

PERSONALITY CHARACTERISTICS OF WIVES
OF GAMMA AND DELTA ALCOHOLICS

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A thesis submitted in fulfilment of the requirements for the degree of
Master of Science in Clinical Psychology

University of Cape Town

1976

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ACKNOWLEDGMENTS

With grateful thanks to David Abelson, for his careful supervision, and in his absence, to Myrna Milun and Dr. O. Ben Arie; to Debbie Bradshaw, Michael Jacobson and Susan Altschuler for their statistical advice; to the staff of the William Slater and Valkenberg Mental Hospitals, for their co-operation; to Pam Musgrave for her hours of typing; and to my husband, David.

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ABSTRACT

40 wives of first admission alcoholics admitted to an alcoholic clinic and a mental hospital were examined and classified into two groups, on the basis of their husband's pattern of drinking, 17 falling into gamma and 23 into delta categories. Subjects were tested on Cattell's 16PF, Fould's Hostility Questionnaire and Gough and Heilbrun's Adjective Check List. In addition, information as regards family background, drinking history and pattern of drinking was obtained in interviews. No significant grouping correspondent with the gamma/delta classification was found with any of the psychological tests or case history data, other than wives of gamma alcoholics tending to marry men whom at the outset of marriage already had a drinking problem. Multidimensional scaling techniques showed there to be some grouping operative within the total sample, corresponding with socio-economic class. Subjects falling into the lower socio-economic classes appeared to be more hostile, anxious and neurotic than those in the higher classes. Although some heterogeneity thus appeared operative amongst wives of alcoholics, this did not correspond with their husband's pattern of drinking.

S U M M A R Y

S U M M A R Y

The problem of alcoholism is one fretted with many confusions, contradictions and misconceptions, exemplified in the fact that no unitary definition of the problem has been accepted. Reasons for this include the fact that alcoholism is a multilevelled problem, including physiological, psychological and sociological aspects, and this multi-dimensionality has, in the main, been ignored.

Further, at each conceptual level, arbitrary criteria have been employed in approaching the problem. A review of the major current theories in this area serves to provide few experimentally acceptable ideas on the nature and etiology of alcoholism. What such a review does, however, indicate is the fact that no typical "alcoholic personality" exists, and the need to consider those persons significant in the alcoholic's social context.

In attempting to elucidate the problem of alcoholism one need examine differences within the alcoholic group. Several attempts at examining such heterogeneity have been undertaken, a classification on the basis of drinking pattern (ala Jellinek, 1960) appearing to be particularly valuable in both diagnosis and treatment of alcoholism. Psychological research in this area has tended to focus on the gamma/delta classification.

Central features of gamma alcoholism include an inability to stop after the first drink, typically drinking to the point of intoxication, and an ability to abstain from drinking for varying periods of time between drinking bouts. Delta alcoholism is characterised by an inability to abstain from drinking, this being a steady daily intake rather than intoxication and a loss of control. The most significant work in this respect includes the work of Vogel (1959, 1961); Stein, Niles and Ludwig (1968); Walton, Ritson & Kennedy (1966); Walton (1968); Abelson & Ben Arie (1970); Abelson (1973); and Tomsovic (1974). Briefly, what these studies show is that the gamma alcoholic tends to be more extroverted, hostile and psychologically disturbed than the delta; to have come from a more disturbed family; to present with alcoholic problems at an earlier age; to be more frequently unemployed, arrested and without accommodation, and to suffer more serious physiological effects from his drinking. Although somewhat less disturbed, the delta alcoholic can by

no means be considered free from pathology, in that he is described as being introverted to the extent of finding such difficulty in relating to others that he is unable to face life without alcohol, albeit relatively smaller amounts than the gamma consumes.

Psychiatry has witnessed a considerable swing towards the importance of the social context of the individual, and in particular the family. Similarly, in the case of alcoholism, theorists are becoming increasingly aware of the need to view pathology in an individual as but a symptom of a "sick" family. Researchers have also found that psychiatric disturbance occurs in both partners of a marriage more often than can be expected by chance (e.g. Penrose, 1944).

Largely following along the line of research into marital disharmony, extensive research has been focused on the wife of the alcoholic. The major approaches in this area may be grouped into disturbed-personality theories, stress theories and psychosocial theories. The former views the wife's behaviour in terms of personal pathology, existing prior to the onset of marriage, marriage to an alcoholic or pre-alcoholic being seen as the wife's attempt to satisfy her own pathological needs. In terms of this theory, it may be hypothesized that the woman who marries a man who is psychologically more disturbed, is sick physiologically, is more socially disruptive and who follows a sporadic drinking pattern which provides her with little security, is likely to be more disturbed than the woman married to the delta alcoholic. Criticisms of these theories include the fact that they tend to be all inclusive, and to lack sufficient experimental validation. Further, a central concept of decompensation, i.e. that the wife's personality will collapse on her husband's recovery, appears to have found little experimental support. (Futterman, 1953).

Stress theories, ala Jackson (1954) et al, view pathology in the wife as a function of changing patterns of adaptation to a severe stress situation. Limitations of such work include the fact that stress leads to a more proficient level of performance until a critical threshold is reached (Yerkes & Dodson, 1908) and that such a threshold differs for individuals, (Appley & Trumbull, 1967) dependent on such factors as past experiences. Considering the gamma/delta classification, it is apparent that the wife of the gamma is.

under greater stress than is the delta, since her husband is more "sick" physiologically, is socially more visible, presents as a more disturbed husband to whom she must relate, and in view of the sporadic nature of his drinking tends to fluctuate from accepting and rejecting his role as head of the household. Hence, in terms of the stress theory, it may be hypothesized that the woman who is married to the gamma alcoholic will manifest more psychopathology than will the wife of the delta.

A psycho-social approach takes into account both personality and stress, viewing pathology in terms of an interaction between these two variables. Unlike the above two theories, this approach does not allow one to make linear predictions about one partner in a marriage from knowledge of the second, in that it states that just how the individual will react to stress will depend on her unique personality constellation. Although research indicates both personality and stress variables to be more disturbed and severe in the gamma than in the delta situation, greater psychopathology amongst wives of gamma alcoholics may not necessarily be predicted.

Therefore, employing the three current theories focusing on wives of alcoholics, both disturbed-personality and stress-type theories would allow one to hypothesize that wives of gamma alcoholics will be more disturbed psychologically than will the wives of delta, whilst the psychosocial approach would predict that this may not necessarily occur.

Hypotheses

- 1) There is a difference in personality characteristics between wives of gamma and delta alcoholics, in terms of :
 - (a) basic personality traits, as indicated by Cattell's 16PF
 - (b) general hostility and direction of hostility, as indicated by the Fould's HDHQ.
 - (c) Self-concept, as indicated by Gough & Heilbrun's ACL.

- 2) Wives of alcoholics will show greater general psychopathology than wives of delta alcoholics in terms of :
 - (a) basic personality traits, as indicated by Cattell's 16PF
 - (b) general hostility and direction of hostility, as indicated by Fould's HDHQ.
 - (c) self-concept, as indicated by Gough & Heilbrun's ACL.

Method

Subjects

Subjects were 40 wives of white first admission alcoholics consecutively admitted to the William Slater and Valkenberg Hospitals, Cape Town. Husbands of subjects met the criteria for a definite diagnosis of alcoholism, as suggested by Feighner, Robins, Guze, Woodruff, Wonokur, & Munoz (1972). Alcoholics who were psychotic or brain damaged were excluded. The sample appeared to represent an approximate socio-economic cross-section of the white population. 23 subjects were classified as wives of delta, and 17 as wives of gamma alcoholics.

Procedure

Every subject was interviewed during her husband's first week of admission to the unit. In an interview prior to testing the following information was collected :

1. Present chronological age of subject.
2. Present chronological age of husband.
3. Length of marriage.
4. Pattern of husband's drinking. Criteria for classification were those as specified by Walton (1968), i.e.
 - (a) Gamma Alcoholism
 - increasing intake whenever drinking starts
 - short abstinence spells between benders
 - periodic intoxication
 - social disorganisation
 - (b) Delta Alcoholism
 - regular daily excessive intake
 - no period of abstinence
 - control so that drunkenness and social disorganisation do not occur
 - a social milieu, often approving high regular ingestion
5. Whether subject had previously been married to an alcoholic or problem drinker.
6. The number of children the couple have.

7. Education and occupation of both subject and her husband. From this, the family's socio-economic class was calculated, according to the tri-axial classification laid down by Rutter, Lebovici, Eisenberg, Sneznevskij, Sadoun, Brooke, Lin (1969).
8. Perceived quality of parent's marriage and family relationship of subject. From subject's description, they were classified into one of four categories :
 - (a) Harmonious : when a happy and harmonious home was reported.
 - (b) Fair : where relationships were described as cold, formal and characterised by a lack of emotional involvement and concern;
 - (c) Disharmonious : where there appeared to be active disturbance between parents, with continuous quarreling, hostility and physical violence.
 - (d) Divorced
9. Whether either of subject's parents had died before she was 10 years of age.
10. Whether subject had any psychiatric treatment, prior to or during the marriage.
11. Subject was questioned as to her own drinking habits, and thereby assigned to one of three categories :
 - (a) teetotaler
 - (b) social drinker
 - (c) problem drinker and/or alcoholic
12. Subject was questioned as to the drinking habits of her parents, both father and mother being individually assigned to one of three categories.
 - (a) teetotaler
 - (b) social drinker
 - (c) problem drinker and/or alcoholic
13. Whether subject's husband was already drinking excessively before the couple were married and whether or not this was hidden from the wife.

The following tests were then administered :-

1. Cattell's 16 Personality Factor Questionnaire

This test provides a personality profile rating for each subject on 16 bipolar primary factors, and 4 secondary factors. Form A, a South African adaptation of the test was used. As this test is so well known it will not be described in any further detail here.

2. Hostility and Direction of Hostility Questionnaire (Caine, Foulds and Hope, 1967)

Hostility being a frequently researched personality variable in wives of alcoholics, the HDHQ, a measure of a person's hostility or punitiveness towards herself and others, was employed. Further, greater punitiveness has been shown to indicate psychopathology.

Although the test enjoys a high standard of validity, split-half reliability of the test has to date not yet been assessed. Thus, an investigation of split-half reliability is included in this study. As no Afrikaans form of the test is available, the translation developed by Abelsohn (1973) will be used.

3. Adjective Check List (Gough & Heilbrun, 1965)

The Adjective Check List (ACL), is a technique specifically designed for assessing self-concept. Subject rates herself on a list of adjectives, and from this a profile including subjects own assessment of her personality, is formed. Again, although validity studies to date support this test, reliability is limited in that no split-half reliability measures are available, and will be calculated in this study. As no Afrikaans form is available, the test was translated by 2 Afrikaans psychologists and checked by an official translator, and the mean scores of English and Afrikaans subjects compared.

Results

Applying the statistical technique of multiple step-wise regression analysis to the case history data, only one variable was correlated with the gamma/delta classification. Wives of gamma alcoholics tended to marry men who at the outset of marriage were already drinking excessively, and their husbands tended to keep this hidden from them ($p > ,05$).

Applying multiple analysis of variance (MANOVA) to the psychological tests, no significant differences on mean scores were found between wives of gamma and delta alcoholics on the 16PF, HDHQ, or ACL ($p > ,05$).

In order to assess whether there was any "clustering" together of subjects into groups, multidimensional scaling was applied to each of the psychological tests, measuring dissimilarity of scores for each pair of subjects, and ranking the subjects. Subjects are placed in a multidimensional scaling configuration, with subjects whose scores are closely correlated being placed near one another, and those dissimilar, far apart. Subjects were thereby placed into three groups, groups A and B differing with respect to all three psychological tests, and group C lying between these two groups. 11 subjects fell into group A, 9 into B and 20 into C.

Step-wise analysis of regression was applied to groups A and B, and the groupings were found to correlate with socio-economic class, group A tending to come from a higher socio-economic class than group B. ($p > ,05$).

Means for groups A and B were compared using the t test. On the 16PF, significant differences between group means were found on factors A, E, H, O, Q2, and Q11 at the 5% level of probability, and factors Q1 and N at the 1% level of probability. On the HDHQ, significant differences between group means were found on factor AH at the 5% level of probability and Sc and Total hostility at the 1% level of probability. On the ACL, significant differences between group means were found on factors S-Cn, Lab, Nurt, Het, and Crs(f) at the 5% level of probability, and on Df (m and f), Fav, S-Cfd, Per Adj, Ach, Dom, End, Ord, Int, Aff and Crs(f) at the 1% level of probability.

A Kuder-Richardson estimate of split-half reliability was calculated for the HDHQ and ACL. Both tests obtained a high reliability score : on the HDHQ $R = ,821$, and the ACL, $R = ,967$.

MANOVA was applied to mean scores of English and Afrikaans groups on the ACL, in order to assess whether there was any significant difference between scores on the standardised English form and the translated Afrikaans form. No such significant differences were found.

