliation than in the later stages of recovery.

An anonymous priest wrote the following in the April 1972 issue of Grapevine, the journal of A.A.:

"There is little doubt, from the accumulated experience
of A.A., that our spiritual recovery is the most important element of our program. Without it, most of us would be simply not drinking, seldom having that change of personality so necessary for a wholesome, serene sobriety. Speaking in the Big Book of his own recovery, Bill W. says: 'But after a while we had to face the fact that we must find a spiritual basis of life -- or else.'

A religious treatment program should attract alcoholics with lower Purpose in Life scores than alcoholics who are in a secular treatment program. Thus, Edwards et al. (1967) found that the incidence of amnesias in A.A. is significantly greater than it is among hospital patients, and that significantly more A.A. members had lost a job through drinking. These results may indicate that A.A. tends to select alcoholics with, in some respects, more severe drinking problems than the average hospital alcoholics. Such individuals may be in greater need of direction as well.

Jacobson et al. (1977) suggest a direction for future research:

"... one might test the hypothesis that religious or spiritual aspects of a rehabilitation program augment the recovery process, or that the concept of a Higher Power as embodied in the traditions of Alcoholics Anonymous may be open to empirical investigation" (p. 316).

The present study is an attempt to determine what sort of individual is likely to be affiliated with a religious treatment modality because of its unique qualities. As Edward et al. (1967) points out, surprisingly little is known about
who goes to Alcoholics Anonymous. The present study will also hopefully shed some light on the effects of such affiliation on relevant personality dimensions, as well as exploring the relation between alcoholism and religion and, in particular, the reasons for the success of religious treatment programs in modifying the drinking behaviour of alcoholics.
Hypotheses

1. The personality profiles of alcoholics who are members of Alcoholics Anonymous (a spiritually-based treatment program) differ significantly from the personality profiles of alcoholics who are in a secular treatment program, or who are not presently receiving treatment, on some subsets of the following variables: emotional dependence (sucorance), tolerance of ambiguity (cognitive structure), need for affiliation, locus of control, purpose in life, authoritarianism, and religiosity.

2. The personality profiles of alcoholics who are members of A.A. differ significantly from the personality profiles of nonalcoholics on some subsets of the variables listed above.

3. The personality profiles of alcoholics who are in a secular treatment program or who are not presently receiving treatment differ significantly from the personality profiles of nonalcoholics on some subsets of the variables listed above.
CHAPTER II
METHOD

Subjects

The present study employs three groups of subjects: a group of 49 alcoholics who are members of Alcoholics Anonymous, a group of 11 alcoholics who are not members of Alcoholics Anonymous, and a group of 45 nonalcoholics. The non-A.A. alcoholics are either untreated or in a secular treatment program. The untreated and secularly treated alcoholic samples have been grouped together because of their relatively small sizes (see the Results section). All subjects are male in order to avoid the confounding effects of sex differences.

Questionnaires were distributed by the experimenter to the representatives or directors of a number of organizations for the treatment of alcoholism, including Alcoholics Anonymous in Windsor, Detroit, and Toronto, the Connaught Clinic and the Open Door Centre in Windsor, the A.R.F. Detoxification Centre in Toronto, and the St. Thomas Hospital in St. Thomas. The nonalcoholic sample was obtained by distributing questionnaires in Toronto and Windsor. The operational definition of alcoholism for the present study was simply whether or not the subject had ever received any treatment for alcoholism. All subjects were assured that their responses would be confidential, and would only be reported in terms of group data. Subjects were allowed to take the questionnaires with them and complete them at their convenience. They were
only told that their beliefs and personality traits were being assessed. When the completed questionnaires were returned, all subjects received a debriefing sheet explaining the purpose of the study and the meaning of the various measures (see Appendix A). Three hundred and fifty questionnaires were distributed and 105 completed forms were returned. Each questionnaire consisted of demographic information and standardized measures of seven personality variables (see Table 1 and Appendix B). The entire form consisted of approximately 200 items and required about an hour to complete. Subjects also completed a "release of information" form (Appendix C). The data was collected over an eight month period.

The Questionnaire

Demographic Information All subjects completed a section requesting information concerning age, income, educational background, religious affiliation, drinking history, and history of treatment for alcoholism. Alcoholics Anonymous members were asked to indicate the length of their affiliation with A.A. and the frequency of attendance at meetings, while subjects who are affiliated with the secular treatment program completed parallel items on the length and frequency of their affiliation. Income levels, educational background, and religious affiliation did not differentiate among the
<table>
<thead>
<tr>
<th>Variable</th>
<th>Scale</th>
<th>Sample Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Locus of Control</td>
<td>Schwartz Inventory of Perceived Control (Schwartz, 1977). Subscales:</td>
<td>People in enviable positions are simply luckier than I am.</td>
</tr>
<tr>
<td></td>
<td>a) By External Forces</td>
<td>At times my temper gets out of hand.</td>
</tr>
<tr>
<td></td>
<td>b) By Impulses</td>
<td>I am capable of dominating almost any conversation.</td>
</tr>
<tr>
<td></td>
<td>c) Over Powerful Others</td>
<td>What happens to me is my own doing.</td>
</tr>
<tr>
<td></td>
<td>d) Self-Control of Outcomes</td>
<td></td>
</tr>
<tr>
<td>2. Emotional Dependence</td>
<td>PRF Succorance Scale (Jackson, 1974)</td>
<td>I don't like to be waited on.</td>
</tr>
<tr>
<td>3. Authoritarianism</td>
<td>Short-Form Dogmatism Scale (Trolldahl and Powell, 1965)</td>
<td>Most people just don't know what's good for them.</td>
</tr>
<tr>
<td></td>
<td>Shortened F for Political Surveys (Janowitz and Marvick, 1953)</td>
<td>Women should stay out of politics.</td>
</tr>
<tr>
<td>4. Need for Affiliation</td>
<td>PRF Affiliation Scale (Jackson, 1974)</td>
<td>Often I would rather be alone than with a group of friends.</td>
</tr>
<tr>
<td>Variable</td>
<td>Scale</td>
<td>Sample Item</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>5. Tolerance of</td>
<td>PRF Cognitive Structure (Jackson, 1974)</td>
<td>Uncertainty in a situation doesn't bother me.</td>
</tr>
<tr>
<td>Ambiguity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Religiosity</td>
<td>Religiosity Scales Faulkner and Dejong, 1965). Subscales:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) Ideological</td>
<td>Do you believe that the world will come to an end according to the will of God?</td>
</tr>
<tr>
<td></td>
<td>b) Intellectual</td>
<td>How do you personally view the story of creation as recorded in Genesis?</td>
</tr>
<tr>
<td></td>
<td>c) Ritualistic</td>
<td>How many of the past four Sabbath worship services have you attended?</td>
</tr>
<tr>
<td></td>
<td>d) Experiential</td>
<td>Would you say that religion offers a sense of security in the face of death which is not otherwise possible?</td>
</tr>
<tr>
<td></td>
<td>e) Consequential</td>
<td>What is your feeling about the operation of non-essential business on the Sabbath?</td>
</tr>
<tr>
<td>7. Purpose in Life</td>
<td>Purpose-in-Life Test (Crumbaugh, 1968)</td>
<td>I am usually:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Com-plete-ly Neutr-al Exub-erant Enth-usia-stic Bored</td>
</tr>
</tbody>
</table>
groups, and will not be discussed further. Drinking history and treatment history did not differentiate among the alcoholic groups, and frequency of program attendance did not distinguish between the two groups of treated alcoholics. These demographic variables will also not be further discussed.

**Personality Measures**

1. **Locus of Control** Schwartz's (1977) 63-item scale (Schwartz inventory of Perceived Control) measures perceived locus of control through the use of four subscales and also employs a social desirability scale. The four locus of control dimensions corresponding to the four subscales are:
   a) BEX (By External Forces). This sort of person feels that many of his reinforcements in life are beyond his control, and that forces such as fate, chance, luck, or powerful other persons or institutions govern what happens to him. Such a person feels, in general, that he is powerless to do anything about his lot in life.
   b) BIM (By Impulses). This type of individual frequently describes himself as being impulsive and over-emotional. In general, he feels that he is unable to control his impulses, desires, and emotions.
   c) OPO (Over Powerful Others). This type of person feels that through the use of his own personal power he is able to influence the actions of other people, institutions, etc.
For example, he may think that he can control or influence a politician's decisions in office or get other people to do special favours for him.

d) **SCO (Self-Control of Outcomes).** A person answering true to SCO items feels that his own motivation, ability, perseverance, and hard work are responsible for what happens to him in life. He typically feels that he has a great deal of control over his outcomes, and takes full responsibility for his failures as well as his successes. All 63 items are true-false.

While the validity of the scales and their relationship to other locus of control measures have not yet been demonstrated, they show high test-retest reliability (BEX .99, OPO -.981, BIM -.984, SCO .972), and internal consistency which is comparable to or better than those of Rotter's (1966) entire I-E scale (alpha coefficients: BEX .81, BIM, .54 with OPO .74, SCO .60). There was a 13 week interval between testing periods. BEX correlates .303 with BIM, .054 with OPO, and -.140 with SCO. BIM correlates .056 with OPO, and -.096 with SCO. OPO and SCO correlate .115. Schwartz does not indicate the precise relation between his scale and other measures of locus of control. Schwartz notes:

"On the whole, I am quite satisfied that the existence and relative independence of the four subscales of perceived locus of control within the 47 retained items has been firmly established" (p. 50).