Discussion

Except for the fact that wives of gamma alcoholics tended to marry men who at the outset of marriage already drank excessively, and that they tended to hide their drinking from their wives, no significant differences were found between these two groups on any of the case history data or psychological tests.

In view of work by Abelson (1973) showing that gamma alcoholics tend to have an earlier age of onset of problem drinking than delta, it is hardly surprising that they already had such a problem at the outset of their marriage.

Before discussing the implications of these results for the gamma/delta classification, comment must be made of several important methodological criticisms and considerations.

In the studies of Walton et al (1966) Abelson & Ben Arie (1972), and Abelson (1973) three groups were employed, gamma, delta and an intermediate group which could not be classified categorically as gamma or delta, rather sharing characteristics of both. In this study statistics were calculated using both a gamma/delta and a gamma/delta/intermediate classification, but changing the grouping in this way made no significant difference to the results. It was decided to provide the results employing two groupings, placing subjects who fell "closer to gamma" in the gamma, and "closer to delta" in the delta groups, as in discussion with the senior consultant psychiatrist, it was felt that the closer to gamma and closer to delta subjects shared more characteristics in common with the gamma and delta groups respectively, than with each other.

The complexity of the problem of alcoholism has already been outlined. Further complication arises from the fact that the alcoholics do not present themselves for treatment at any specific stage of drinking (Pattison, 1975), and that Jackson points out how the wife of the alcoholic passes through seven stages in adapting to her husband's problem (1954).

In view of this, several controls were imposed. Subjects were limited to wives of first admission alcoholics, both because this meant they were unlikely to have been involved in a psychotherapeutic programme aimed at understanding their husband's problem and because case workers report increased hostility to such therapeutic programmes in wives whose husbands have already undergone treatment unsuccessfully. Important is that there is an increased rate of divorce amongst alcoholics (Glatt 1972). Many alcoholics who presented for treatment were therefore, divorced, and no attempt was made to include their wives in the study, hence omitting an important group of wives.

Subjects were drawn from state hospitals only, and only white subjects were employed. In view of the former point, there were no subjects falling into the highest socio-economic class, and limiting subjects to the white South African population meant that few subjects fell into the lowest class. Hence results of this study may be generalised only to wives of white first admission alcoholics at a state treatment unit.

Despite the above limitations, one need examine the broader implications of the results for the gamma/delta classification amongst wives of alcoholics. On the one hand, only three psychological tests were administered, all of them being self-report inventories. Reviewers like Annastasi (1970) outline the limitations of such inventories and indeed no three psychological tests can claim to cover all aspects of personality. Similarly only 15 variables relating to subject's life history were included. This is important in that it is unlikely that any two groups would differ with respect to all variables, and it may well be that the specific variables omitted from this study were those which differentiated the two groups. On the other hand, psychological tests and case history data were selected with specific criteria in mind, e.g. their recognition as a broad tool of assessing personality (16PF), or their weighting to a diagnosis of psychopathology. Therefore, although this study did not cover all aspects of personality, it is felt that areas pertinent to the problem were examined, and that on failing to find any significant differences between the two groups one might accept that wives of alcoholics do not differ according to their husband's pattern of drinking.

It should be noted that finding no significant differences between the wives of gamma and delta alcoholics in no way detracts from the importance of this classification in dealing with alcoholics themselves.

A further examination of the efficacy of a concept of heterogeneity amongst wives of alcoholics was undertaken. Employing multidimensional scaling techniques, three groups were formed, groups A and B differing from one another with respect to all three psychological tests and being homogeneous within each group, and group C sharing the characteristics of both A and B. Briefly, group B appeared to be more anxious, neurotic, hostile and in fact more pathological than group A. The grouping was correlated with socio-economic class, group A tending to come from a higher socio-economic class than group B. Considerable research has been conducted examining social class variables (Bergel, 1974), and that such personality grouping on the basis of social class was found, is hardly surprising.

In terms of the theoretical implications of the study, it must be emphasised that this study in no way undertook an assessment of the efficacy of various theories, but rather used the current theories to make predictions about a group of people.

In an earlier section, the limitations of all three theoretical approaches to the wife of an alcoholic were outlined. It was indicated as well that although the gamma alcoholic appeared to be more disturbed than the delta, this by no means implied that the delta alcoholic could be considered psychologically "healthy". Nor did he fail to impose stresses on his family, all be they different to those in the gamma situation. Of all three approaches, the psychosocial theory is the most easily able to account for these results, in that in recognising the effects of both personality and stress, it emphasises that how a person will react to a severe stress situation will depend on their personality resources. Although this emphasis renders the theory almost impossible to disprove, it is the most realistic in that the two factors which have been shown to play a significant role in the development of psychopathology have been accounted for.

Studies on wives of alcoholics have been accused of being too specific (Orford, 1975). That is, researchers in this area have paid little attention to current trends in research on marital disharmony, other than those directly related to alcoholism. Although this criticism is not entirely valid, researchers in this area have erred in focusing too specifically on the marital dyad, and paid little attention to the effects of extra-marital events. Insufficient attention has been paid to relationships with other family members,

or extra-familial relationships, such as the extended family or associates at work.

In conclusion, that wives of alcoholics form a heterogeneous group is clear, but this heterogeneity does not appear to be related to their husband's pattern of drinking. Of all variables examined in this study, socio-economic class appeared to correspond with the personality grouping obtained. It is highly likely that variables which have not been examined in this study are operative in such a categorisation, and it may well be that these variables lie outside of the marital relationship itself, e.g. in the broader family dynamics or in satisfaction at work.

A. INTRODUCTION

A. INTRODUCTION

The problem of alcoholism is one fretted with many confusions, contradictions and misconceptions. In this thesis, an attempt is made to throw further light on this complex problem, through a study of the spouse of the alcoholic, specifically the wives of male alcoholics.

1. What is an alcoholic?

Jellinek, one of the foremost authorities on alcoholism to date, cites over 50 implicit and explicit definitions of alcoholism, ranging from "drunkenness (is) a vice" (Todd, 1882 p207) to "an allergic disease coupled with emotional factors" (Silkworth, 1937 p83, both in Jellinek, 1960). At times the terms "drunkenness" and "alcoholism" have been used interchangeably, at others not; certain researchers have differentiated between "problem" and "non-problem" drinkers when discussing alcoholism, whilst others have failed to do so. Such lack of uniformity in definition is no trivial matter: Kant states that a definition should serve to clarify a concept; hence a definition may indicate a concept of etiology, method of treatment, and probable outcome.

A major reason for such confusion is that alcoholism, like many diseases or disorders, is a multi-levelled concept, including physiological, psychological and social parameters. Thus the varying symptoms and complications have been differently interpreted and emphasised depending on the standpoint from which analysis has proceeded, e.g. the physiologist noted primarily the physiological development, the sociologist the manner in which the disorder affects the social groups in which the alcoholic is involved.

Moreover, the conceptual level from which analysis has proceeded has often been unclear. Only recently have the limitations of viewing alcoholism on one level been fully recognised, and classification based on multi-levelled schema been introduced, e.g. as indicated in the World Health Organisation (WHO) definition of alcoholics as :

"Those excessive drinkers whose dependence on alcohol has attained such a degree that they show a noticeable mental disturbance or an interference with their mental and bodily health, their interpersonal relations and their smooth social and economic functioning; or show prodromal signs of such developments" (1952 : Alcohol Subcommittee Report, in Kessel & Walton 1969).

This definition is necessarily stated in extremely broad terms, highlighting a second problem : that is, the arbitrariness of criteria employed, even at each conceptual level.

Examining the reasons for such arbitrariness we see that on a physiological level individuals differ in their biochemical threshold for intoxication; on a cultural level, researchers have tended to ignore all forms of alcoholism other than that prevalent amongst their own cultural group, differences between Anglo-Saxon "Loss-of-control" and French "inveterate" drinkers being notorious in this respect; and on a psychological level, Pattison (1974) points out that even within one cultural group each alcoholic lives out his alcoholism in a different "meaning manner", drinking in a different situation and with different people, and hence rendering the question of "mental disturbance due to drinking" infinitely complex.

Largely related to the above is the fact that alcoholism, like drug addiction, homosexuality and other socially deviant behaviour has undergone a change in social perspective. The concept of alcoholism has moved from being viewed as sinful to sick behaviour as typified in Jellinek's book "The disease concept of alcoholism" (1960). Such a shift has far-reaching implications: where behaviour is labelled sinful, the alcoholic is considered responsible for himself and is blamed and punished; once labelled sick, he is perceived to be in a state of diminished responsibility and is hence not answerable for his behaviour. Further, when regarded as sinful the community is

divested of its social responsibility, whilst if regarded as sick there is considerable social sanction to help rehabilitate the deviant. Although initially considered an extremely significant shift, many theorists now feel the disease concept has gone too far in absolving the alcoholic from his individual responsibility. As a result, a third standpoint has been propogated by Steiner (1969), Calahan (1970), Szasz (1971) and Pattison (1974) the essential features being that human behaviour is both chosen and determined; that blame and punishment are not remedial; and that it is wrong to impute blame. Rather, that the deviant and the community, being mutually dependent, should share responsibility.

No simple answers to the above issues can be found, however, since alcoholism refers to a number of conditions which manifest in a variety of ways. Recognising this, Jellinek (1960) chose the extremely broad definition of "any use of alcoholic beverage that causes any damage to the individual or society" (p35)

Throughout the introductory discussion, therefore, alcoholism will be referred to in a rather broad sense, embracing all the conditions discussed above. Where a specific "type" of alcoholism is being referred to, closer definition will be provided. In the context of this experimental study itself, the criteria for alcoholism will be explicitly defined and applied.

2. Theories of Alcoholism

In an attempt to clarify the problem, the major theories of alcoholism will be outlined and an attempt made to highlight the over-simplification evident in unlevelled theories.

(a) Biological Theories

Since the discovery that many diseases of chronic alcoholism, such as polyneuropathy and some alcoholic encephalopathies, were attributable to vitamin deficiencies, a number of elaborate physiopathological theories of alcoholism have gained in standing, e.g. the formulation of a chemical allergy with a specific reaction on the meninges (Cowles 1941); and brain pathology theories (Little & Mc Avoy, 1952), in Jellinek (1960).

Jellinek (1960) points out that the most potent criticism of any such theory rests in the conclusions drawn from experiments designed to test such a theory. Similarly, this theory will assess the various theories of alcoholism on the basis of such experimental evidence.

(i) Animal Studies

A good deal of research has been undertaken with the aim of formulating an animal model of the human alcoholic which, although devoid of features characterising man's social relations, may reveal the essential biological nature of the addictive process.

The predominant methodology in the area has involved self-selection experiments, where animals have a free choice between various alcoholic and non-alcoholic solutions. The assumption here is that voluntary consumption by an animal indicates its "preference" for alcohol and hence increased susceptibility to alcoholism. A wide variety of preference factors have been examined, varying from different qualities of alcoholic beverages, to environmental, inbreeding and hybridization effects.

The interaction of taste, smell, calories and prior alcohol ingestion has been extensively studied (e.g. Dicker (1958); Kahn & Stellar (1960); results in this area have, however, been contradictory. The role of drugs and hormones, e.g. the differential role of thyroid and of estrogens (Ashkenasy-Lelu, 1958 in Lester, 1965) has been studied; attempts have been made to correlate biochemical measures with alcohol selection. Again results have proved inconclusive. Hence Lester (1965) concludes that "although these factors undoubtedly play a considerable role in the amount of alcohol drunk" p400, their exact contribution is still unknown.

On the other hand, the role of several other variables has more clearly been outlined; temperature and alcohol concentration (Myers, 1962); physical trauma (Zarrow, Aduss & Denison 1960); age of animal (Kakihana & Mc Clean, 1963) and even type of feeding tube (Amir, Amir & Corcoran, 1973) have been shown to influence alcohol selection significantly. The obvious need to control such variables casts further doubt on much of the research conducted in this area to date.

Most of the original animal studies were confined to rats and mice (Richter, in Lester 1965; Zarrow, Aduss & Denison, 1960). Other studies, (Forsander & Salaspuro, 1962; Mc Learn & Rodgers, 1961) employing hamsters, rabbits, hedgehogs and guinea pigs

and comparing different strains of mice, respectively, demonstrated a wide range of species specific preferences, emphasising the need to study differential biochemistry of species and indicating an important role for inherited characteristics. Recently some form of neutral sensitivity has been hypothesized as significant in species specific selection (Schneider et al, 1973). Until this has been further clarified, such studies need be borne in mind when applying information gained in animal studies, to humans. Such evidence presents a major warning against over-simplification and emphasises that alcohol does not affect all beings uniformly. In this case the effect of alcohol may be dependent on the species' particular biochemical mechanisms. Taking this one step further, one may expect the next major contribution of biological theories to come from closer examination of variables within each group.

In sum, results of most animal studies have proved inconclusive. Moreover, spontaneous preference for alcohol is not striking in any animal. Hence Goodwin & Guge (1974) conclude that "the relevance of animal studies to alcoholism in humans remains uncertain" (48).

(ii) Human Studies

In research using humans, correlational studies, rather than any direct manipulation of variables, have been employed. An exception are studies investigating the role of feeding vitamins to alcoholics (Hoff & Forbes, 1955, in Lester).

Several attempts have been made to elucidate the role of genetics in alcoholism. A major problem encountered has been that of assessing the relative importance of hereditary and environment since both are usually provided by an individual's progenitors, at least in early life. The earliest studies by Luxenburger (1928), Slater (1935) and others (in Goodwin & Guze, 1974) on familial expectancy rates of alcoholism fall down in this respect.

Others have pursued the hypothesis that an association of alcoholism with other characteristics known to be inherited would afford some support for a biological factor in the etiology of alcoholism.

Cruz-Coke and Varela (1965) found colour-blindness, cirrhosis and alcoholism to be associated, and proposed the hypothesis that alcoholism was transmitted by an X-borne recessive gene. Subsequent work, e.g. Fialkow, Thuline & Fenster, 1966 (in Goodwin & Guze) reported a similar association, but found that the colour-blindness usually disappeared after the acute alcoholic symptoms had subsided. It was concluded that the colour-blindness more likely reflected the toxic or nutritional effects of heavy drinking than a sex-linked gene, and indeed later work (Thuline, 1967) failed to find any relationship between colour-blindness and alcoholism.

Goodwin & Guze conclude that although present genetic studies present inconsistent results, one should not discard these hypotheses entirely, since inconsistency may arise from the yet primitive knowledge of population genetics.

Lester (1965) illustrates how studies comparing endocrinological and other characteristics of alcoholics with non alcoholics have employed faulty methodological design and hence arrived at inconclusive results, e.g. work on the hypothesized relationship between thyroid activity and alcoholism (Richter, 1956) has been criticised by Goldberg (1962) who concludes that alcoholism antedates, and leads to thyroid impairment, rather than hypo-thyroidism predisposing to alcohol addiction.

Hence Lester (1965) and more recently Kessel & Walton (1969) conclude that no real break through has been achieved to indicate that the future alcoholic is marked out, biologically, from his fellows. Reasons for this include lack of controls in research studies, as well as lack of definition as to what exactly constitutes an alcoholic. Until recently, it was universally accepted that alcoholism is irreversible. Work by Davies (1962), Kendell, 1965 and Pattison (1966) indicates that many alcoholics are later able to return to normal drinking. Refutation of the irreversibility argument presents problems for a theory of biochemical defect, and further questions related to the stage at which the label "alcoholic" is applicable. Moreover, researchers like Jellinek have delineated four types of alcoholics (alpha, beta, gamma, delta) and argue that lack of examination of within group differences has obscured differences between groups.

(b) Psychological Theories

(i) Psychoanalytic Theories

Psychoanalytic formulations have formed a great majority of the psychological theories of alcoholism to date. By focusing on different aspects of alcoholism several trends have emerged, many of these being mutually incompatible. The three main trends in the literature have focused on the undue dependency of the alcoholic; his relation to his parents; and fixation at specific developmental stages.

a) Dependency

The motive of dependency has been related to anxiety (review by Barry 1974). The individual begins life with complete dependency on a nurturant agent, usually the mother. The response of dependency, avoiding dangers by remaining close to a familiar protector, continues to relieve anxiety effectively. Conflicting needs for autonomy and novel experiences develop. Insecurity and anxiety are associated with these needs, and may stem from initial dependence on a weak agent. Hence not only are conflicting needs for dependence and independence learned but insecurity and anxiety is involved in the motivation for both opposite responses.

Many studies describe alcoholics as people with unusually strong dependency needs, coupled with conflict between dependent and independent response tendencies (Knight, 1937; Higgins 1953, in Blum 1966). In her extensive review, Blum (1966) states that it is the double function of addictions that is stressed in psychoanalytic literature on addiction, i.e. the "dependence on a substance, an activity or person, believed to provide pleasure on the one hand and relief from psychic pain (anxiety, etc.) on the other hand". (263). Further, such dependence has primarily been rooted in developmental failure, be it fixation at various stages of growth, regression to previously outgrown stages, or both.

More recently Blane (1968) demonstrated the various expressions of conflicting tendencies in alcoholics, including overt dependent and counterdependent behaviour and illustrated just how drinking provides reinforcement for these two opposite responses: intoxication permits an overt expression of dependent behaviour, including sociability, sentimentality and dependence on the alcohol itself; whereas the disinhibiting effect of intoxication may lead to feelings of freedom, independence and power. Such conflicts necessarily play a major role in the interpersonal relationships of the alcoholic, determining not only the way he relates to others, but the type of person who would be able to fulfil his needs.

b) Relation to Parents

The child models himself upon impressions of his parents, thus pathological adult behaviour may reflect actual pathological characteristics of parents, or false recollections based on childhood fantasies.

In support of this it is noted that there is ample evidence that alcoholics show an elevated incidence of pathology or disruptive influences during childhood (review by Chen & Cobb, 1960). Similarly, a recent review of the literature by Warner & Rosett (1975) emphasises that there is a high incidence of psychopathology in children of alcoholics and that a significant proportion of these children themselves later become alcoholics. e.g. early parental loss (Oltman, Mc Garry & Friedman 1952, in Barry) and alcoholic parent criminals (Goodwin et al 1971). Others have attempted to illustrate how, if his parent has been overly punitive, the alcoholic will repeat such attitudes towards himself as an adult: he attempts to assuage an intolerable conscience by various forms of self-inflicted punishment through drinking e.g. hangovers, loss of job, choice of friends and spouse. Alcoholism has even been compared to slow suicide (e.g. Menninger, Palmer, Wall and Adler, (1961) in Blum).

c) Fixation at Developmental Stages

In an attempt to account for many apparent differences in the life circumstances and personality dynamics of alcoholics, fixation at specific developmental stages has been presented as giving rise to different dominant defence mechanisms and types of love relationships.

- i) Noting parallels between the alcoholic and a baby's pleasure in the bottle and feelings of satiation followed by sleep or unconsciousness, Bergter (1946); Clark (1919) & Zwerling (1959) in Blum, stress how damage during the nursing period results in an arrest of emotional growth at the oral stage (such people appear unable to cope with frustration, pain and anxiety and are irresponsible and immature). The defence mechanisms of denial of unpleasant reality (e.g. alcoholics denial of his drinking problem) and projection of blame (onto his family, boss, etc.) are central whilst emotionally, narcissistic love choices predominate.
- ii) Fixation at the anal stage results from mismanagement of the child's needs when he begins to assert selfhood and learn sphincter control. Such a child is aggressive, cruel, obstinate, rebellious and has an excessive drive for mastery and achievement. (Simmel, 1948; Knight 1937 in Blum). The more adaptive defence mechanism of sublimation is evident and self-love has been transmitted to homosexual love. (Freud, 1930). Case studies abound with comments on repressed homosexuality in alcoholics.
- iii) Fixation at the phallic-oedipal stage involves those who have progressed beyond homosexual to heterosexual love choice. However, such people have failed to come to terms with emerging sexual feelings towards their mothers with the result that their love relations to the opposite sex are characterised by irreconcilable impulses of tenderness and sexuality which they find difficult to project to the same woman. Major defence mechanisms at this stage are repression and the formation of hysterical character symptoms. Amongst the terms used to describe such people are that they are friendly (Menninger, 1938) form superficial relationships (Knight 1937), tend to be anxious (Alexander 1946) and are competitive (Knight, 1937) in Blum, (1966).

On a theoretical level, many of these theories have attempted to provide an explanation of psychopathology, but have failed to relate this significantly to the field of alcoholism per se. Notable exceptions include the work of Chordorkoff (1964, 1971) and Blane (1968), which attempts to incorporate the physiological consequences of alcohol intake into psychological theorising.

Further, contrasting the review of Barry (1974) with that of Blum (1966) one notes how the mechanisms of denial and regression have been associated with fixation at different developmental stages. These contradictions are well illustrative of the multitude of disparate theories in this area. Psychoanalysts, depending on their own, unique biases, clinical experiences, training and socio-cultural milieux have proposed different theories to account for the etiology of alcoholism. Few of these theories have been empirically tested and in the main have relied on clinical case reports. On the other hand, such wide disparity may be explicable on the basis that alcoholics do not form a homogenous population, i.e. that theorists have come into contact with different forms of alcoholism and hence have proposed different psychological dynamics.

On a purely methodological level, a major problem is that many studies have relied on retrospective analysis of the alcoholic's recollections about his family relationships. This method is of dubious value as it relies heavily on the memory of the alcoholic, a faculty known to be affected by prolonged alcohol intake. Further, denial is a defence mechanism which is clinically evident in alcoholics, and past recollections of childhood experiences necessarily involve the subjective perceptions of the individual and need be treated as such.

Although many other serious criticisms may be laid against psychoanalytic contributions e.g. their notorious neglect of sociocultural factors and biased sampling populations, they have often forwarded valuable clinical insights which provide guidelines for future research and treatment orientations. Further, these theories highlight the role of "significant others" in the life of the alcoholic; in both the development of pathology and patterns of interaction, the alcoholic cannot be viewed in isolation.

In the final analysis I would tend to agree with Blum's suggestion that although psychoanalytic theories fall short of providing a unitary theory of alcoholism, they should be regarded as partial and complementary solutions of a complex puzzle. I would add, however, that many pieces of that puzzle need be sought from fields other than psychological, e.g. from the physiological and socio-cultural fields as well.

(ii) Learning Theories

Two major approaches in this area have been formalised as the tension reduction and dissociation hypothesis.

a) Tension Reduction Hypothesis (TRH)

This approach, based on Hullian learning principles, assumes that the presence of a reward or reinforcement serves as a prerequisite for learning an association between stimulus and response, reinforcement being defined in terms of drive reduction.

"Thus if making a response in the presence of a cue or stimulus leads to reduction in the strength of a drive (the latter being a state of tension resulting from an unsatisfied need), the individual will be more likely to repeat that response when confronted with the same or similar stimulus situations on subsequent occasions. Conversely, if the response is not drive-reducing, or if it leads to an increase rather than a decrease in drive, it will not be learned - We know that many people who have once made the response of drinking alcohol continue to do so, and that some of them do so to excess. Through experience the drinking response becomes learned"

(Conger, 1956 p.296)

The pioneer researcher in this field was Masserman (1946 in Conger, 1956) who, employing both experimental and clinical observations, demonstrated that alcohol, although leading to lessened efficiency in specific tasks, resulted in an increase in over-all adaptivity of behaviour, something he attributed to resolving "a highly complex neurotic process" (298 in Conger, 1956).

Taking impetus from this work, Conger (1951) formalised the TRH, and extended his work, replicating Masserman's approach-avoidance studies, comparing whether change in situation rather than condition of inebriation accounted for his results; and examining how alcohol affects the two competing tendencies in the approach-avoidance conflict. Finding avoidance to be more affected by alcohol than approach responses, he hypothesized that differences in relative strength of competing approach and avoidance drives might account for differences in susceptibility to alcohol (elaborated later by Brown & Cowell, 1974). Generally, Conger's work tended to support TRH, providing the basis for a proliferation of experimental research.

Recently, Cappell and Herman (1972) undertook an extensive review evaluating evidence bearing on the TRH. They conclude, however, that although the TRH enjoys confirmation in the literature on conflict and experimental neurosis, research (e.g. studies by Barry, Wagner & Miller, 1962) in other areas, does not fare well (i.e. studies on avoidance and escape; conditioned suppression; extinction and partial reinforcement, stress and behavioural disruption, psycho-physiological indicators, self-report of affective state; and risk taking behaviour). Hence they conclude that "while the TRH may be quite plausible intuitively, it has not been convincingly supported empirically". (59).

Although never specifically stated, an important aspect of this work is that in focusing on contingencies of reinforcement, the TRH allows for the development of different drinking patterns resulting from different contingencies of reinforcement. Bearing in mind such typologies as that of Jellinek's 4 types, it is possible that much of the inconsistency in research results may lie in ignoring such differences in drinking patterns or contingencies.

In a recent article, however, van der Spuy (1974) outlines how basing their theories largely on animal studies and work with non-alcoholics, researchers focused on the idea that the alcoholics' emotional state, particularly anxiety level, improved with alcohol. He quotes recent studies by Diethelm & Barr (1962), Smart (1968), McNamee Mello & Mendelson (1968) and others who found that with alcoholics there was either

a deterioration or no change at all. Hence they concluded that the alcoholic's emotional state appears to benefit considerably less from alcohol than the emotional state of the non-alcoholic. This poses serious problems for the TRH, a theory based on the reduction of anxiety with alcohol intake.