A high scorer on this scale frequently seeks the sympathy, protection, love, advice, and reassurance of other people, and he may feel insecure or helpless without support. He also confides difficulties readily to a receptive person, and may be described as dependent, help-seeking, ingratiating, and defenseless. The PRF has been demonstrated to have good reliability and validity. There is a moderately high correlation between the Succorance Scale and the Feminity Scale of the California Psychological Inventory.

3. Authoritarianism and Dogmatism The present study utilizes two short scales measuring authoritarianism and dogmatism. Authoritarianism is generally seen as a rightest dimension (e.g., Adorno et al., 1950), while dogmatism is more general. The shortened P for Political Surveys (P SCALE) (Janowitz and Marvick, 1953) emphasizes two of the components of the authoritarian syndrome: authoritarian submission, "a tendency in an individual to adopt an uncritical and submissive attitude toward the moral authorities that are idealized by his ingroup"; and power and toughness, "a preoccupation with considerations of strength and weakness, domination and subservience, superiority and inferiority".

The scale consists of six items, and a six-point Likert scale is used to assess degree of agreement-disagreement with each of the six statements. When this scale was adapted for the present study, a neutral point was also included, making
it a seven-point scale, which is consistent with other scales used in the questionnaire. Though no direct information on test-retest reliability or on item test correlations was reported by the authors, several of the research findings support the conception of authoritarianism put forward by Adorno et al. (1950). This scale is short, understandable, and of demonstrated usefulness, though only one of the six items is worded negatively.

Rokeach (1956) advanced the notion of dogmatism as a suitable way to conceptualize authoritarianism, as opposed to the rightist authoritarianism measured by the California F Scale. The success of this effort is indicated by several studies (Plant, 1960; Hanson, 1968; Kerlinger and Rokeach, 1966).

The Short Dogmatism (DOGMA) Scale (Troldahl and Powell, 1965) consists of twenty statements to which the respondent indicates his degree of agreement or disagreement (a little, on the whole, or very much). This scale was also adapted as a seven-point Likert scale for consistency. The scale has high reliability and validity (.79 and .95, respectively, as reported by the authors), though no information on validity other than correlations with the total scale scores is given. The authors suggest that this twenty-item scale can be used without reluctance in field studies. It is also much more economical than Rokeach's (1960) forty-item and 66-item measures of dogmatism.
4. **Tolerance of Ambiguity**  The Cognitive Structure (CS) Scale of Jackson's (1974) Personality Research Form measures tolerance of ambiguity. An individual who scores high on this scale does not like ambiguity or uncertainty in information, and wants all questions answered completely. He desires to make decisions based upon definite knowledge, rather than upon guesses or probabilities, and may be described as precise, exacting, rigid, and needing structure.

The Cognitive Structure Scale consists of twenty true-false items. There is a high negative correlation between this scale and the Flexibility Scale of the California Psychological Inventory. The Cognitive Structure Scale is also highly correlated with the PRF Order Scale (in a positive direction) and Impulsivity Scale (in a negative direction).

5. **Need for Affiliation**  The Affiliation (AF) Scale of the PRF consists of twenty true-false items. The person who scores high on this scale enjoys being with friends and people in general. He accepts people readily, and makes efforts to win friendships and maintain associations with people. He may be described as friendly, genial, sociable, gregarious, and warm. The Sociability and Dominance Scales of the California Psychological Inventory are both moderately and positively correlated with the PRF Affiliation Scale. There are also moderate to high correlations between the Affiliation Scale and the Nurture and Autonomy Scales of the PRF; they are correlated positively and negatively respectively. Clark (1973) states that the PRF
is the most reliable and best validated test for measuring affiliation motivation.

6. **Religiosity** The Religiosity Scales of Faulkner and Dejong (1965) attempt to measure the five dimensions of religiosity proposed by Glock and Stark (1965) using the Guttman technique and consist of five subscales: a five-item ideological subscale (the ideological dimension reflects the assumption in all formal religions that adherence to a core of beliefs is essential to the religious life); a four-item intellectual subscale (the intellectual dimension reflects the expectation that a religious person will be knowledgeable about the tenets of his faith); a five-item ritualistic subscale (the ritualistic dimension encompasses the specifically religious activities prescribed by all formal religions, such as prayer and fasting); a five-item experiential subscale (the experiential dimension reflects the expectation that a religious person will at one time or another experience special feelings or direct knowledge of ultimate reality, such as the "presence" or "nearness" of God); and a four-item consequential subscale (the consequential dimension refers to the effects of religiosity in an individual's life — e.g., doing of "good works" and displaying "love of neighbour").

This scale appears to be a relatively good measure of general religiosity. Although Faulkner and Dejong do not cite evidence for the scale's validity, except for using the
Guttman procedure as a construct validity procedure, they reported the following reproducibility coefficients for the various subscales: ideological .94, intellectual .93, ritualistic .92, experiential .92, and consequential .90. No test-retest data are reported. Since the scale was based on Glock and Stark's (1965) dimensional analysis, it covers several components of religious commitment commonly ignored by other researchers. It can also be used for both Christian and non-Christian subjects.

7. **Purpose in Life** Crumbaugh's (1968) Purpose-in-Life Test (PIL) is designed to measure the degree to which a person experiences a sense of meaning and purpose in life. The PIL scale consists of twenty items rated from 1 (low purpose) to 7 (high purpose). Total scores therefore range from 20 (low purpose) to 140 (high purpose).

The PIL scale correlated significantly with the depression scale of the MMPI \((r = -.65)\). It also correlated about .40 with the Srole anomia scale. A split-half correlation of .85 was reported by Crumbaugh (1968). No test-retest data are reported. The scale's validity is given some support by the fact that PIL scores for a sample of active Protestant parishoners correlated .47 with minister's ratings of their purpose in life, and that PIL scores for a sample of outpatient neurotics correlated .38 with therapist ratings.
Operationalized Hypotheses

1. The personality profiles of alcoholics who are members of Alcoholics Anonymous (a spiritually-based treatment program) differ significantly from the personality profiles of alcoholics who are in a secular treatment program or who are not presently receiving treatment on some of the following measures: the BIM, BEX, OPO, and SCO scales of the Schwartz Inventory of Perceived Control (SIPC), the Succorance, Cognitive Structure, and Affiliation scales of the PRF, the Purpose in Life scale, the Short Dogmatism and Shortened F scales, and Faulkner and Dejong's Religiosity scales.

2. The personality profiles of alcoholics who are in a secular treatment program or who are not presently receiving treatment differ significantly from the personality profiles of nonalcoholics on some of the scales listed above.
CHAPTER III
RESULTS

One hundred and five adult males participated in the present study. Sixty subjects were alcoholics, while the remaining 45 subjects were nonalcoholics. The alcoholic sample can be further separated into 49 individuals who were active members of Alcoholics Anonymous and eleven non-members who were either receiving other forms of treatment (seven subjects) or no treatment at all (four subjects). Multiple regressions and discriminant analyses were conducted between A.A. alcoholics and nonalcoholics, non-A.A. alcoholics and nonalcoholics, and A.A. and non-A.A. alcoholics, as well as among all three groups. Correlations were also performed between all possible pairs of demographic and personality variables for each of the three groups. A.A. members' scores on relevant personality scales were correlated with length of affiliation with A.A. Means for all groups on relevant variables are listed in Table 2.

Because of the disproportionate number of A.A. members comprising the alcoholic sample, differences involving the total alcoholic sample were largely a reflection of differences involving the A.A. sample. In other words, comparing the alcoholic and nonalcoholic samples is much the same as comparing the sample of A.A. members with the nonalcoholics, since most of the alcoholics are A.A. members. However, differences between the total alcoholic and nonalcoholic samples
<table>
<thead>
<tr>
<th>Variables</th>
<th>A.A. Alcoholics (N=49)</th>
<th>Non-A.A. Alcoholics (N=11)</th>
<th>All Alcoholics (N=60)</th>
<th>Nonalcoholics (N=45)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>42.6957</td>
<td>37.0909</td>
<td>41.6140</td>
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<tr>
<td>Income</td>
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<td>20,000</td>
<td>24,000</td>
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<td>AF</td>
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<td>2.8833</td>
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<td>13.3167</td>
<td>6.2222</td>
</tr>
</tbody>
</table>
will be briefly discussed. Since there were no significant differences between the two alcoholic groups (A.A. affiliates and nonaffiliates) on the relevant personality dimensions, comparisons between the two groups will not be further discussed. The present analysis will focus instead on the differences between alcoholics affiliated with A.A. and nonalcoholics, alcoholics not affiliated with A.A. and nonalcoholics, and among all three groups (A.A. alcoholics, non-A.A. alcoholics, and nonalcoholics), and will also examine the effect of length of affiliation with A.A. on relevant personality dimensions.