Finally, the reasoning behind much of the experimental work reviewed is that it comments directly on the etiology of alcoholism. Clearly, any support for the TRH does not constitute evidence that alcohol is consumed for its tension-reducing effects. Cappell & Herman correctly emphasise that research has confused two distinct hypotheses: that alcohol reduces tension; and that organisms drink alcohol for its tension-reducing effect. In other words, one cannot infer motivation for behaviour from one of its consequences.

b) Dissociation Hypothesis

An exciting alternative "dissociation" model has been proposed by Storm & Smart (1965). Their rationale runs as follows :-

Work by researchers like Overton (1964) and Otis (1964) has shown that habits acquired by animals in drugged conditions (i.e. sodium pentobarbital and chlorpromazine respectively) showed little transfer to the non-drugged condition; and that different responses could be trained in the different drug states, with little interference from the alternative response. This phenomenon has similarly been shown in experiments with alcohol. For example Masserman et al 1964, and Conger (1951) have demonstrated that learned conflicts acquired during a sober state decrease markedly after alcohol administration. Further learned discriminations and instrumental behaviours have shown significant decrements after alcohol ingestion, whilst responses inhibited by extinction increase in strength (Blough, 1956, Barry, Wagner & Miller, 1962).

The similarity of this "dissociation" to the behaviouristic concept of stimulus generalisation and the implications of such a similarity is discussed: in such terms, the larger the dose of alcohol, the greater the generalisation decrement to the sober

state. Moreover, considering the different contingencies of social reinforcement applicable in drinking and non drinking states, and different contingencies possibly resulting from differential suppression of conflicts and fears, a learned discrimination between alcohol and non alcohol states is hypothesized.

Such a model provides a potential explanation for "loss of control" in drinking, a feature believed central to alcoholism in North America (Jellinek, 1960). In this type of alcoholism (gamma), a small number of drinks set the alcoholic off on a binge. According to the dissociation hypothesis, as the behaviour learned in the intoxicated state increases in distinctiveness and strength, it should generalise along the gradient of alcohol dosage, occurring at increasingly small dosages but showing little generalisation to the sober state. In these terms, loss of control may mean that after a critical quantity of alcohol has been taken in, all inhibitions on further drinking are gone. Related to this is current research by Goodwin et al (1974), who, working with subjects who had had alcohol but were not "drunk" concluded that "it seems that overt intoxication is a prerequisite for dissociation" (201).

Although such an analysis does appear intuitively reasonable, not all alcoholics exhibit such loss of control. Rather Jellinek draws attention to a dependence on alcohol which follows a pattern of an inability to abstain in which intoxication is rarely reached (delta type). Such an analysis would account for such different drinking patterns on the basis of differential thresholds for intoxication: since the state of intoxication is not reached, loss of control and dissociation, leading to the operation of a different contingency of reinforcement does not occur.

The dissociation hypothesis throws a new light on the amnesias ("blackouts") associated with alcoholism, and proposes that the blacking out phenomenon may work in a second way, i.e. that events experienced while sober will tend to be forgotten when drunk. This has far-reaching implications for treatment of alcoholics: at present, standard procedures involve "drying out" the alcoholic before any form of treatment is begun, hence psychotherapy etc., is given in the

non-alcohol state. This model suggests in fact that more effective therapeutic procedure would be to work with certain alcoholics in their intoxicated state. Recently Lisman (1974) has elaborated upon the therapeutic and prophylactic implications of this approach, but it is still too early to assess the empirical value of these ideas.

As far as experimental studies are concerned, research to date with both animals (Freed, 1968, 1971; Bindra and Retchert, 1967) and humans (Storm and Caird, 1967; Goodwin et al, 1967) does tend to support the dissociation hypothesis. Hence it is likely that this approach to alcoholism could be of considerable explanatory value.

iii) Social-role Theories : Transactional Analysis (T.A.)

In his book "Games People Play", Berne (1964) outlined transactional analysis, a theory of social intercourse embracing an idea of games analysis. "A game is an ongoing series of complementary ulterior transactions progressing to a well-defined, predictable outcome --- it is a recurring set of transactions, often repetitious, superficially plausible, with a concealed motivation" (p.44). Two aspects distinguish games from other forms of interactions such as pastimes, procedures and rituals : their ulterior quality, and pay-off. The assumption is that theoretical analysis of a game will lead to an antithesis, i.e. an attempt to stop the game.

In these terms, Berne states that there is no such thing as an alcoholic or alcoholism, rather a role called Alcoholic in a certain type of game. Viewing "alcoholic" as one of many life games, i.e. games likely to involve life-long participation and relatively innocent bystanders, he outlines the various roles involved : there is the Alcoholic ; the main supporting role of Persecutor, usually played by the spouse; the Rescuer, usually the doctor; a Patsy or Dummy, e.g. the Alcoholic's sympathising mother; an Agitator frequently played by the Patsy who supplies drinks unasked; and the professional connection e.g. the bartender. Not all these roles are essential to the games, but are flexible and interchangeable at times. The often ignored "hangover"

is seen as Pay-off in the game.

Although this aspect renders the theory difficult in application to those who do not have hangovers, one might hypothesize that guilt could have a similar function.

The theory has been further extended by Steiner (1969) who noted that several different types of games were embraced by the life-game "Alcoholic". He proposed 3 variants of "Alcoholic" : the aggressive type who plays "Drunk and Proud of it"; the psycho-social self-damaging "Lush" who admits he is "crazy" and depressed and begs others for help; the tissue self-damaging "Wino" who ruins himself physically so that others are forced to cure him.

Obvious is the fact that a games analysis is incompatible with a disease concept of alcoholism. Understandably, strongly disparaging criticisms of this theory were voiced in the Quarterly Journal of Studies on Alcoholism. Some of these were predominantly emotionally based, e.g. letters by past members of the Alcoholics Anonymous, whilst others were worthy of more serious consideration. It was pointed out that no studies have been carried out to assess the validity of the T.A. hypothesis. Pattison (1969) points out that games analysis confuses the issue of addiction, stating that this analysis is applicable only to the psychological and not physiological context of addiction. In the latter criticism we see how in their radical contribution to the field of alcoholism, games analysts too have fallen into the trap of ignoring the multi-dimensionality of the problem.

Despite the above criticisms, T.A. does make several important comments on alcoholism objectifying the influence of and effect on significant others in the life of the alcoholic, and proposing three variants or types of alcoholics.

(c) Sociological Theories

Sociological theories have attempted to explain the behaviour of individuals through analysis of the wider social groups of which they form a part.

"Specifically what the investigator in this field is trying to do is to discover how membership in a group sharing a certain culture predisposes one to a particular method of handling anxiety, whether normal or otherwise. He is working on the problem of symptom choice". (Ullman 1958).

Although emphasis on the handling of anxiety is specific to Ullman's own theory, the idea of socio-cultural analysis as a guide to symptom choice reflects the major trend of these theories and studies.

In his classical paper on "The Functions of Alcohol in Primitive Societies" (1943), Horton relates drunkenness to the differential effects of alcohol on anxiety. Since alcohol both induces and inhibits anxiety, drunkenness results from a complex interaction of anxiety-reduction and anxiety induction. Criticizing Horton's indices of social anxiety, as indirect and questionable, Field (1962) explains this primarily in terms of relative social organisation. In support of his thesis he quotes variables positively correlated with relative sobriety in primitive tribes. Of significance to the South African scene is the manner in which he relates acculturation and the loosening of traditional social organisation to increases in drinking rates.

Bales (1946) hypothesized that within a culture attitudes towards drinking learned during socialisation, define the accepted function of alcohol consumption for that group. Identifying four such attitudes, he accounted for the high rate of alcoholism amongst the Irish with their relatively utilitarian attitude to alcohol, whilst the low rate amongst the Jews is attributed to a mixture of ritual and convivial attitudes.

Somewhat similarly, Ullman (1958) proposed that in any group where drinking customs, values and attitudes are well established, known to and agreed upon by all, and are consistent with the rest of the culture, the rate of alcoholism will be low. As evidence he states that the Jews and Chinese, who incorporate alcohol in religious

ritual, grow up without ambivalence towards alcohol, whilst the Anglo-Saxon American, who is expected to drink differently depending on the occasion, is full of ambivalence to alcohol, hence rates of alcoholism amongst the latter group is high. In Ullman's theory we see a certain compatibility to Field's social organisation hypothesis. A major shortcoming of these theories lies in their inability to explain why only some and not all Anglo-Saxon Americans become alcoholics. Clearly other factors at a different epistemological level would be complementarily involved.

Methodologically, these studies have largely taken the form of cross-cultural comparison. This method has several important potential advantages for extending knowledge of alcoholism e.g. this method enables the researcher to deal simultaneously with a wide range of modest drinking patterns. Several serious criticisms have, however, been laid against it, particularly when extensive statistical analysis has been employed. For example, Pittman & Snyder (1962) assert that this method necessitates an abstraction and dissociation of a custom from its setting, which in turn distorts the meaning of that custom.

The theory which appears to have dealt most adequately with the role of cultural factors in alcoholism, is the "psychological vulnerability" theory of Jellinek (1960, 1962). In his paper "Cultural differences in the meaning of alcoholism" Jellinek draws attention to the differences in drinking patterns, the concept of alcoholism and acceptance of liquor in the various countries: the French writers emphasise "steady symptomatic drinkers" whilst the Scandinavians "occasional excessive drinkers". (1962 p.383). He discusses the significant role of availability of alcohol on the rate of alcoholism, e.g. the role of viticulture in France and Italy. Moreover he discusses how economic insecurity and poor housing, prevalent in France, may drive people towards the taverns, but that only a concept such as psychological vulnerability can explain why only a minority of these people become alcoholics. Hence he states :

"In societies which have a low degree of acceptance of large daily amounts of alcohol, mainly those will be exposed to the risk of addiction who on account of high psychological vulnerability have an inducement to go against the social standards. But in societies which have an extremely high degree of acceptance of large daily alcohol consumption, the presence of any small vulnerability, whether psychological or physical, will suffice for exposure to the risk of addiction". (p.29, 1960).

Although this concept of psychological and/or physical vulnerability demands further elaboration, Jellinek's theory is singularly valuable in that he attempts to provide an adequate multi-dimensional approach.

In sum, examination of the above material highlights the complexity of alcoholism: in few areas have any unambiguous experimental results been obtained or theories been formulated. As indicated reasons for this include both methodological problems and such conceptual difficulties as problems of definition and lack of consideration of the multi dimensionality of alcoholism. Despite this, two conclusions specific to this thesis may be drawn: research in most areas stress the need to examine the heterogeneity of the alcoholic group, and the need to consider the "significant others" with whom the alcoholic relates.

3. The Search for the Alcoholic Personality

Until recently, most psychological research on alcoholism has sought to identify "the alcoholic personality" in the hope of either proving etiologically-based theories, or establishing more effective therapeutic programs, the underlying assumption being that the alcoholic population was relatively homogenous in character. On a sociological level, the notion of homogeneity implied that alcoholics were probably drawn from only one segment of the population, namely the lower class; whilst on a psychological level it implied that alcoholism manifested in people who were comprised of a relatively unique constellation of personality characteristics.

Studies have provided conflicting evidence, some showing significant differences between alcoholic and non-alcoholic groups, whilst others have failed to do so.

Despite huge research investment, the literature tends to support Keller's "law" which states that :

"the investigation of any trait in alcoholics will show that they have either more or less of it. Alcoholics are different in so many ways that it makes no difference" (Keller, 1972, p.1147).

As implied earlier, reasons for such confusion include both methodological and conceptual problems. Much of this work has involved retrospective analysis, a technique poorly suited to research on alcoholics. Other common methodological problems have involved a failure to provide comparative normal samples, and bias in selecting these samples.

More significant to note, and implicit in the above research, is that the alcoholic has largely been treated as belonging to a homogenous group, hence any distinct sub-types within this group have been obscured and averaged out. Researchers like Jellinek (1960) have pointed out that a more fruitful source of research would involve an assumption of heterogeneity and a consequent switch in research design. As indicated in the discussions above, research on all conceptual levels, be they biological, sociological, psychological, or learning theory would support such an hypothesis. Pattison (1974) has extended this still further, emphasising a need for recognition of heterogeneity in treatment planning and outcome criteria in the management of the alcoholic. Further, he highlights the concept of heterogeneity operative in treatment facilities at present. From this he concludes that different treatment units provide for different needs, and that not only is it likely that different types of alcoholics select treatment units in accordance with their needs, but that these units each select a specific type of patient whom they feel they can help. Hence an all-

inclusive therapeutic program would need to provide different forms of therapy to cope with different types of needs.

Attempts at clarification of alcoholic sub-types include the work of Zwerling (1959); the behavioural "indulgent", "social" and "reparative" sub-types used by Emery (1960), and more recently those based on relative perceptual motor skills, defined by Fuller, Lunney & Naylor (1966). Recent work, by Foulds & Hassall (1969) and Abelson (1974) has classified alcoholics according to age of onset of drinking problem, and the classification, which appears potentially valuable and will be the form of the study concerns the relationship between personality and drinking patterns, ala Jellinek, 1960.

a) Patterns of Drinking

On the basis of clinical evidence, Jellinek isolated four major patterns of drinking :

(i) Alpha

This represents a purely psychological dependence on the effect of alcohol to relieve bodily or emotional pain, and does not lead to "loss of control" or "inability to abstain".