The mean age of the group of A.A. members was 42.70 years, compared with 37.09 years, for the sample of alcoholics who are not affiliated with A.A., and 30.58 years for the sample of nonalcoholics. Because of the large age difference between alcoholics and nonalcoholics, it was necessary to examine the relationship between age and relevant personality variables, and to examine the effect of age on the relationship between these personality variables and alcoholism.

Figure 1 shows the multivariate means, characteristic roots, characteristic vectors, and test of significance for all three groups. Multivariate analysis of variance for three groups was used to obtain multivariate means. The multivariate mean is the sum of the products of the scale scores and characteristic vectors for each group. A characteristic vector is like a set of regression weights, but on the dependent variable. Its purpose is to form a new dependent variable which
FIRST CHARACTERISTIC ROOT  PERCENT

0.5796  83.24

CHARACTERISTIC VECTORS

<table>
<thead>
<tr>
<th>AF</th>
<th>CS</th>
<th>SU</th>
<th>INT</th>
<th>EXT</th>
<th>PIL</th>
<th>DOGMA</th>
</tr>
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<td>.6222</td>
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<td>.0115</td>
<td>-.1727</td>
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FScale  IDeo  IIntel  Rit  Exp  Cons

.1889  5.3460  .3815  2.9232  -.1683  -1.1545

SECOND CHARACTERISTIC ROOT  PERCENT

0.1167  16.76

CHARACTERISTIC VECTORS

<table>
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<tr>
<th>AF</th>
<th>CS</th>
<th>SU</th>
<th>INT</th>
<th>EXT</th>
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<td>.1229</td>
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</table>

FScale  IDeo  IIntel  Rit  Exp  Cons

.7954  4.0208  -.4931  -.9259  -3.6757  6.8578

HOTELLING-LAWLEY

TRACE  F  P

.6963  2.28  .001

MULTIVARIATE MEANS

<table>
<thead>
<tr>
<th></th>
<th>A.A. ALCOHOLICS</th>
<th>NON-A.A. ALCOHOLICS</th>
<th>NONALCOHOLICS</th>
</tr>
</thead>
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<tr>
<td>VECTOR 1</td>
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<td>VECTOR 2</td>
<td>4.8335</td>
<td>5.8852</td>
<td>4.8278</td>
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</tbody>
</table>

DIMENSION 2

7.0

A. NONALCOHOLICS (N=45)
B. A.A. ALCOHOLICS (N=49)
C. NON-A.A. ALCOHOLICS (N=11)

Figure 1

Characteristic Roots, Characteristic Vectors, Test of Significance, and Multivariate Means for All 3 Groups
is a linear combination of all dependent variables, which accounts for maximum variance. Since there were three groups, there were only two characteristic vectors, so the multivariate means for each group were plotted along two dimensions. It can be seen that the two alcoholic groups differed more from the nonalcoholic group than from each other.

The need for affiliation, succorance, religious ideological, ritualistic, and consequential variables were the main contributors to the first dimension, while the second dimension was based primarily on the religious ideological, intellectual, experiential, and consequential subdimensions. The first dimension seems to reflect the pragmatic, need-filling aspect of religion (the supportive, directive side); thus the need to socialize, emotional dependence, and religious dogma and proselytism stand out on this dimension. The non-A.A. alcoholic group fell between the A.A. alcoholic and nonalcoholic groups along the first dimension. On the second dimension, which appears to reflect a more general concept of religiosity, the non-A.A. alcoholic group differed from the A.A. alcoholic and nonalcoholic group.

A multiple regression was conducted for all three groups with age and group membership acting as independent variables, and subjects' scores on the relevant personality scales serving as dependent variables. Group membership was a significant predictor of the control by impulses, externality, religious ideological, intellectual, ritualistic, experiential, and total religiosity scale scores (see Table 3).
TABLE 3

Analysis of Covariance for A.A. Alcoholics, Non-A.A. Alcoholics, and Nonalcoholics

<table>
<thead>
<tr>
<th>Model</th>
<th>Error</th>
<th>Corrected Total</th>
<th>Group</th>
<th>Age</th>
<th>R²</th>
</tr>
</thead>
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<td></td>
<td>df</td>
<td></td>
<td>df</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dependent Variable: Control by Impulses</td>
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<td></td>
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<tr>
<td>df</td>
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<td>101</td>
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<td>SS</td>
<td>142.72</td>
<td>707.13</td>
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<td>119.87</td>
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<tr>
<td>MS</td>
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<tr>
<td>F</td>
<td>6.59**</td>
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<td>Dependent Variable: Externality</td>
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<td>df</td>
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<td>101</td>
<td>2</td>
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</tr>
<tr>
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<td>2362.03</td>
<td>2565.15</td>
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<td>Dependent Variable: Religious Ideological</td>
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<tr>
<td>F</td>
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<td></td>
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<td>19.15*</td>
<td>2.43^{a}</td>
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<td>SS</td>
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<tr>
<td>F</td>
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<td></td>
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<td>7.40**</td>
<td>12.99**</td>
</tr>
</tbody>
</table>

*P < .0001
**P < .001
***P < .01
****P < .05

^{a}Not significant
<table>
<thead>
<tr>
<th>Model</th>
<th>Error</th>
<th>Corrected Total</th>
<th>Group</th>
<th>Age</th>
<th>$R^2$</th>
</tr>
</thead>
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<td></td>
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<td>98</td>
<td>101</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>SS</td>
<td>53.93</td>
<td>134.24</td>
<td>188.17</td>
<td>27.25</td>
<td>4.95</td>
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<td></td>
<td></td>
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</tr>
<tr>
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<td>3.61*</td>
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<tr>
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<tr>
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<td>101</td>
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<tr>
<td>SS</td>
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<td>183.73</td>
<td>262.67</td>
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<tr>
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<tr>
<td>Dependent Variable: Religiosity</td>
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<tr>
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<td>22.69*</td>
<td></td>
<td></td>
<td>14.80*</td>
<td>9.37***</td>
</tr>
</tbody>
</table>

*p < .0001

**p < .001

***p < .01

****p < .05

*a Not significant
Table 4

Discriminant Analysis Classification

Summary for Three Groups

<table>
<thead>
<tr>
<th>From Group:</th>
<th>Non-A.A. Alcoholic</th>
<th>A.A. Alcoholics</th>
<th>Nonalcoholics</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-A.A. Alcoholics</td>
<td>5(^a) 45.45(^b)</td>
<td>3 27.27</td>
<td>3 27.27</td>
<td>11 100.00</td>
</tr>
<tr>
<td>A.A. Alcoholics</td>
<td>8 17.39</td>
<td>33 71.74</td>
<td>5 10.87</td>
<td>46 100.00</td>
</tr>
<tr>
<td>Nonalcoholics</td>
<td>8 17.78</td>
<td>2 4.44</td>
<td>35 77.78</td>
<td>45 100.00</td>
</tr>
</tbody>
</table>

Total
Percent

Priors

0.3333 0.3333 0.3333

Note. Three members of the A.A. group did not report their age, and were therefore not included in this analysis.

\(^a\)Number of subjects.

\(^b\)Percent classified into group.
### TABLE 5

Analysis of Covariance for Alcoholics Affiliated with A.A. and Nonalcoholics

<table>
<thead>
<tr>
<th>Model</th>
<th>Error</th>
<th>Corrected Total</th>
<th>Group</th>
<th>Age</th>
<th>(R^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>df 2</td>
<td>88</td>
<td>90</td>
<td>1</td>
<td>1</td>
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<tr>
<td></td>
<td>SS 148.11</td>
<td>574.92</td>
<td>723.03</td>
<td>124.45</td>
<td>93.03*</td>
</tr>
<tr>
<td></td>
<td>MS 74.06</td>
<td>6.53</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F 11.34*</td>
<td>19.05*</td>
<td>14.24**</td>
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</tbody>
</table>

Dependent Variable: Externality 0.0766

<table>
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<tbody>
<tr>
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<td>MS 80.35</td>
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<tr>
<td>F 3.65****</td>
<td>7.24***</td>
<td>2.33a</td>
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</table>

Dependent Variable: Religious Ideological 0.4090

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</tr>
<tr>
<td>F 30.45*</td>
<td>36.89*</td>
<td>1.85a</td>
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</table>

Dependent Variable: Religious Intellectual 0.3560

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<th>1</th>
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<td>11.98</td>
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<tr>
<td>MS 30.15</td>
<td>1.24</td>
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<tr>
<td>F 24.33*</td>
<td>15.74*</td>
<td>9.67***</td>
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</tbody>
</table>

\[p < .0001\]
\[**p < .001\]
\[***p < .01\]
\[****p < .05\]

\(^{a}\)Not significant
<table>
<thead>
<tr>
<th></th>
<th>Model</th>
<th>Error</th>
<th>Corrected Total</th>
<th>Group</th>
<th>Age</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable:</strong></td>
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<td>35.51*</td>
<td></td>
<td>32.85*</td>
<td>6.99***</td>
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* $p < .0001$
** $p < .001$
*** $p < .01$
**** $p < .05$

^a Not significant
A discriminant analysis was conducted for all three groups, with age included as a constant. The non-A.A. alcoholic group had the fewest number of subjects correctly classified at 45.45%, while 71.74% of the A.A. alcoholics and 77.78% of the nonalcoholics were correctly classified according to group membership. The discriminant model is shown in Table 4.

A comparison was conducted between the nonalcoholic sample and those alcoholics affiliated with A.A. When multiple regression was performed with group membership and age acting as independent variables, and subjects' scores on the personality scales serving as dependent variables, group membership was a significant predictor of scores on the control by impulses, externality, religious ideological, intellectual, ritualistic, experiential, and general religiosity dimensions (see Table 5).

When group membership was treated as a dependent variable and age was included as an independent variable along with the relevant personality variables, group membership was significantly predicted by need for affiliation, externality, religious ideology and ritual, and age (see Table 6).

The discriminant model did a good job of classifying subjects according to group, as shown in Table 7. When age was included as a constant, 89.13% of the A.A. group and 91.11% of the nonalcoholic group were correctly classified, thus comprising two distinct groups.
Table 6

Multiple Regression Analysis with A.A. Alcoholics and Nonalcoholics as Dependent Variables

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>R²</th>
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* p < .0001
** p < .001
*** p < .01
**** p < .05

a Not significant
### TABLE 7

**Discriminant Analysis Classification Summary**
for A.A. Members and Nonalcoholics

<table>
<thead>
<tr>
<th>From Group:</th>
<th>A.A. Alcoholics</th>
<th>Nonalcoholics</th>
<th>Total</th>
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<tr>
<td></td>
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**Note.** Three members of the A.A. group did not report their age, and were therefore not included in this analysis.

<sup>a</sup> Number of subjects.

<sup>b</sup> Percent classified into group.
The nonalcoholic sample was also compared with the sample of alcoholics who are not affiliated with A.A. When a multiple regression was performed with group membership (non-A.A. alcoholic/nonalcoholic) and age acting as independent variables, and subjects' personality scale scores serving dependent variables, group membership was a significant predictor of scores on the succorance, externality, religious ideological, ritualistic, consequential, and general religiosity scales. These results are listed in Table 8 in Appendix D. When group membership was treated as a dependent variable, and age was included as an independent variable, none of the personality scale scores were significantly predictive of group membership.

A discriminant analysis was performed for the nonalcoholic and non-A.A. alcoholic groups with age included as a constant. The discriminant model correctly classified 84.44% of the non-alcoholics and only 73.64% of the non-A.A. alcoholics, as shown in Table 9 in Appendix D. Thus, a relatively large percentage of the alcoholics who were not affiliated with A.A. had characteristics which bear a strong resemblance to the personality traits of nonalcoholics.

When a multiple regression was conducted for the total alcoholic and nonalcoholic groups with group membership and age acting as independent variables, and subjects' scores on the personality scales serving as dependent variables, group membership significantly predicted scores on control by
impulses ($F = 8.05, p < .006$), General religiosity ($F = 29.06, p < .0001$), and four of the dimensions which comprise it: ideological ($F = 38.36, p < .0001$), intellectual ($F = 13.75, p < .0003$), ritualistic ($F = 19.32, p < .0001$), and experiential ($F = 16.96, p < .0001$). When group membership was treated as a dependent variable and age was included as an independent variable, there were several significant predictors of group membership: need for affiliation ($F = 3.55, p < .06$), externality ($F = 4.24, p < .04$), religious ideology ($F = 7.96, p < .006$), and age ($F = 8.91, p < .004$). The discriminant model correctly classifies 82.46% of the alcoholic sample and 88.89% of the non-alcoholic sample when age is included as a constant.

Length of affiliation with A.A. was found to be significantly correlated in a positive direction with A.A. members' scores on the purpose in life, religious ideological, intellectual, experiential, and general religiosity scales. The negative correlation between length of affiliation with A.A. and control by impulses approached significance. All correlations involving length of affiliation with A.A. are listed in Table 10 in Appendix D. When a multiple regression was performed with length of affiliation serving as a dependent variable and age included as an independent variable, none of the personality scale scores were significantly predictive of length of affiliation with A.A.

Significant correlations between demographic and personality variables and between pairs of personality variables for
each of the three subject groups are listed in Table 11 in Appendix D. Correlations which are of particular interest will be identified and examined in the Discussion section.
CHAPTER IV
DISCUSSION

It appears, based on the discriminant analyses described in the Result chapter, that the personality measures employed in the present study do the best job of discriminating between alcoholics affiliated with A.A. and nonalcoholics.

A.A. members are generally more external than nonalcoholics on the locus of control dimension, and in particular are more controlled by their impulses. This is to be expected, since A.A. appears to exclude alcoholics whose behaviour does not conform to one of the "out of control" syndromes which form the A.A. stereotype of alcoholism (Edwards, Hensman, Hawker, and Williamson, 1967). This may also explain why the sample is so much older than the other samples. The authors suggest that A.A. may be systematically excluding young alcoholics because their drinking may not have gotten so far as total "loss of control".

Though past studies have tended to find that alcoholics are highly internal (Goss and Morosko, 1970; Gozali, 1971; Gross and Nerviano, 1972; Costello and Manders, 1974), they have relied on Rotter's (1966) Internal-External (I-E) Control Scale, which employs a forced-choice format and is based on a unidimensional construct. It is not clear whether Rotter actually observed the general principles for constructing a forced-choice test and controlling for social desirability (Schwartz, 1977). The Schwartz Inventory of Perceived Control
is multidimensional and uses a true-false format. Also, some studies (e.g., Goss and Morosko, 1970; Gross and Nerviano, 1972; Costello and Manders, 1974) have used alcoholic subjects who had not yet received treatment and were being tested as part of their admission procedure. The internality of such subjects may be alcohol-engendered. In the present study, only four out of sixty alcoholic subjects were untreated. Almost all of the subjects in the A.A. group had received extensive treatment.

A member of A.A. may not have the luxury of perceived internality because he adopts A.A.'s two central beliefs, that he is powerless and that there is a power external to him. The artificial sense of internality is therefore replaced by a more realistic external orientation. However, much of the externality of the A.A. members is due to their high control by impulses relative to nonalcoholics, which implies that alcoholism may stem, at least in part, from weak impulse control. These alcoholics have an inability to delay gratification which McCarthy (1975) suggests has its basis in permissive rather than authoritarian child-rearing patterns, and which may have caused them to become compulsive individuals associated with addiction. The negative correlation between control by impulses and length of affiliation with A.A. approaches significance, and there is also significant negative correlation between control by impulses and A.A. members' age, suggesting that the supports which A.A. provides may have a restraining effect on the alcoholic's impulses, specifically on his impulse
to drink.

The notions that alcoholism may be related to poor impulse control, and that A.A. helps the alcoholic to keep his impulse to drink in check, provide some explanation as to why the A.A. model has been successfully adapted to the treatment of other problems stemming from poor impulse control (e.g., Gamblers Anonymous, Overeaters Anonymous).

Overeaters Anonymous, for example, has 100,000 members in more than 4,800 chapters in 24 countries, and is 20 years old. It claims a high success rate, though there are no official records of successes and failures, since the organization operates anonymously. Overeaters Anonymous, like A.A., has 12 steps and 12 traditions, group meetings, and a strong spiritual-religious basis, though it claims to be nonreligious. O.A. members, like their counterparts in A.A., speak of a "Power greater than ourselves" which they often describe as God. In fact, O.A. uses A.A. literature, merely substituting "compulsive overeater" for "alcoholic" and "food" for "alcohol". Author George F. Christians states:

"The alcoholic and the compulsive overeater are brother and sister under the skin, both driven by a baffling, powerful obsession they do not understand and cannot control" (Gladstone, 1980, p. 56).

The fact that A.A. members are considerably more religious than nonalcoholics is to be expected. Since A.A. is a religiously oriented treatment program, it should attract more individuals possessing traditional religious beliefs than
would a secular treatment program. Such a program would also instill greater religiosity in its members. These expectations are partially supported by Cato's (1969) finding that drug users in religiously oriented aftercare programs have more traditional beliefs than drug users in secular programs.

High religious ideological and religious ritualistic scores are also predictive of A.A. membership. These two dimensions reflect the dogmatic side of religion. The ideological dimension is concerned with the adherence to a core of beliefs, and the ritualistic dimension is concerned with specifically religious activities prescribed by all formal religions. Thus, a dogmatic adherence to religious ideology and ritual distinguishes A.A. members from nonalcoholics.

The sample of A.A. members is the only group in the present study in which purpose in life and religiosity are significantly correlated (in a positive direction). Purpose in life is also significantly correlated in a positive direction with length of affiliation with A.A. Thus, religion appears to provide meaning or direction in life for A.A. members. This is also indicated by the last of A.A.'s Twelve Steps:

"Having had a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics and to practice these principles in all our affairs".

This supports the findings of Jacobson, Ritter, and Mueller, (1977) that comprehensive rehabilitation leads to an increased sense of purpose in life, and that purpose in life was significantly related to religiosity for alcoholics at the end
of an inpatient treatment program.