(ii) Beta

Here the physical alcoholic complications of polyneuropathy, gastritis, and cirrhosis of the liver may occur without psychological or physical dependence on alcoholism. Withdrawal symptoms do not occur.

(iii) Gamma

Clinically referred to as "loss-of-control" alcoholism. Central features include : acquired increase tissue tolerance to alcohol; adaptive cell metabolism, withdrawal symptoms and physical dependence; inability to stop after the first drink, typically drinking to the point of intoxication or until all available supplies of alcohol are consumed; an ability to abstain from drinking for varying periods of time between drinking bouts.

(iv) Delta

Here the increased tissue tolerance and adaptive cell metabolism of the Gamma type is evident, but is characterised by an inability to abstain, i.e. a steady daily intake rather than by a loss of control. Symptoms of withdrawal and physical dependence occur if the person tries to stop drinking.

Jellinek stated, however, that of these types only the gamma and delta form two discrete non-interchangeable species, whilst the alpha and beta are less clearly defined and are often a stage in development leading on to gamma and delta alcoholism. Hence research has concentrated on the gamma and delta categories, alcoholics being viewed as falling somewhere on a continuum between the two. Most significant work in this respect includes the work of Vogel (1959; 1961); Stein, Niles & Ludwig (1968); Walton, Ritson & Kennedy 1966; Walton 1968, Abelsohn & Ben Arie (1970); and Abelsohn (1973); Tomsoric (1974); Schuckit, Rimmer, Reich & Winoleur (1971).

Employing a self-report questionnaire containing the Maudsley Personality Inventory and items pertaining to drinking patterns on 58 in-patients at an alcoholic clinic, Vogel (1959, 1961) found introversion to be significantly associated with solitary drinking, a longer time between occurrence of first blackout and onset of frequent blackouts, and a steadier drinking pattern (a la the Delta type), whilst extroversion was associated with no solitary drinking, a shorter time between first blackout and onset of frequent blackouts, and a periodic drinking pattern (a la the Gamma type). Although this study is not without methodological flaws, e.g. no "outside" confirmation of drinking pattern was obtained, and sample selection appears to have been loaded with one socio-economic class, significantly different psychological variables did appear to be related to drinking pattern.

Stein, Niles and Ludwig (1968) asked 271 male alcoholics to fill out a detailed self-administered questionnaire covering the areas of family background, personal development, attitudes towards his drinking problem, the social effects of drinking, physiological concomitants, and drinking pattern, a single question providing the basis for the Gamma/Delta classification. Despite inadequacy of this latter criterion, they found significant differences between the two groups on a number of psychological variables. Briefly their results indicate that the Gamma group had a history of childhood antisocial behaviour, was the product of a significantly more disturbed family, was more impulsive and as a result of drinking more frequently arrested, unemployed and without accommodation than the Delta group. Moreover, as shown in Vogel's studies, physiological effects of drinking appeared to be more severe in the gamma group.

In 1966, Walton, Ritson & Kennedy examined the response of alcoholics to clinical treatment : they found that loss of control (gamma) alcoholics tended to do better with the clinic treatment than the regular, restrained addicts, or delta alcoholics, although this was not statistically significant.

On the basis of clinical evaluation, Walton (1968) assigned 16 in-patients at a treatment clinic to gamma, and 22 to a delta group. The groups were then compared on the basis of degree of punitiveness, as measured by a psychiatrists's rating; psychological explorativeness and amount of talking in the ward, rated by nursing staff, and several standardised

personality tests, including Cattell's 16PF, the Personal Illness Scale (Foulds, 1965), the Personality Disorder Scale (Foulds, 1967), the Hostility & Direction of Hostility questionnaire (HDHQ, of Foulds, Caine & Creasey, 1960). Difficulties in assessing such work include lack of specification of rating scales, no apparent attempt to control for experimental bias, and no attempt to control for unequal size of samples. Results of the study showed the gamma alcoholics to be more afraid of their own impulses, and more aggressive, their aggression being directed towards themselves. Clinical ratings provided ambiguous results, and no significant difference on the Cattell 16PF was noted.

In a recent study, Tomsovic (1974) examined the characteristics and treatment follow up of binge and continuous drinkers. These categories are largely similar to Jellinek's gamma and delta classes, although loss of control in the binge drinker need not be as complete as the gamma definition requires. Although both these groups appeared to show relatively similar recovery rates, several characteristics clearly distinguished the two groups: the binge drinkers had fewer years of schooling, were of lower intelligence, more frequently had association with the Alcoholics Anonymous, and had previous treatment in hospitals for alcoholism than did the continuous drinker. Further, he hypothesized that the binge drinker seemed to seek intense psychic experiences that pre-empt social obligations, while the continuous drinker uses alcohol to achieve a state sufficiently tranquil to be able to play his social role. The implication follows that each group requires a different type of therapy and that higher recovery rates will come only with a recognition of heterogeneity in treatment.

Work by Schuckit, Rimmer, Reich & Winokur (1971) fails to support such differentiation. They examined several characteristics of bender alcoholics defining this in terms of loss of control. Although they found bender alcoholics to have begun drinking at a significantly younger age, and to show more social and physical problems associated with alcoholism, they failed to find any differences in family background, affective disorder in either the family or the alcoholic himself, incidence of premenstrual pain in women or marital and sexual problems. Hence they concluded that there was little justification for the gamma/delta classification and that the demographic differences obtained reflect the consequences of drinking patterns rather than outline distinct morbid processes.

Several criticisms may, however, be levelled at their work : Jellinek's gamma definition embraces more than the singular loss of control phenomenon used in this study; further, the majority of studies in this area have compared gamma with delta alcoholics, acknowledging that many alcoholics do not clearly fit into either category. This study does not specify characteristics definitive of their non-bender group, and one must, therefore, conclude that this group included all "other" alcoholics i.e. delta and "mixed" types. Hence it was likely that the differences obtained by other researchers in this field were obscured by the fact that the non-bender group were a relatively heterogeneous group.

More recently, Abelson & Ben Arie (1970) administered the Q sort to 50 European males. They found a significant difference in self-acceptance between gamma, delta and an intermediate group, the gamma showing the lowest self acceptance score and the delta, the highest, whilst the score of the intermediate group approached that of a non-psychiatric control group. Unfortunately, only one measure of self-acceptance was employed, and the Q sort technique generally appears to be influenced by social desirability.

In a somewhat related field, Abelson (1973) has examined the age variable in alcoholism. Using Cattell's 16PF, Fould's Hostility questionnaire and the Bene Family Relations tests, as well as additional information on family background, drinking history and pattern of drinking, results showed early onset subjects to have had more disturbed childhood families, perceived their parents in a more hostile manner, and were themselves generally more disturbed than the late onset subjects. Moreover not only did early onset drinkers tend to show a gamma drinking pattern, whilst the late onset drinkers showed a delta pattern, but the gamma presented for treatment at a significantly younger age.

The number of alcoholics classified into gamma and delta groups by the Abelson/Ben Arie, and Abelson studies (both with South African samples), and the Walton study (drawn from a Scottish population) show a marked correlation. This correlation may indicate either that drinking patterns are similar amongst these two populations, or may contribute to validating the clinical criteria according to which alcoholics are classified as either gamma or delta.

It must be mentioned too that certain other studies have failed to show different personality "types" correlating with drinking patterns, e.g. using the Cattell 16PF Abelson (1973) failed to differentiate significantly between gamma and delta types. As he has pointed out, it is unlikely that these groups differ significantly in terms of every personality variable : hence any difference will depend on whether the specific variables examined by the test are those variables on which the two groups differ.

Despite these complications, classification of alcoholics into these two sub-groups appears to have been favourably supported.

In sum, research to date indicates that the gamma alcoholic tends to be more hostile, extroverted and psychologically disturbed; to have come from a more disturbed family; to present with alcoholic problems at an earlier age; to be more frequently unemployed, arrested and without accommodation, and to suffer more serious physiological effects from his drinking. In these terms he presents as more disturbed than the delta alcoholic. On the other hand the delta alcoholic can by no means be considered free from pathology. He has been described as introverted to the extent of finding difficulty in relating to others, and is unable to face life without alcohol, albeit relatively smaller amounts.

Of note, however, and to be elaborated upon later, is that no research has been done in attempting to differentiate the wives of gamma and delta alcoholics.

4) Psychopathology and The Family

In the foregoing section, reference has been made to the role of "significant others" in the life of the alcoholic, although this has been de-emphasised in research. The last two decades, however, have witnessed the development of an influential family orientated approach to mental illness.

Traditionally, mental health grew out of a fascination with individual dynamics, a preoccupation which led to concentrating on intrapsychic phenomena only. Similarly, psychotherapeutic techniques focused on the individual, drawing an "artificial" boundary between the individual and his social context. Although this artificiality was recognised in theory, in practice it was maintained. Data concerning the social context was limited to what the patient thought and felt was happening to him, such individualised material reinforcing the approach of an individual apart from his context. Hence the individual came to be seen as the site of pathology.

Without ignoring intrapsychic phenomena, a family orientated approach attempts to eliminate such artificial boundaries, focusing more specifically on man in his social context. Rather than conceive of an individual with an "essential" personality, which remains relatively unchanged with the vicissitudes of different circumstances and contexts, this approach views the individual as a member of different social contexts, acting and reacting within them.

Therapy similarly involves intervention in various of these social contexts, including school work, peer groups and most significantly, the family. As such, the site of pathology has been broadened, including both intrapsychic and interpersonal phenomena. The basic assumption of this approach is that

"mental illness of a family member is but a symptom or aspect of an interlocking family pathology" (Zuk & Rubinstein, p.23, 1966)

This means, therefore, that the alcoholic alone is not sick, but rather that his alcoholism is a symptom of a sick family or context.

As Ackerman (1970) has pointed out, beyond this one point of agreement, workers in the field of family dynamics hold radically divergent views, ranging from models based on group dynamics in a psychoanalytic sense, e.g. Whitaker (1965) and Wyne (1965), to those based on games and systems theories, such as Ackerman (1965) and Munichin. Despite this, their message is clearly that the elucidation of pathology will follow from a closer examination of the family, one of the major social contexts of the individual.

This approach is however, extremely new, and the development of techniques for assessing ongoing family dynamics is as yet in its infancy. To date, no reliable and well-validated tests aimed at such assessment are available (Buros, 1972). Hence, although taking cognisance of its divergence from a strictly family orientated approach, this thesis will focus on the person commonly considered to be the most significant "other person" in the life and family of the alcoholic, his spouse. At the same time, one needs to remain aware of the difficulty of making linear predictions from one member of the family to another. For example within the family itself, the context may change according to different circumstances, the spouse playing a central role in certain of the alcoholic's relationships, his children or friends in another. Admittedly, in focusing on the wife of the alcoholic one is open to the criticism of examining only a limited aspect of his family context, albeit the so-called healthy member of the family. However, in view of the fact that no techniques are available for a broader examination of family dynamics, this was unavoidable.

Researchers, such as Glatt (1972) have pointed out many factors differentiating the life circumstances, pressures and personalities of women alcoholics from those of men, e.g. social censure and intolerance of drinking is much stronger in attitudes towards female alcoholics. It was, therefore, felt that families and spouses of female alcoholics present a different problem to those of male alcoholics. This study has thus been limited to an examination of the spouses of male alcoholics.

a) Psychopathology and The Spouse

Within this general paradigm, several researchers have found that psychiatric disturbances occur in both partners of a marriage, more often than can be expected by chance, i.e. Penrose (1944), Slater and Woodside (1951), Pond, Ryle and Hamilton (1963), Kreitman (1962 : 1964) et al.

Two major theories accounting for this are those of assortive mating and pathogenic interaction. The former theory proposes a tendency for persons of similar psychological constitutions to marry, and derives indirectly from investigations on normal populations showing correlations between marital partners for such attributes as intelligence, height, and other physical attributes (Jones 1930; Slater & Woodside 1951; and Smith, 1946, in Ovenstone 1973).

The theory of pathogenic interaction holds that husbands and wives living together tend to influence one another, and that the illness of one may lead to the breakdown of the other. Evidence in favour of this view has been produced by Kreitman (1964, 1970), Nelson, Collins, Kreitman & Troop (1971) and Ovenstone (1973) who found that with increasing duration of marriage, concordance on direct and indirect measures of psychopathology between spouses increased, or that spouses showed increasing disturbance when compared with matched controls.

Although the assortive hypothesis is being heavily criticised at present by Kreitman, with regard to neuroses (1964), it would hardly be fair to state that present research unambiguously supports the pathogenic hypothesis. As pointed out by Kreitman (1971) and Drewery & Rae (1969), research techniques in assessing the marital relationship are crude, and frequently what the tests actually measure fall far from their claims.

Taking impetus from family therapists such as Ackerman (1965; 1968; 1970) and Satir (1974) this approach has influenced the treatment of alcoholics so that therapeutic programmes have been established for alcoholics incorporating their wives, and in certain cases, their entire families.