It is somewhat surprising that low need for affiliation relative to nonalcoholics is a significant predictor of affiliation with A.A., since previous studies have shown that those who affiliate with A.A. have higher affiliation needs than those who do not (e.g., Mindlin, 1964; Trice and Roman, 1970). It may be that these alcoholics, most of whom have "hit bottom" prior to joining A.A., have difficulty relating to, and gaining acceptance from, nonalcoholics. Many of these men no longer associate with the friends they had prior to joining A.A. (e.g., their old "drinking buddies"), so their need for companionship is fulfilled by affiliation with A.A.

A.A. offers its members group support and a sense of belonging, as well as spiritual values. A.A.'s function is primarily supportive; the member receives both group support and religious support. A.A. therefore performs the same function for its members that the church performs for its members.

When those alcoholics who are not affiliated with A.A. are compared with the nonalcoholic group on the relevant personality dimensions, the intergroup differences are not as great as when the A.A. and nonalcoholic groups are compared. The discriminant model indicates that over a third of the non-A.A. alcoholics have characteristics which cause them to be misclassified into the nonalcoholic group, though only 15% of the nonalcoholic subjects were misclassified into the non-A.A. group. While none of the personality scale scores were significant predictors of group membership, the succorance, externality, religious ideological, ritualistic, consequential,
and general religiosity scale scores were significantly predicted by group affiliation.

It was expected that the A.A. group would score high on the religiosity dimension, but it is surprising that the group of non-A.A. alcoholics is so much more religious than the non-alcoholic group. Since the non-A.A. alcoholics also scored significantly higher on the succorance (emotional dependence) dimension than the nonalcoholic group, it may therefore be that alcoholics in general tend to seek solace from religion. Thus, the total alcoholic sample was also significantly more religious than the nonalcoholic sample. This also explains the success of A.A. and other spiritual programs in the treatment of alcoholism. It is also possible that the high religiosity scores of the non-A.A. alcoholics are simply artifactual, due to the small size of this sample (eleven subjects).

While previous studies investigating locus of control and alcoholism have mostly found that alcoholics are relatively internal, people who have lost control of their drinking might logically be expected to be externals, or persons who do not perceive themselves in control of their own behaviour. Butts and Chotlos (1973) found that alcoholics in a Veterans Administration hospital were significantly more external than a sample of nonalcoholics.

Carman (1974) found that among rural high school students who were presently engaged in some form of alcohol use, those students reporting a greater belief in external locus of control were significantly more likely to indicate problem-oriented personal psychological motivations for their drinking, and
were less satisfied with daily life in these rural communities. In other words, students who were high in perceived external control were potential problem drinkers.

Whereas the high external scores of the group of A.A. members (and the total alcoholic sample) were due primarily to high control by impulses scores, the control by external forces and control by impulses scores of the non-A.A. alcoholic sample (both of which yield nonsignificant F values) contribute equally to their high scores relative to the scores of the nonalcoholic group on the external dimension. In other words, the non-A.A. alcoholics do not appear to be as controlled by their impulses as the A.A. alcoholics.

When a discriminant analysis was conducted for all three groups, the non-A.A. alcoholic groups had a much lower percentage of correctly classified subjects than either the A.A. alcoholic or nonalcoholic groups. Equal numbers of non-A.A. alcoholics were misclassified into the A.A. alcoholic and nonalcoholic groups. Also, most of the subjects in the A.A. and nonalcoholic samples can be envisioned as being at the opposite ends of a continuum, with the non-A.A. sample falling in between. In other words, the personality profile of the group of non-A.A. alcoholics falls between the personality profiles of A.A. members and nonalcoholics. The multivariate means indicate that the non-A.A. alcoholic group's personality profile is closer to the profile of the A.A. alcoholic group than to that of the nonalcoholic group.

A multiple regression for all three groups found that
subjects' scale scores for control by impulses, externality, and general religiosity (and all of the dimensions which comprise it, except religious consequential) were significant predictors of group membership. The nonalcoholic sample had the lowest scores on all of these scales, while the A.A. group had the highest scores on all significant predictors except the external scales. Since the exact same scales are significant predictors of group membership in both the multiple regression comparing all three groups and the multiple regression comparing just the A.A. and nonalcoholic groups, it appears that the differences which emerge from the multiple regression for all three groups are a reflection of the differences between the A.A. and the nonalcoholic samples.

The two main limitations of this study must be reiterated. Firstly, the average age of the alcoholic sample (and particularly the members of A.A.) is considerably greater than the mean age of the nonalcoholic sample. This age disparity is due partly to the fact that A.A. members tend to remain affiliated with the organization for several years. The average length of affiliation for the sample of A.A. members in the present study is 6.15 years. Also, since it may take several years before the alcoholic's drinking gets "out of control," or he develops health problems from excessive drinking, and since the alcoholic generally has to encounter personal adversity before seeking help, most A.A. members are at least in their forties. In addition, many of the nonalcohols who participated in this study were recruited within the University of Windsor, so the mean age of this sample tends to be somewhat
younger than that of the alcoholic sample. Future studies which involve A.A. members should endeavour to control for their relatively advanced age by using a comparable mean age. The present study controls for the age discrepancy through statistical manipulation, as outlined in the Results section.

The second limitation of the present study is the small size of the group of non-A.A. alcoholics. This group consists of alcoholics who are receiving traditional secular forms of treatment such as hospitalization and psychotherapy, and alcoholics who are not receiving treatment. Most alcoholics who have received treatment have come into contact with A.A., and many have been affiliated with A.A. for extended periods of time. Thus, alcoholics who are in spiritual and secular treatment programs do not form two mutually exclusive groups; there is considerable overlap. There is also a reluctance on the part of those professionals who are in charge of treatment programs to cooperate with a study which they interpret as comparing the success of their program to the success of other programs. Alcoholics are reluctant to cooperate because they distrust anyone who is perceived as a professional in the field of alcoholism treatment. This distrust is based on the unpleasant experiences which most of the alcoholics seem to have had within the traditional treatment system.

It is also difficult to find a sample of untreated alcoholics. Most individuals who have been diagnosed as alcoholic have received treatment for their condition at some point.
Those alcoholics who are truly untreated are often reluctant to participate in a study because of the stigma of being identified as an alcoholic, or else are incapable of doing so because of their condition. Thus, it was necessary to obtain a sample of nonalcoholics to serve as a control group, though a sample of untreated alcoholics of equal size may have been preferable. A nonalcoholic control group allows us to distinguish the effects of alcoholism on personality, while the group of non-A.A. alcoholics, though relatively small, gives some indication of the effect which A.A. has on personality when the two alcoholic samples are compared.

To summarize, the main finding of the present study is that alcoholics affiliated with A.A. are significantly more controlled by their impulses, more external on the locus of control dimension, more traditionally religious, and are lower in affiliative need than nonalcoholics. Alcoholics who are not affiliated with A.A. also appear to be significantly more external and religious than nonalcoholics, as well as more emotionally dependent. However, there are no significant differences between A.A. and non-A.A. alcoholics. Thus, the results of the present study support the second and third hypotheses, but fail to confirm the first hypothesis. The personality differences between alcoholics and nonalcoholics are much greater than the differences between alcoholics in different treatment modalities, suggesting that alcoholism has a greater impact on personality than treatment does.
Alcoholics Anonymous seems to control the alcoholic's impulse to drink by meeting his need for affiliation through group support, and by providing purpose in life through spiritual support. It appears, based on the claims of organizations such as Overeaters Anonymous, that A.A.'s treatment approach can be successfully generalized to other problems stemming from poor impulse control, such as gambling, smoking, and overeating. This generalizability of the treatment method advocated by A.A. and the high impulsivity of its members seem to support a psychological rather than physiological model of alcoholism. It remains for future studies to determine whether there are personality similarities among groups with different problems stemming from weak impulse control, and whether individuals who succeed in the various treatment programs based on the A.A. model (e.g., Overeaters Anonymous, Gamblers Anonymous) have personality traits in common.

The present study offers a personality profile of longtime A.A. members in comparison to other alcoholics and nonalcoholics, and therefore some indication of the type of individual who is suited to the sort of treatment which A.A. offers. Such an individual should be impulsive and have a religious orientation. He may also be seeking the purpose in life and sense of belonging which A.A. provides (as indicated, respectively, by a positive correlation between purpose in life and length of affiliation with A.A., and a relatively low affiliation score which suggests that A.A. may be fulfilling the
need for companionship).

The present study failed to replicate the findings of past studies in that the sample of A.A. members did not differ significantly from the nonalcoholic sample in emotional dependence, tolerance of ambiguity, dogmatism, authoritarianism, or purpose in life. A.A. members do not appear to be affiliated with the organization because of the negative aspects of religiosity (i.e., emotional dependence, authoritarianism-dogmatism, intolerance of ambiguity). Previous studies investigating personality traits of alcoholics have rarely compared A.A. members with nonalcoholics, but have used other alcoholic groups for comparison. Whereas past studies have found that A.A. members are more affiliative than nonmembers, and that alcoholics are more internal than nonalcoholics, the present study found just the opposite.