Moreover, in the lay field we have seen the development of Alanon and Alateen groups associated to Alcoholics Anonymous (AA) for the wife and children of the alcoholic. In the clinical field, researchers such as Pixley & Steifel (1963) felt their patients were making unsatisfactory therapeutic advances and related this to "chronic neurotic interaction" (p304) in the marriage : hence groups dealing with the intraphysic problems of the non-alcoholic wife were established. Although examination of the literature shows that including the family in therapy is clearly the current trend, it is as yet too soon to assess the efficacy of this approach in dealing with alcoholics. Clinicians like Fox (1967), Kotis (1968) Rae (1972) and Pixley & Stiefel (1963) have produced extremely optimistic results in their therapeutic programmes. Other researchers e.g. Pattison et al, feel programmes have met with discouraging results. Pattison elucidates three problems facing the out-patient unit for wives; how to get the wives involved in a programme; how to diagnose their situation adequately; and how to provide therapy geared to their interest and potential. In view of this, it is felt that closer examination of the wife of the alcoholic may not only provide insight into the etiology of alcoholism, but would assist in the planning of treatment.

b) Wives of Alcoholics

Bailey (1961) and more recently, Edwards, Harvey & Whitehead (1973) have reviewed the literature on wives of alcoholics under three headings : the disturbed-personality theory, the stress theory, and the psychosocial theory.

(i) Disturbed-Personality Theory :

Analogous to the concept of assortive mating, this group of theorists view the wife's behaviour in terms of personal pathology, existing prior to the onset of the partner's alcoholism. Marriage to an alcoholic or pre-alcoholic is seen as the wife's attempt to satisfy certain of her own pathological needs, such as the basically insecure woman who marries a weak, impotent man whom she can dominate, thus strengthening her own ego.

Generally, these theories have arisen from psychiatric staff's attempts to account for the abnormalities they observed in the wives of the alcoholics, and as such, serves as little more than a conceptual system for clinical impressions.

An early paper by Price (1945) describes the typical wife of the alcoholic as being a dependent person who becomes hostile or aggressive towards her husband on finding him dependent too. Such a woman often interprets her husband's drinking as a rejection of her, and to "get even" she becomes more demanding or assumes greater responsibility, highlighting her husband's inadequacy. Alcoholism in the husband is viewed as proof of the wife's superiority and his inadequacy.

Lewis (1937) adopted a different approach, stressing that these wives find an outlet for their aggressive impulses in a partnership with a man who was partially dependent creating situations which force her to punish him.

As proof of these wives' psychopathology, certain researchers (e.g. Kogan & Jackson, 1965) note that a significant proportion of their previous husbands had been alcoholics and also that they are often daughters of an alcoholic father. The hypothesis follows that despite his unpredictability and unfair

behaviour to the mother the children identified with the father, a la the Electra complex. Often due to the strain, the wife becomes so unpleasant that the children identify with the father who when sober, goes out of his way to please his children, "overcompensating" for his unpleasant behaviour (in Glatt, 1972).

As further proof of the wives' psychopathology, many researchers note that the wife knew her husband was an alcoholic before their marriage, implying that she specifically married an alcoholic to satisfy her needs (Lemert, 1962). Extensive work by Bailey (1961) found that 34% of the 262 wives in her study had such prior knowledge. Interestingly, she noted a higher incidence of psychophysiological disturbance amongst this group, than amongst those who married men for whom drinking was not yet a problem. This implies heterogeneity within the group of wives of alcoholics: not all women married a man with overt psychopathology, but those who did were themselves disturbed.

Psychiatric journals and case studies abound with many different theories, all explaining how, because of their own psychopathology, such women married alcoholics, or potential alcoholics. Clearly no "typical wife" has as yet been found. These studies share a number of limitations. They are based on clinical observations of relatively few cases and are limited, i.e. while they may help generate testable hypotheses, they do not represent experimental results. Frequently these wives are described without being compared to other wives of non-alcoholic or psychiatric patients. Hence these studies fail to explain adequately why only a small proportion of women who have these characteristics become wives of alcoholics. A logical consequence of such explanations of the wives' psychopathology is that when the husband is "cured" the wife will decompensate, i.e. her defences will collapse (elaborated by Futterman, 1953 et al). Although certain studies do illustrate this (Mitchell & Mudd, 1957) the majority of more recent research has failed to find evidence of such decompensation.

Finally, perusing through the literature one is struck by the fact that the various researchers seem to be discussing totally different women. With the notable exceptions of Whalen (1953) and Deniker, de Saugy & Ropert (1964), few researchers have examined differences within the group of wives. This is hardly

surprising since until recently, alcoholics themselves have been regarded as an homogenous group. With the recognition of heterogeneity amongst alcoholics, viz. the gamma group appearing to be more pathological than the delta, a disturbed personality type theory should logically predict similar hereogeneity amongst their wives. Since marriage to an alcoholic is seen as the wife's attempt to satisfy her own pathological needs, one would predict that the woman who marries the more pathological gamma alcoholic would herself show more psychopathology.

(ii) Stress Theories

A pioneer in this field was Jackson (1954, 1956, 1959, 1962) who theorised that in their efforts to handle problems associated with alcoholism, family members came to feel guilty, ashamed, inadequate and isolated from social support; wives were specially affected, since in their own and society's eyes they had failed in their major role.

In an empirical test of her theory, Jackson studies wives who belonged to Alanon over 3 years, and outlined seven stages through which the wife and family pass in reacting to the development of alcoholism in the husband. She stressed that seemingly pathological behaviour in the wife was largely a function of changing patterns of adaptation and not a consequence of personality disturbance.

Jackson's work implied that all women were similar in personality and in undergoing a specific stress situation would react similarly. In their recent book "Psychological Stress", however, Appley & Trumbull (1967) emphasise a personal equation in assessing reactions to stress. viz. that reactions vary in intensity from person to person under exposure to the same environmental event.

A second important criticism of the assumption that stress leads to psychopathology comes from the work of Yerkes & Dodson (1908), who show that coping ability actually increases under stress situations as anxiety increases until a critical magnitude of stress is reached, whereafter such ability deteriorates. Again, such critical points differ from person to person.

Further limitations of work in this area include the fact that select samples of Alanon members were frequently used : subsequent work by Corder, Hendricks & Corder (1964) highlighted personality differences between women motivated to join Alanon and a group of wives treated at an ordinary clinic.

The value of the stress theory approach, however, lies in its emphasis that closer examination of the specific stress situation should clarify apparent differences in personality and coping devices. Thus, for example, while the wife of a delta alcoholic has to live with a man who is never without alcohol, albeit relatively small quantities, the wife of the gamma faces other serious stresses such as frequent police arrests of her husband, change of residency, job and financial status, and a husband periodically absenting himself from his responsibilities when "on a binge". One might, therefore, hypothesise that a stress theory would predict that wives of gamma and delta alcoholics would display different personality characteristics, and more important, that the wife of the gamma would appear more pathological than the wife of the delta.

iii) Psychosocial Theories

Recent research shows a merging of psychopathological and stress theories into a psychosocial theory, largely analogous to the pathogenic hypothesis discussed earlier. Such studies have attempted to examine both the effect that the wife's personality might have on the particular coping style she uses most often and the causal relationship which might exist between her coping style or personality make up and her husband's stage of alcoholism.

The main impetus for this approach lies in the methodological difficulties inherent in the approaches discussed above. At no one stage can one differentiate the relative effect of personality or stress, since both factors interact to form each complex situation.

Examples of psychosocial studies are that of Rae and Drewery (1972, 1973) in which they examine interpersonal patterns of communication and personality characteristics of husband and wife, and how this relates to treatment outcome.

These studies are not without their methodological difficulties, e.g. Rae & Drewery employed a test based on psychological needs, the EPPS, to infer interpersonal perception; whilst in a study examining wife's coping mechanisms and husband's stages of alcoholism, Orford and Guthrie (1968) relied on wives own statements about their coping behaviour in discussing how they actually deal with their alcoholic husbands.

What is significant, is that in recognising the effects of both stress and personality, it has lead researchers away from looking at the wives of alcoholics as an homogeneous group suffering from a unique psychopathology, and for a unitary group who undergo similar stressful situations. This approach emphasises that individuals with differing personality characteristics will not react similarly to stress, but rather that their reaction will depend on their unique constellation of personality characteristics.

On the one hand it proposes that the person with poor personality resources who undergoes a difficult stress situation will not be able to cope and may present with psychopathology, and those with extremely poor personality resources may not be able to adjust to even minor stresses. On the other hand, women with considerable resources may well adjust to the situation satisfactorily.

In short in contrast to the previous two theories, although the more serious stresses of being married to a gamma alcoholic may lead on to the development of psychopathology this need not necessarily occur.

5. Rationale

In the foregoing sections, research focusing on the heterogeneity of alcoholics, viz. gamma vs. delta, has been examined. Thereafter, major theories applied in the understanding of the psychopathology in the wife of the alcoholic were outlined. In this section, it will be shown more specifically how, on the basis of past gamma/delta research, all the theories outlines above would predict personality characteristics of wives of gamma and delta alcoholics to differ, viz. that the wife of the gamma should manifest greater psychopathology than the delta.

Briefly outlining gamma/delta research evidence :

- (i) on a physiological level, studies by Stein et al (1968) and Vogel (1961) found the gamma to suffer more seriously, more frequently, and sooner in his drinking career from the physiological effects of drinking than the delta, concluding that the delta is more able to rationalise the physiological effects of his drinking, and in fact, denies his alcoholism.
- (ii) on a psychological level, Walton (1968) found gamma to be differentiated from delta by the greater force of their own impulses, a force they viewed as a threat to their own security; Abelson (1973) found the gamma to be somewhat more hostile and intropunitive than the delta, although this relationship was not significant; and Abelson and Ben Arie (1970) found gamma alcoholics to be lower in self-acceptance than delta, indicating psychopathology in the former.
- (iii) on a sociological level, Stein et al (1968) showed significant differences in social effects of drinking, the gamma being more frequently arrested, having a greater incidence of change of residency, missing work more often and having a higher rate of job dismissal. Similarly, Walton (1968) notes how they clash with authority more frequently, particularly with the police. From this, researchers like Abelson (1973) concluded that the gamma alcoholic is more socially visible than the delta.

- (iv) Finally, affecting all three levels is the actual drinking pattern of the alcoholic : although the delta drinks daily and is never without alcohol, he seldom drinks to intoxication as does the gamma whose drinking pattern is more sporadic and intensive. The wife, therefore, cannot predict just when the gamma will go on a drinking binge and whether in fact this will lead to a change in life style as a result of dismissal from a job or a change in the alcoholic's state of health, and whether she will be relating to a sober man or one "under the influence".

It is felt that this research evidence relates to the theoretical explanations formerly proposed to account for pathology in the alcoholic's wife.

- (a) Disturbed personality theories view the wife and her behaviour in terms of personal pathology existing prior to the onset of marriage. Marriage to an alcoholic or pre-alcoholic is seen as the wife's attempt to satisfy her own psychological needs. Hence the woman who marries a man who is greatly disturbed psychologically, who is sick physiologically, who is more disruptive socially and who follows a sporadic drinking pattern which provides her with little security, is likely to be more disturbed than the woman married to the less disturbed delta alcoholic. Further, in view of research indicating that the onset of alcoholism is earlier in the gamma than the delta, it is more likely that the gamma would show problem drinking at the time of marriage and that the wife of the gamma would probably know that she is marrying a man who has a drinking problem.
- (b) Stress theories view the seemingly pathological behaviour of the wife in terms of patterns of adaptation to stressful situations. Looking at gamma and delta alcoholics, it is apparent that the wife of the former is under greater stress since her husband is "sick" physiologically, is socially more visible and liable to suffer from the social effects of his drinking. In addition, he presents psychologically as a more disturbed husband to whom she must relate, and in view of the sporadic nature of his drinking she is faced with the stress of periodically assuming his role as head of the household.
- (c) A psychosocial approach takes into account both personality and stress, viewing pathology in terms of an interaction between these two factors. Unlike the above two theories this approach does not allow one to make linear predictions about one member of a marital couple from knowledge of the second, in that it states that just how the individual will react to stress will depend on his unique personality constellation.

Although research indicates both personality and stress variables to be more disturbed and severe in the gamma than the delta situation, greater psychopathology amongst wives of gamma alcoholics may not necessarily be predicted.

In sum, on the basis of past research on the differences between gamma and delta alcoholics, regardless of the theoretical standpoint one adopts, one may predict differences in personality characteristics amongst their wives. More specifically, one might hypothesize that the wife of the gamma alcoholic would present as more disturbed than the wife of the delta. As no previous work has been carried out on wives of gamma and delta alcoholics, this is the first study in this area and is intended to investigate the field in a more general way. At this juncture more specific hypotheses are thought to be premature and will not be postulated

B. HYPOTHESES

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- 1) There is a difference in personality characteristics between wives of gamma and delta alcoholics in terms of :-
 - (a) basic personality traits as indicated by Cattell's 16PF.
 - (b) general hostility and direction of hostility as indicated by the Foulds HDHQ.
 - (c) self-concept, as indicated by Gough & Heilbrun's ACL.