The sample of non-A.A. alcoholics also did not differ significantly from the nonalcoholic sample in need for affiliation, tolerance of ambiguity, dogmatism, authoritarianism, purpose in life, or control by impulses. In addition, there were no significant differences among the three groups on the self-control of outcomes, control over powerful others, control by external forces, or internality dimensions, and the two alcoholic groups did not differ significantly from one another on any of the variables which the present study undertook to examine. Thus, the first hypothesis was disproven, while the second and third hypotheses were partially supported.
APPENDIX A

DEBRIEFING SHEET
THE STUDY

In general, alcoholism treatment programs may be divided into those programs which have as their basis a secular format (i.e., those forms of treatment which are based on the medical model, employing hospitalization, drug therapy, psychoanalysis, etc.) and those programs which are based on spiritual or religious format. The present study is an attempt to distinguish alcoholics who are involved in treatment programs with a spiritual vs. secular orientation on the basis of personality differences. This study is also examining personality differences of alcoholics in the early vs. later stages of the spiritually-based treatment program. In addition, alcoholics who are presently receiving treatment are being compared with those who are not.

The present study will aid in the determination of what types of individuals are affiliated with the different kinds of treatment programs, and the effects of such affiliation on relevant personality dimensions. The end result of this research might be as test battery which can be used to determine which type of treatment would be most effective for a certain individual, thus minimizing the treatment failures and drop-outs which occur in the trial-and-error approach to choosing a form of treatment.

THE QUESTIONNAIRE

Section I of the questionnaire consists of demographic information (age, income, education, treatment history, etc.)

Section II contains items which can be grounded into four scales measuring the following four personality variables:

1. Locus of control (the extent that the individual perceives contingency relationships between his actions and outcomes - in other words, do you feel that you're responsible for your own fate, or that it's controlled by such things as luck, chance, or powerful others);

2. Tolerance of ambiguity (willingness to tolerate ambiguous situations and and material - the extent of your need to see things in "black and white");

3. Need for affiliation (whether you're the type of person who needs lots of friends and socializing);
4. Emotional dependence (the extent to which you depend on other people).

Section III measures purpose in life (the need to find and fulfill meaning in life).

Section IV contains measures of dogmatism and authoritarianism (an antidemocratic, potentially fascist, unquestioning obedience to authority).

Section V measures religiosity.

Again, thank you for taking the time to fill out the questionnaire. When the study is completed (hopefully in another six to eight months), the general results will be forwarded to you.

Lyn Goldenthal
APPENDIX B

THE QUESTIONNAIRE
PERSONAL ASSESSMENT FORM

This questionnaire is an attempt to find out about some of your beliefs and certain aspects of your personality. It is anonymous, and all information will be kept confidential. Please try to be as honest as possible. It is also important that you answer every question and leave nothing out. The questionnaire is divided into five sections. Each section has its own instructions. Thank you for your cooperation.
SECTION I

Background Information

Complete the following:

1. Age (in years) __________

2. Annual Family Income (Check one of the following):

☐ Over $50,000
☐ $35,000 - $50,000
☐ $25,000 - $34,000
☐ $20,000 - $24,000
☐ $15,000 - $19,000
☐ $10,000 - $14,000
☐ $ 5,000 - $ 9,000
☐ Below $5,000

3. Educational Background: Indicate the highest year of education, and any degrees obtained.

Elementary or High School Grade __________

University Year __________

University Degree __________

Professional or Postgraduate Degrees __________

4. Religion (Check one):

☐ Protestant
☐ Catholic
☐ Jewish
☐ Other (Specify) __________

5. When was the last time that you had a drink of liquor, wine or beer?

_________________________________ ago.
6. (a) What was the last alcoholic drink that you had? (Check one)
  □ beer
  □ wine
  □ liquor

(b) When you last took a drink, was it part of a heavy drinking session?
  □ Yes
  □ No

(c) If not, when did you last have a heavy drinking session? ____________________________ ago.

7. Treatment History for Alcoholism:

i) What type(s) of treatment are you presently receiving? (Check appropriate box or boxes):
  □ Alcoholics Anonymous
  □ inpatient intensive treatment (i.e., hospitalization)
  □ daycare intensive treatment (non-residential)
  □ recovery home program (e.g., halfway or quarterway house)
  □ detoxification ("drying out")
  □ drug therapy (e.g., Antabuse, Temposil, tranquilizers, etc.)
  □ individual counselling or therapy
  □ group counselling or therapy
  □ drop-in program
  □ other (please specify) ____________________________

ii) How long have you been receiving this treatment? Fill in where appropriate. (For example, Alcoholics Anonymous three years ____________).

  Alcoholics Anonymous ____________________________
  inpatient intensive treatment (i.e., hospitalization) ____________________________
  daycare intensive treatment (non-residential) ____________________________
  recovery home program (e.g., halfway house or quarterway house) ____________________________
  detoxification ("drying out") ____________________________
  drug therapy (e.g., Antabuse, Temposil, tranquilizers, etc.) ____________________________
iii) How frequently do you receive this treatment? Fill in where appropriate. (For example, drug therapy 3 times per week).

Alcoholics Anonymous: ___ times per ___

Inpatient intensive treatment (i.e., hospitalization) ___ times per ___

Daycare intensive treatment (non-residential) ___ times per ___

Recovery home program (e.g., halfway or quarterway house) ___ times per ___

Detoxification ("drying out") ___ times per ___

Drug therapy (e.g., Antabuse, Temposium, tranquilizers, etc.) ___ times per ___

Individual counselling or therapy ___ times per ___

Group counselling or therapy ___ times per ___

Drop-in program ___ times per ___

Other (specify) ___ times per ___

iv) Prior to the treatment which you are presently receiving, have you received any treatment in the past? (Check appropriate box or boxes.) Also, please indicate how long ago it was that you received this treatment. (For example, group therapy two years ago).

☐ Alcoholics Anonymous ___ ago

☐ Inpatient intensive treatment (i.e., hospitalization) ___ ago

☐ Daycare intensive treatment (non-residential) ___ ago

☐ Recovery home program (e.g., halfway or quarterway house) ___ ago

☐ Detoxification ("drying out") ___ ago

☐ Drug therapy (e.g., Antabuse, Temposium, tranquilizers, etc.) ___ ago

☐ Individual counselling or therapy ___ ago

☐ Group counselling or therapy ___ ago

☐ Drop-in program ___ ago

☐ Other ___ ago
SECTION II

The following statements might be used by a person to describe himself. Read each statement and decide whether or not it describes you. If you agree with a statement or decide that it does describe you, check T (TRUE). If you disagree with a statement or feel that it is not descriptive of you, check F (FALSE). Answer every statement either true or false, even if you are not completely sure of your answer.

1. Often I would rather be alone than with a group of friends.  
   T  F

2. When I talk to a doctor, I would rather just have him tell me what to do than go into details of my problem.  
   T  F

3. I don't like to be waited on.  
   T  F

4. If a person does a favour for me, I like to do something in return.  
   T  F

5. I often try to predict what will happen in the future from my own past experiences.  
   T  F

6. It is important to me to know that others care how I feel.  
   T  F

7. I think that fame is more rewarding than friendship.  
   T  F

8. Uncertainty in a situation doesn't bother me.  
   T  F

9. It doesn't depress me to realize that no one is thinking about me.  
   T  F

10. When I meet old acquaintances, I usually give them a very warm welcome.  
    T  F

11. In general, I feel that people should be more definite and decisive.  
    T  F

12. I usually try to share my burdens with someone who can help me.  
    T  F

13. I don't spend much of my time talking with the people I see every day.  
    T  F

14. My work is organized loosely, if at all, and therefore it is adjustable.  
    T  F

15. As a child, I disliked having to be dependent on other people.  
    T  F

/
16. Having friends is very important to me.  
17. When someone gives me street directions, I usually ask several questions and repeat the directions to make sure I have everything clearly in mind.  
18. I like to ask other people's opinions concerning my problems.  
19. I don't care whether or not the people around me are my friends.  
20. I don't mind being around people who change their minds often.  
21. I keep my problems to myself.  
22. People consider me to be warm and friendly.  
23. I don't like to start a project until a decision has been made as to the best way to proceed.  
24. I prefer to face misfortune with a friend at my side.  
25. I am not considered sociable.  
26. I can feel comfortable even when I have a number of questions in mind for which I have no good answer.  
27. The person I marry won't have to spend much time taking care of me.  
28. I think that a person must know how to get along well with others before he can be a success.  
29. Once I begin to solve a puzzle or problem I have a hard time concentrating on anything else until I find the answer.  
30. As a child, if I imagined frightening things I ran to my mother for comfort.  
31. I seldom put out extra effort to make friends.  
32. I often start work on something when I have only a very hazy idea of what the end result will be.  
33. If I have a problem, I like to work it out alone.  
34. I need the feeling of "belonging" that comes from having friends.
35. When I go on a trip I try to plan a timetable for it beforehand.  
36. If I am depressed I go to friends who can snap me out of it.  
37. I don't really have fun at large parties.  
38. I rarely consider the daily weather report when deciding what to wear.  
39. I don't like to be with people who are always trying to protect me from danger.  
40. I think that any experience is more significant when shared with a friend.  
41. Often when I telephone someone, I think about what I intend to say or make a list of things to discuss.  
42. I would like to be married to a protective and sympathetic person.  
43. I don't believe in showing lots of affection toward friends.  
44. I seldom organize my activities so completely that I can tell what I will be doing at some future time.  
45. I would rather act on my own responsibility than have a superior help me.  
46. My friendships are many.  
47. I keep very close track of my money and finances so that I will know how much I can spend if anything unexpected comes up.  
48. I want to be sure someone will take care of me when I'm old.  
49. I would not be very good at a job which required me to meet people all day long.  
50. I think theories are useful as guides for thought even when they are not related to facts.  
51. I am not afraid of being alone.  
52. I like to work with other people rather than all alone.  
53. I try to organize for my future so that I can tell what I will be doing at any given time.
54. If I have a problem I prefer to take it to an expert instead of solving it alone.  
55. Sometimes I have to make a concentrated effort to be sociable.  
56. I enjoy a certain amount of unpredictability in my daily activities.  
57. I enjoy making my own decisions.  
58. I choose hobbies that I can share with other people.  
59. I plan my work carefully in advance and follow the plan exactly.  
60. I have trouble making decisions without advice.  
61. My life is full of interesting activities.  
62. If I wanted to do so, I could influence the actions and decisions of many powerful individuals.  
63. People in enviable positions are simply luckier than I am.  
64. Something I cannot do is have complete mastery over the way I behave.  
65. I often question whether life is worthwhile.  
66. By active participation in the appropriate political organizations, I could do a lot to keep the cost of living from going higher.  
67. When I want something special, I want it immediately and have a hard time waiting to obtain it.  
68. I have often found that what is going to happen will happen and there is little I can do about it.  
69. I would be willing to do something a little unfair to get something that was important to me.  
70. There will always be wars and there is nothing I can do about it.  
71. Sometimes I impulsively do things which at other times I definitely would not let myself do.
72. What happens to me is my own doing.
73. I get along with people at parties quite well.
74. It is not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
75. No matter how strong my emotion, it would never cause me to act without thinking.
76. Getting what I want requires pleasing those people above me.
77. I am one of the lucky people who could talk with my parents about problems.
78. There are moments when I cannot subdue my emotions and keep them in check.
79. I could teach child psychologists a thing or two about children.
80. Because of misfortune or bad luck, my personal worth often passes unrecognized no matter how hard I try.
81. I can always resist the temptation to act impulsively.
82. If someone gave me too much change I would tell him.
83. I would have very little chance of protecting my personal interests if they were to come in conflict with those of strong pressure groups.
84. I am seldom successful in concealing strongly felt emotions.
85. The misfortunes and successes I have had were the direct result of my own behaviour.
86. For me to become a boss or supervisor would depend a lot on happening to be in the right place at the right time.
87. I could convince a policeman not to give me a traffic ticket if I tried hard.
88. I believe people tell lies any time it is to their advantage.
89. I would find it difficult not to brood or sulk if a close friend let me down.

90. To succeed in the stock market all I would need is some good luck.

91. I believe I could talk almost any teacher into giving me a higher grade.

92. I did many very bad things as a child.

93. What I do now and in the future will be determined by me alone.

94. To a great extent my life is controlled by accidental happenings.

95. I am always prepared to do what is expected of me.

96. When going out with friends we usually do whatever I suggest.

97. At times my temper gets out of hand.

98. If a supervisor felt I should not get a raise, nothing I could do or say would change it.

99. I am capable of dominating almost any conversation.

100. My getting a good job or promotion in the future will depend a lot on getting the right turn of fate.

101. I am quite able to make correct decisions on difficult questions.

102. Even if I try not to submit, I often find I cannot control myself from some of the enticements of life such as over-eating or drinking.

103. I am glad I grew up the way I did.

104. I would probably buy an article of clothing if the salesperson said it looked good on me.

105. Whether or not I get into a car accident is mostly a matter of luck.

106. When I put my mind to it I can constrain my emotions.
107. I could easily convince others that I was experienced in a field which I knew very little about.

108. I am never able to do things as well as I should.

109. There are some mistakes which I seem to make over and over again, even though I know better.

110. This world is run by a few people in power and there is not much that I can do about it.

111. My accomplishments in life typically turn out to be the result of ability and perseverance.

112. I am careful to plan for my distant goals.

113. Astrology or something similar might be a useful aid in planning my daily activities.

114. If I do not attain my life's goal, I will have no one to blame but myself.

115. In general, it seems that who I know in life is more important than what I know.

116. I find it very difficult to concentrate.

117. I would have little difficulty getting people to help me even if they did not particularly want to.

116. Sometimes I say things which I find hard to believe that I said.

119. Whether an instructor likes me is often a more important determinant of my grade than is my ability.

120. My daily life includes many activities I dislike.

121. Many times I feel I might just as well decide what to do by flipping a coin.

122. I have the capacity to be an excellent fundraiser for a charity.

123. Many things make me feel uneasy.
SECTION III

For each of the following statements, circle the number that would be most nearly true for you. Note that the numbers always extend from one extreme feeling to its opposite kind of feeling. "Neutral" implies no judgement either way. Try to use this rating as little as possible.

1. I am usually:

   1 2 3 4 5 6 7
   completely    Neutral       exuberant,
   bored         enthusiastic

2. Life to me seems:

   7 6 5 4 3 2 1
   always        completely
   exciting      routine

3. In life I have:

   1 2 3 4 5 6 7
   no goals or aims
   neutral at all
   very clear goals
   and aims

4. My personal existence is:

   1 2 3 4 5 6 7
   utterly        very purposeful
   meaningless,   and meaningful
   without        purpose
   purpose

5. Every day is:

   7 6 5 4 3 2 1
   constantly     exactly the same
   new and
different

6. If I could choose, I would:

   1 2 3 4 5 6 7
   prefer        like nine more
   never to      lives just like
   have been     this one
   born
7. After retiring, I would:
   1 2 3 4 5 6 7
   loaf completely
   the rest of my
   life.
   Neutral
   do some of
   the exciting
   things I have
   always wanted
   to do.

8. In achieving life goals I have:
   1 2 3 4 5 6 7
   progressed to
   complete
   fulfillment
   Neutral
   made no
   progress
   whatsoever

9. My life is:
   1 2 3 4 5 6 7
   running over
   with exciting
   good things
   Neutral
   empty,
   filled only
   with despair

10. If I should die today, I would feel that my life has been:
    1 2 3 4 5 6 7
    completely
    worthless
    Neutral
    very worth-
    while

11. In thinking of my life, I:
    1 2 3 4 5 6 7
    always see a
    reason for
    being here
    Neutral
    often wonder
    why I exist

12. As I view the world in relation to my life, the world:
    1 2 3 4 5 6 7
    fits meaningfully
    with my life
    Neutral
    completely
    confuses me

13. I am a:
    1 2 3 4 5 6 7
    very responsible
    person
    Neutral
    very irresponsible
    person
14. Concerning man's freedom to make his own choices, I believe man is:

7 6 5 4 3 2 1 completely bound by limitations of heredity and environment
absolutely free to make all life choices

15. With regard to death, I am:

7 6 5 4 3 2 1 Unprepared and frightened
prepared and unafraid

16. With regard to suicide, I have:

1 2 3 4 5 6 7 never given it a second thought
thought of it seriously as a way out

17. I regard my ability to find a meaning, purpose, or mission in life as:

7 6 5 4 3 2 1 practically none
very great

18. My life is:

7 6 5 4 3 2 1 out of my hands and controlled by external factors
in my hands and I am in control of it

19. Facing my daily tasks is:

7 6 5 4 3 2 1 a painful and boring experience
a source of pleasure and satisfaction

20. I have discovered:

1 2 3 4 5 6 7 clear-cut goals and a satisfying life purpose
no mission or purpose in life
SECTION IV

Indicate how much you agree or disagree with each of the following statements by circling the number which most nearly corresponds to your feelings. Try to use the "don't know" response as little as possible.

-3. Disagree very much  3. Agree very much
-2. Disagree on the whole  2. Agree on the whole
-1. Disagree a little  1. Agree a little
0. Don't know

Example: First impressions are very important.

3 2 1 0 1 2 3
Disagree Don't Agree
very much Know very much

This indicates that you disagree a little with the statement.

1. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.

-3 -2 1 0 1 2 3
Disagree Don't Agree
very much Know very much

2. My blood boils whenever a person stubbornly refuses to admit he's wrong.

3 -2 1 0 1 2 3
Disagree Don't Agree
very much Know very much

3. There are two kinds of people in this world: those who are for the truth and those who are against the truth.

3 2 1 0 1 2 3
Disagree Don't Agree
very much Know very much
4. Most people just don't know what's good for them.

-3 2 1 0 1 2 3
| Disagree very much | Don't Know | Agree very much |

5. Of all the different philosophies which exist in this world, there is probably only one which is correct.

-3 2 1 0 1 2 3
| Disagree very much | Don't Know | Agree very much |

6. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.

-3 2 1 0 1 2 3
| Disagree very much | Don't Know | Agree very much |

7. The main thing in life is for a person to want to do something important.

-3 -2 1 0 1 2 3
| Disagree very much | Don't Know | Agree very much |

8. I'd like it if I could find someone who would tell me how to solve my personal problems.

-3 2 1 0 1 2 3
| Disagree very much | Don't Know | Agree very much |
9. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.