- 2) Wives of gamma alcoholics will show greater general psychopathology than wives of delta alcoholics in terms of :-
 - (a) basic personality traits as indicated by Cattell's 16PF.
 - (b) general hostility and direction of hostility as indicated by the Fould's HDHQ.
 - (c) self-concept, as indicated by Gough & Heilbrun's ACL.

C. METHOD

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1. Summary

Subjects were 40 women, wives of first admission alcoholics admitted to the William Slater and Valkenberg mental hospital. A psychiatric interview was held, during which a case history was taken, focusing on both the subject and her spouse. On the basis of both this history and information in the alcoholic's hospital file, subjects were classified into wives of gamma or delta alcoholics. Three psychological tests, Catell's 16 Personality Factor Questionnaire (16PF), Foulds' Hostility and Direction of Hostility Questionnaire (HDHQ) and Gough and Heilbrun's Adjective Check List (ACL), were administered. By means of various statistical techniques, data obtained from wives of gamma and delta alcoholics were then compared.

2. Rationale for Statistical Procedures

(a) Multiple analysis of variance (MANOVA)

The analysis of variance (ANOVA) is a technique that was designed to ferret out differences in the means of populations, i.e. it is used to test the hypothesis that two or more groups are drawn from a population having the same mean. This technique is specifically aimed at coping with variables that are qualitative rather than quantitative, as in this case the differential effects of two types of drinking patterns.

In the simple ANOVA only two sources of variance are considered : that attributable to the independent variable, and that attributable to sampling error. MANOVA is a technique which is designed to deal with an associated group of variables, rather than a single independent variable, e.g. the 25 readings on the ALC for each person. Assuming each variable to be normally distributed, it studies group differences in location in multidimensional space. Further, this technique is able to control for the effect of differences in sample size.

As such this test was used to compare group means on factors of all three psychological tests, the 16PF, HDHQ and ACL, and to compare group means of English and Afrikaans variables of the ACL.

(b) Step-wise analysis of regression

Analysis of regression provides a test of the hypothesis of no relationship between the independent and dependent variables in a regression equation. In the single-predictor situation it is equivalent to the test of the Pearson correlation coefficient. In the multiple regression situation, it tests that hypothesis of no relationship existing between the combined independent variables and the independent variable. In step-wise regression, the first independent variable is entered into the regression, yielding a regression equation. In each of the consecutive steps the independent variable with the highest partial correlation was entered into the regression.

Step-wise analysis of regression was used to investigate the relationships existing between the 15 factors of each individuals' life history and the grouping of gamma/delta. The technique was again employed, investigating the relationship between these factors and the grouping calculated according to the multi-dimensional scaling technique (see below).

(c) Kuder-Richardson split-half reliability formula

As no split half reliability figures predicting internal consistency were available for either the HDHQ or ACL, it became important to assess such reliability in this thesis.

With this technique, a single administration of the instrument is made, the test split into two halves which are scored separately and a Pearson correlation coefficient between the two scores is calculated. The Kuder-Richardson technique is then used to compensate for the fact that the reliability was estimated from a test one-half the length of the final form.

(d) Multi-dimensional Scaling

As no significant differences were found when grouping was calculated according to husbands' drinking pattern, a technique of multi-dimensional scaling was employed to assess whether any grouping does occur within the total population. Using this technique a scattergram is calculated using the scores of each subject on each psychological test, the pattern on the scattergram indicating the existence of any form of grouping.

(e) The t-test

The t-test for independent samples is used to determine whether the means for two groups differ. This is equivalent to testing the null hypothesis whether two populations are in fact a single population, with respect to a criterion value, e.g. a score on the 16PF. As such the t-test was applied to 2 groupings obtained from the multi-dimensional scaling in order to describe on which factors the significant differences lay.

3. Psychological Tests

(a) Cattell's 16 Personality Factor Questionnaire (16PF)

The 16PF is "an objectively scoreable test devised by basic research in psychology to give the most complete coverage of personality possible in a brief time". (p.5 16PF Manual 1972). Derived primarily from the research and theory of Cattell, the 16PF covers the basic personality traits isolated in his factor analytic research. The original development of the test followed a survey of all well-known questionnaire, opinionnaire, interest and value scales. The evidence from this survey and from earlier factor analytic studies suggested the existence of 20 factors, these factors thereafter forming the basis for the development of further questionnaire items. (Cattell, 1957). Of these 20 factors, a number were found to be ambiguous and after further refinement, the test consisted of 15 personality factors and one intelligence factor. In addition, Cattell provides evidence for the existence of 4 second order factors.

The test has been designed for use with individuals aged 16 and above. Five forms of the test are currently available, whilst a 6th is at present in preparation.

The 16PF is one of the few psychological tests which have been standardised for the South African population. In this thesis, the 1966 Form A edition of the National Bureau of Education and Social Research is used, in view of the need for both an English and Afrikaans translation.

Only three norm tables are as yet available, i.e. one for the general population, for male and for female student. Hence norms for the general population will be employed.

As yet, South African age transformations such as those suggested by Cattell, Eber & Tatsuoka (1970) have not been compiled.

Form A consists of 187 items, each allowing three possible answers, e.g. I don't feel guilty for something I did not do - a) true b) uncertain c) false.

The test may be administered both in group and individual situations. Important is that Cattell et al designed the test items specifically for newspaper literate adults and it is, therefore, considered appropriate for use in the present study.

In his review of the test, Pervin (1970) notes that the scales on the 16PF appear to have adequate, although not specifically high, split half reliability.

Data is not given on test-retest reliability because it is assumed that low reliability may reflect characteristic fluctuation in trait rather than poor scale reliability. This is not sufficient excuse however, and he suggests that the manual should provide statements concerning which scales reflect labile personality characteristics as well as statistical evidence of such fluctuation.

In terms of validity, the test is adequately covered for criterion-related validity. The manual provides correlations of the scale with many concrete performances such as school achievement; and for construct validity by means of the factor analytic approach itself.

As has been mentioned, the test is based on factor analytic research and hence embraces the assumptions attendant on such a method. Two major criticisms of factor analysis have been that it assumes a linear relationship among variables and that it assumes that factors combine additively instead of by a more complex interaction. Further, although Cattell was confident that factor analysis can be relied on to discover basic dimensions or underlying structures of personality, others have reservations: Holt (1962) points out that if researchers start with different principles and use different variables the observed factors differ substantially, i.e. you get out what you have put in; frequently the suggestion is made that factor analysis is useful for reducing large amounts of data to a few categories, but that one cannot assume that these categories reflect underlying structures.

A second major weakness of the test lies in the fact that no validity scales are provided. Extensive work by Edwards (1957) and others have illustrated the operation of response sets in questionnaires: how people are unconsciously defensive, or consciously fake responses to questionnaires. The 16PF attempts

to deal with such problems by encouraging the subject to be honest in the instructions and by selecting the items such that each scale has an equal number of "yes" and "no" responses contributing to the total score. In spite of this Pervin concludes that the problems above do appear to enter into some aspects of the test and distort the psychological meanings of items involved.

A further weakness but of less relevance to this study lies in the present inability of the 16PF to substantiate the validity of the psychoticism score as a diagnostic aid. (Cattell et al 1970). Until this aspect is considerably improved the test will be unable to play its full role in the psychiatric setting.

Despite these difficulties, the 16PF remains an extremely useful test. Over the years an impressive body of reliability and validity data has been collected (Rover 1972, Bouchard 1972). Further as the 16PF is not specifically psychiatrically orientated, it is particularly applicable to the group of wives of alcoholics, a group not clinically regarded as psychiatrically ill.

(b) Fould's Hostility and Direction of Hostility Questionnaire (HDHQ)

The HDHQ, based on Fould's general theory of personality, is designed to measure a wide range of general punitiveness, hostility or aggression. Fould's views psychopathology on a continuum, ranging from normality through personality disorder, personal illness, psychosis to non-integrated psychosis, the defining feature of this continuum being an increased failure to maintain or establish mutual personal relationships. All these disorders are necessarily an extension of egocentricity and its corollary, a lack of empathy. Fould's states that the more people are able to empathize with others, the more able they are to establish significant relationships, and the less likely they are to resort to blaming themselves or others when under extreme stress. Hence he proposed that general punitiveness was a valid measure of egocentricity and psychopathology.

The test itself consists of 51 items drawn from the MMPI and allocated to 5 subscales, three indicating hostility directed outwards towards others, (extrapunitiveness) two indicating hostility towards self (intropunitiveness). Hence, while projected hostility (PH), Criticism of Others (CO) and Acting Out Hostility (AH) comprise extropunitive scales, Guilt (G), and Self Criticism (SC) comprise intropunitive

scale. The format of the test is a "True-False" forced choice.

Examining the validity of the test, statistical assessment by Foulds, Caine & Creasy (1960), Phillips (1968) and more recently Mayo & Bell (1971) found a positive correlation between all 5 scales, substantiating a "general punitive factor". Further they found that correlations between the three extrapunitive scales are higher than with the two intropunitive scales, hence inferring that extrapunitive scales measure something different from intropunitive scales. They concluded that measuring the direction of hostility, extrapunitive vs. intropunitive would indicate the dominance of one hostility response over the other.

Foulds et al (1960), Phillips (1968) & Hope (1969) have carried out studies to assess the validity of subscales. To date work with psychiatric samples largely substantiates such subscale differentiation. In testing his hypothesis of increasing punitiveness ranging from normals to non-integrated psychotics, Foulds (1965) found this to be true, with the exception of psychopaths who manifested the most general hostility. Foulds explained this on the basis that in addition to the high extrapunitiveness of the psychopath, there is an unconscious facade of intropunitiveness, the psychopath deceiving himself.

Moreover, work by Phillips (1968, 1970) has recently provided extensive normative data, indicating the use of the test with non-psychiatric groups as well.

Assessment of reliability has taken the form of test-retest correlations. In the manual, Foulds quotes a study in which 30 normals and 41 psychiatric patients were tested on 4 occasions over a 1 year period. Test-retest correlations for Hostility were ,75, and Direction ,51. No split half reliability studies of this test have been undertaken, and in view of the fact that test-retest reliability is relatively low, split-half reliability will be examined in this thesis.

Although no South African standardisation of this test has been undertaken, this test has been widely used in research in this country: Abelsohn's work on the age variable in alcoholism (1973) & Rabinowitz's work with renal patients (1974). Further, in Abelsohn's study, the test was translated into Afrikaans by two Afrikaans

speaking psychologists in conjunction with a senior translator for a Cape Town publishing firm. In this study, Abelsohn found no significant difference between the means of English and Afrikaans forms of the HDHQ.

Use of a test of hostility for wives of alcoholics hardly needs justification. The literature abounds with case studies and experiments focusing on the aggression of the wife of the alcoholic, e.g. Whalen's analysis of Punitive Polly who uses her marriage as an "outlet for her aggressive impulses" (p.640, 1953) and Price's analysis of the aggressive wife (1945)

Further, the specific advantage of using this test lies not only in the ability to assess the extent of such hostility but the manner in which it is expressed.

(c) Adjective Checklist (ACL)

The Adjective Check List, a technique specifically developed for assessing self-concepts, provides a list of 300 adjectives arranged alphabetically from "absent-minded" to "zany" (Gough, 1960; Gough & Heilbrun, 1965). The respondent marks all the adjectives he considers to be descriptive of himself.

Many studies discussed above have focused on the self concept of the wife of an alcoholic. In an attempt to provide a more extensive examination of personality, it appears important to tap the subjects' descriptions of herself, i.e. her self-concept. Drawing on the work of theorists like Hill (1957) and Rogers (1961), Wylie (1961) reviews research examining the relationship between psychopathology and self-concept. Although reviewers like Scott (1958, in Wylie) warn of the complexity of the relationship, e.g. positive self-regard may be indicative of good adjustment, denial of problems or unsophisticated conventionality, Wylie sums up the research conclusions as follows :-

- (i) diagnosed neurotics and/or mixed patient groups showed significantly lower self-regard than did normal non-patient subjects; there is overlap between the groups, however.
- (ii) varying results have been obtained in comparisons between psychotics and normal persons.

In view of the fact that no psychotic persons were included in this study it is considered that the relationship between self-concept and psychopathology has been sufficiently validated.

There are 24 scales currently available from the ACL, three being response set scales which are not only used to adjust scores on other scales, but are of interest in their own right. Four scales were developed by empirical laying against a criterion at intensive personal observation in an IPAR (Institute for Personal Assessment and Research) program viz. self-confidence, self-control, lability and personal adjustment. Another scale, counseling readiness was similarly empirically desired, whilst the remaining 15 scales were prepared on a rational or content basis by assigning adjectives to each of the 15 needs covered by Edwards Personal Preference Scale.