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10. Man on his own is a helpless and miserable creature.

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11. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.

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12. Most people just don't give a "damn" for others.

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13. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.

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14. It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.

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15. The present is all too often full of unhappiness. It is only the future that counts.

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16. The United States and Russia have just about nothing in common.

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17. In a discussion I often find it necessary to repeat myself several times to make sure I am understood.

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18. While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein, or Beethoven, or Shakespeare.

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19. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.

\[
\begin{array}{cccccc}
3 & 2 & 1 & 0 & 1 & 2 \\
\text{Disagree} & \text{Don't} & \text{Know} & \text{Agree} \\
\text{very much} & \text{very much} & \text{very much} & \\
\end{array}
\]

20. It is better to be a dead hero than to be a live coward.

\[
\begin{array}{cccccc}
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\text{Disagree} & \text{Don't} & \text{Know} & \text{Agree} \\
\text{very much} & \text{very much} & \text{very much} & \\
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21. Human nature being what it is, there will always be war and conflict.

\[
\begin{array}{cccccc}
3 & 2 & 1 & 0 & 1 & 2 \\
\text{Disagree} & \text{Don't} & \text{Know} & \text{Agree} \\
\text{very much} & \text{very much} & \text{very much} & \\
\end{array}
\]

22. A few strong leaders could make this country better than all the laws and talk.

\[
\begin{array}{cccccc}
3 & 2 & 1 & 0 & 1 & 2 \\
\text{Disagree} & \text{Don't} & \text{Know} & \text{Agree} \\
\text{very much} & \text{very much} & \text{very much} & \\
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23. Women should stay out of politics.

\[
\begin{array}{cccccc}
3 & 2 & 1 & 0 & 1 & 2 \\
\text{Disagree} & \text{Don't} & \text{Know} & \text{Agree} \\
\text{very much} & \text{very much} & \text{very much} & \\
\end{array}
\]
24. Most people who don't get ahead just don't have enough will power.

-3  -2  -1  0  1  2  3
Disagree very much Don't know Agree very much

25. An insult to your honour should not be forgotten.

-3  -2  -1  0  1  2  3
Disagree very much Don't know Agree very much

26. People can be trusted.

-3  -2  -1  0  1  2  3
Disagree very much Don't know Agree very much
SECTION V

For each of the following questions, circle the one answer which most corresponds to your beliefs. (Circle the number of the answer you choose).

1. Do you believe that the world will come to an end according to the will of God?
   1. Yes, I believe this.
   2. I am uncertain about this.
   3. No, I do not believe this.

2. Which of the following statements most clearly describes your idea about the Deity?
   1. I believe in a Divine God, Creator of the Universe, who knows my innermost thoughts and feelings, and to Whom one day I shall be accountable.
   2. I believe in a power greater than myself, which some people call God and some people call Nature.
   3. I believe in the worth of humanity but not in a God or Supreme Being.
   4. The so-called universal mysteries are ultimately knowable according to the scientific method based on natural laws.
   5. I am not quite sure what I believe.
   6. I am an atheist.

3. Do you believe that it is necessary for a person to repent before God will forgive his sins?
   1. Yes, God's forgiveness comes only after repentance.
   2. No, God does not demand repentance.
   3. I am not in need of repentance.

4. Which one of the following best expresses your opinion of God acting in history?
   1. God has and continues to act in the history of mankind.
   2. God acted in previous periods but is not active at the present time.
   3. God does not act in human history.

5. Which of the following best expresses your view of the Bible?
   1. The Bible is God's word and all it says is true.
   2. The Bible was written by men inspired by God, and its basic moral and religious teachings are true, but because writers were men, it contains some human errors.
   3. The Bible is a valuable book because it was written by wise and good men, but God had nothing to do with it.
   4. The Bible was written by men who lived so long ago that it is of little value today.
6. How do you personally view the story of creation as recorded in Genesis?

1. Literally true history.
2. A symbolic account which is no better or worse than any other account of the beginning.
3. Not a valid account of creation.

7. Which of the following best expresses your opinion concerning miracles?

1. I believe the report of the miracles in the Bible; that is, they occurred through a setting aside of natural laws by a higher power.
2. I do not believe in the so-called miracles of the Bible. Either such events did not occur at all, or if they did, the report is inaccurate, and they could be explained upon scientific grounds if we had the actual facts.
3. I neither believe nor disbelieve the so-called miracles of the Bible. No evidence which I have considered seems to prove conclusively that they did or did not happen as recorded.

8. What is your view of the following statement: Religious truth is higher than any other form of truth?

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

9. Would you write the names of the four Gospels? If you are Jewish, what are the first five books of the Old Testament?

10. Do you feel it is possible for an individual to develop a well-rounded religious life apart from the institutional church?

1. No
2. Uncertain
3. Yes
11. How much time during a week would you say you spend reading the Bible and other religious literature?
   1. One hour or more
   2. One-half hour
   3. None

12. How many of the past four Sabbath worship services have you attended?
   1. Three or more
   2. Two
   3. One
   4. None

13. Which of the following best describes your participation in the act of prayer?
   1. Prayer is a regular part of my behaviour.
   2. I pray primarily in times of stress and/or need, but not much otherwise.
   3. Prayer is restricted pretty much to formal worship services.
   4. Prayer is only incidental to my life.
   5. I never pray.

14. Do you believe that for your marriage the ceremony should be performed by:
   1. A religious official.
   2. Either a religious official or a civil authority.
   3. A civil authority.

15. Would you say that one's religious commitment gives life a certain purpose which it could not otherwise have?
   1. Strongly agree
   2. Agree
   3. Disagree

16. All religions stress that belief normally includes some experience of "union" with the Divine. Are there particular moments when you feel "close" to the Divine?
   1. Frequently
   2. Occasionally
   3. Rarely
   4. Never
17. Would you say that religion offers a sense of security in the face of death which is not otherwise possible?
   1. Agree
   2. Uncertain
   3. Disagree

18. How would you respond to the statement: "Religion provides the individual with an interpretation of his existence which could not be discovered by reason alone?"
   1. Strongly agree
   2. Agree
   3. Disagree

19. Faith, meaning putting full confidence in the things we hope for and being certain of things we cannot see, is essential to one's religious life.
   1. Agree
   2. Uncertain
   3. Disagree

20. What is your feeling about the operation of non-essential businesses on the Sabbath?
   1. They should not be open.
   2. I am uncertain about this.
   3. They have a legitimate right to be open.

21. A boy and a girl, both of whom attend church frequently, regularly date one another and have entered into sexual relations with each other. Do you feel that people who give at least partial support to the church by attending its workshop services should behave in this manner? Which of the following statements expresses your opinion concerning this matter?
   1. People who identify themselves with the church to the extent that they participate in its worship services should uphold its moral teachings as well.
   2. Sexual intercourse prior to marriage is a matter of individual responsibility.

22. Two candidates are seeking the same political offices. One is a member and a strong participant in a church. The other candidate is indifferent, but not hostile, to religious organizations. Other factors being equal, do you think the candidate identified with the church would be a better public servant than the one who has no interest in religion?
   1. He definitely would.
   2. He probably would.
   3. Uncertain.
   4. He probably would not.
   5. He definitely would not.
23. Suppose you are living next door to a person who confides in you that each year he puts down on his income tax a $50.00 contribution to the church in "loose change," even though he knows that while he does contribute some money to the church in "loose change" each year, the total sum is far below that amount. Do you feel that a person's religious orientation should be reflected in all phases of his life so that such behaviour is morally wrong—that it is a form of lying?

1. Yes
2. Uncertain
3. No

Your ordeal is over. Thank you for taking the time to complete this questionnaire. Please make sure that you haven't left out any questions.
APPENDIX C

"RELEASE OF INFORMATION" FORM
CONSENT TO THE DISCLOSURE OR TRANSMITTAL OF INFORMATION

I, ____________________________________________
(print full name)

of ___________________________________________
(address)

hereby consent to the disclosure or transmittal by Lyn Goldenthal of the University of Windsor of the information compiled in the Personal Assessment Form. I understand that results will only be reported in terms of group data, that my individual results will remain confidential, and that all questionnaires will be destroyed upon completion of the study.

____________________________________________
(signature)

Dated the ________ day of ______________________ 19____

at ___________________________________________
(name of program or institution)
APPENDIX D

ADDITIONAL TABLES
### TABLE 8
Analysis of Covariance for Non-A.A. Alcoholics and Nonalcoholics

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*p < .0001
**p < .001
***p < .01
****p < .05

aNot significant
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* $P < .0001$
** $P < .001$
*** $P < .01$
**** $P < .05$

a Not significant


**TABLE 9**

Discriminant Analysis Classification Summary
for Non-A.A. Alcoholics and Nonalcoholics

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<sup>a</sup>Number of subjects.

<sup>b</sup>Percent classified into group.
TABLE 10
Correlations of Personality Variables
with Length of Affiliation with A.A.

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Cato, J.D. The aftercare preferences of drug users and the relation of these preferences to religious orientation and to a manifest personality need. Dissertation Abstracts International, 1970, 30(7A), 2869-2870.


VITA AUCTORIS


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