A relatively new scale, reliability and validity appears to be fairly favourable. Test-retest reliability coefficients vary from +0, to +0,86, lability and succorance scales showing a low reliability. Subsequent researchers hypothesise that retest reliability over a 6 month interval may in itself be an important personality variable. In view of the fact that no split-half reliability scores are available for these test it will be examined in this paper. The concept of validity is extremely complex, since much of the work in this area has compared scoring on the ACL with scores on other psychological tests. Hence the value of such results fluctuates with the validity of the tests compared, and whether in fact those tests measure identical personality variables, or not. Studies by Gough & Heilbrun (1965) in which observer evaluations were employed, contribute further to construct validity of the test. Hence, although the manual stresses that the test is still experimental, Anastasi (1970) concludes that the ACL may be widely applied.

No South African standardisation of the test has been undertaken, and several words e.g. "zany" are seldom used by South Africans. Since so few self-concept tests are applicable to a group comparison, and few psychological tests have been standardised. Amongst the South African population, the use of this test is considered validated.

4. Subjects

The subjects were 40 White women, wives of first admission alcoholics consecutively admitted to the William Slater and Valkenberg Mental Hospitals, Cape Town, between the period of October, 1975 and June, 1976. Drawing from both hospitals, it was hoped that the total sample might be representative of wives of male alcoholics who came for psychiatric treatment at a state unit. Due to the admission policies of the above units, and the criteria employed in selecting subjects, only two subjects were from Valkenberg, the remaining 38 being drawn from the William Slater hospital.

All the subjects tested were in fact legally married to the alcoholic and during the period just prior to admission had been living with their husbands. No wives of psychotic or brain damaged subjects were included in the sample. Two women were omitted from the sample as, on hearing of the research nature of the interview, they refused to participate.

(a) Criteria for Diagnosis of Alcoholism

The operational definition suggested by Frighner, Robins, Guze, Woodruff, Winokur and Munoz (1972) was used in the diagnosis of alcoholism. Such diagnosis was made when the husband manifested symptoms in at least three of the four following groups.

Group 1

- (i) Any indication of alcohol withdrawal tremulousness
- (ii) History of medical complications, e.g. polyneuropathy
- (iii) alcoholic blackouts
- (iv) at least two alcohol benders which have lasted for 48 hours or more

Group 2

- (i) Subject has not been able to stop drinking when he has wanted to
- (ii) subject has tried to discipline and control his drinking, e.g. drinking only with other people
- (iii) drinking before breakfast
- (iv) drinking non-beverage alcohol e.g. hair oil

Group 3

- (i) Arrests for drinking
- (ii) drink associated with work trouble
- (iii) drink associated fighting

Group 4

- (i) Subject thinks he drinks too much
- (ii) family objects to his drinking
- (iii) loss of friends because of drinking
- (iv) feels guilty because of his drinking

(b) Patterns of Drinking

Subjects were classified clinically into one of two groups, depending on their husbands' pattern of drinking, i.e. gamma or delta. Diagnosis was made by using interview data obtained from wife, social workers' reports and cross checking by the consultant psychiatrist. Criteria for classification were those supplied by Walton (1968).

Gamma Alcoholism

- (i) increasing intake whenever drinking starts
- (ii) short abstinence spells between benders
- (iii) periodic intoxication
- (iv) social disorganisation

Delta Alcoholism

- (i) regular daily excessive intake
- (ii) no periods of sbstention
- (iii) control so that drunkenness and social disorganisation do not occur.
- (iv) a social milieu often approving high regular ingestion.

- (c) Subjects generally represented an approximate socio-economic cross section of the European population who would present to a state hospital for psychiatric treatment.

Table 1 - Percentage of Subjects in each Socio-economic Class

	GAMMA	DELTA	TOTAL GROUP
i.	0	0	0
ii.	18	13	22
iii.	35	17	30
iv.	41	22	39
v.	6	5	9

In saying this, one must bear in mind the fact that the highest socio-economic class are more likely to present for treatment at a private unit or practitioner and that in South Africa, the lowest classes are predominantly Black.

Subjects were not evenly distributed between the English and Afrikaans language groups, rather there being more English than Afrikaan patients. This is explicable in that the William Slater is predominantly an English speaking unit and that a similar Afrikaans unit is situated just outside of the Cape Town area and is likely to attract the majority of Afrikaans alcoholics.

5. Procedure

Each subject was seen by the interviewer during the first week of her husband's admission to the alcoholic unit. The experimenter introduced herself as a psychologist who was routinely interviewing and testing the wives of all first admission patients entering the hospital. The research orientation of the investigations was mentioned, as was the fact that the results of the test would be anonymous and participation was voluntary.

During this interview a brief case history was taken, focusing on both the subject and her alcoholic spouse. The ordering of specific questions was left open. This was necessary since a varying amount of time was needed to establish rapport, and information often arose spontaneously during this initial period. Thus, although no specific time or order was prescribed, specific information relevant to the study was systematically recorded. Wherever possible, social workers' reports were consulted, such data either corroborating or necessitating modifications in the categories below.

The following information was obtained :-

- (i) Present chronological age of subject.
- (ii) Present chronological age of husband.
- (iii) Length of marriage.
- (iv) Whether subject had previously been married to an alcoholic or problem drinker.
- (v) The number of children the couple have.
- (vi) Husband's pattern of alcoholic drinking - whether he fell into the gamma or delta category, as outlined by Walton (1968) (discussed above).
- (vii) Education and occupation of both subject and her husband. From this, the family's socio-economic class was calculated, according to the tri-axial classification laid down by Rutter, Lebovici, Eisenberg, Sneznevsky Sadoun, Brooke, Lin (1969).
- (viii) Perceived quality of family relationship and parents' marriage. The subject was asked to describe the home atmosphere and relationships between parents and the entire family up till subjects were 15 years old. The perceived quality of the parental and familial relationships were classified into one of four categories:

- (a) Harmonious : when the subject reported a happy home.
 - (b) Fair : where relationships were described as cold, formal and characterised by a lack of emotional involvement and concern; where there appeared to be a lack of positive feelings within the home
 - (c) Disharmonious : where there appeared to be active disturbance between the parents, with continuous quarreling, hostility and physical violence.
 - (d) Divorced
- (ix) Whether either of subject's parents had died before she was 10 years of age.
 - (x) Whether subject had any psychiatric treatment prior to, or during the marriage, i.e. in a psychiatric hospital, by a private psychiatrist or psychologist, at a child guidance unit, or marriage guidance centre.
 - (xi) Subject was questioned as to her own drinking habits, and thereby assigned to one of three categories :-
 - (a) teetotaller
 - (b) social drinker
 - (c) problem drinker and/or alcoholic
 - (xii) Subject was questioned as to the drinking habits of her parents, both father and mother being individually assigned to one of three categories
 - (a) teetotaller
 - (b) social drinker
 - (c) problem drinker and/or alcoholic
 - (xiii) Whether subject's husband was already drinking excessively before the couple were married and whether or not this was hidden from his wife. Events indicative of the former, according to Kessel & Walton (1969) and Ritson & Hassal (1970) are : drinks to relieve tension; "sneaks" drinks; takes stronger drinks than his companions; drinks to perform adequately socially; and spends increasing time in social drinking.

The Cattell 16PF questionnaire was then administered, the HDHQ and ACL being administered on subsequent occasions. The subject always completed the test with the experimenter in attendance.

D. RESULTS

D. R E S U L T S

1. Gamma/Delta

(a) Multiple Stepwise Regression Analysis

A Multiple Stepwise regression analysis was carried out on the data, (40 subjects) in order to establish the relationships existing between the 15 life history factors (independent variables) investigated, and the grouping of the wives (dependent variables). The following is a table of the variables and their corresponding measures.

Table 2 - Case History Data for Multiple Stepwise Regression Analysis

Variables		Units
X1	Length of marriage	years
X2	Age of alcoholic	years
X3	Age of wife (subject)	years
X4	Wife's drinking pattern	0 = teetotaler 1 = social 2 = problems
X5	Father's drinking pattern	0 = teetotaler 1 = social 2 = problems
X6	Mother's drinking pattern	0 = teetotaler 1 = social 2 = problems
X7	Family relationships	0 = harmonious 1 = fair 2 = disharmonious 3 = divorce
X8	Death in wife's early childhood	0 = No 1 = yes
X9	Husband's drinking at onset of marriage	0 = No 1 = yes 2 = hidden
X10	Psychiatric treatment of wife prior to marriage	0 = No 1 = yes
X11	Psychiatric treatment of wife after marriage	0 = No 1 = yes
X12	Socio-economic class	Classes 1 - 5
X13	Children	number of
X14	Previous marriage to alcoholic	0 = No 1 = yes
X15	Home language	0 = Afrikaans 1 = English
Y	Type of alcoholism of husband	1 = gamma 2 = delta

It was decided to do a stepwise multiple regression analysis in order to gauge the contribution of each of the variables to the variation of each of the variables to the variation of Y. The F-level for entrance into the regression was arbitrarily chosen to be low (1,0) so that variables which are contributory, even if not significantly so, may be indicated. In the first step, the independent variable with the highest correlation with the dependent variable Y, is entered into the regression. In each of the following steps, the independent variable with the highest partial correlation with the dependent variable, given that some independent variables have already entered the regression in preceding steps, is entered into the regression.

The analysis is summarised in Tables 3 and 4. Variable 9, knowledge of husband's drinking before marriage, had the highest correlation with the grouping and was entered into the regression in the first step, having a significant F level of $5,7 > 4,1 = F_{2,10} (0,05)$. The correlation between these two independent variables is negative implying that the gamma group tended to have husband's who hid their drinking habits and had a drinking problem before marriage, and the delta group tended to have husbands who did not drink before marriage.

Table 4

Four steps with highest correlation coefficients (gamma/delta)Step No. 1

Variable Entering	9		
Flevel	5,122467	> 4,1	
Standard Error of Y		,476109	
Constant	1,734375		
	Variable	Coefficient	Std. Error of Coeff
	X 9	-,22768	,10060

Step No. 2

Variable Entering	11		
Flevel	3,341870		
Standard Error of Y		,462083	
Constant	1,640804		
	Variable	Coefficient	Std. Error of Coeff
	X 9	-,22641	,09764
	X11	,28517	,15599

Step No. 3

Variable Entering	14		
Flevel	3,734766		
Standard Error of Y		,445898	
Constant	1,644177		
	Variable	Coefficient	Std. Error of Coeff
	X 9	-,27933	,09812
	X 11	,31844	,15151
	X 14	,91448	,47320

Step No. 4

Variable Entering	6		
Flevel	1,070518		
Standard Error of Y		,445462	
Constant	1,593052		
	Variable	Coefficient	Std. of Coeff
	X 6	,11826	,11430
	X 9	-,28461	,09815
	X 11	,29135	,15361
	X 14	,97618	,47648

(b) Multiple Analysis of Variance (MANOVA)

This thesis was aimed at testing whether differences existed between two groups, wives of gamma and delta alcoholics, with respect to three psychological tests. Since the tests did not reply on a single score, but several scores, the usual method of comparing the means of the two groups (a t-test which is a generalisation of ANOVA) could not be used. The multivariate analog instead had to be used. This technique, called MANOVA, assumes each of the variables (scores) to be normally distributed, and is a study of group differences in location in a multi-dimensional measurement space. The technique is based on a U-statistic which has 3 degrees of freedom, and may be transformed into an F-statistic with 2 degrees of freedom. This is used as the test criterion and is compared with the F tables.

(i) Cattell's 16PF Questionnaire

Table 5
MANOVA Mean scores on the 16PF

Factors	Gamma Mean	Delta Mean	Grand Mean
A	6,176	6,348	6,275
B	3,705	4,087	3,925
C	3,765	4,304	4,075
E	3,353	4,435	3,975
F	3,235	3,652	3,475
G	5,411	5,435	5,425
H	4,353	5,000	4,725
I	8,412	8,174	8,275
L	3,941	3,696	3,800
M	6,882	5,348	6,000
N	5,353	5,087	5,200
O	6,176	5,217	5,625
Q1	4,823	4,522	4,650
Q2	6,353	6,304	6,325
Q3	5,765	5,826	5,800
Q4	5,706	5,956	5,850

$U = 0,645$ is distributed as $U_{16, 1, 38}$

and $F = 0,97$ is distributed as $F_{16, 23}$

Since $F = 0,79 < 2,11 = F_{16, 23} (0,05)$ we must accept that the vector of mean scores for the 16PF for the two groups do not differ significantly, at 5% level of significance.

It was not necessary to consider the second order factors, since as first order factors were not shown to differ the second order factors derived from these figures would similarly show no significant differences.

ii) Fould's HDHQ

Table 6

MANOVA mean scores on the HDHQ

Factors	Gamma mean	Delta mean	Grand mean
AH	3,882	4,391	4,175
PH	3,117	3,347	3,250
CO	3,411	3,260	3,325
SC	5,582	4,130	4,750
G	2,883	2,000	2,375

The calculated U value was 0,785 which is distributed as $U_{5,1,38}$ and the calculated F value was 1,75 which is distributed as $F_{5,32}$. Since $F = 1,75 < 2,51 = F_{5,32}(0,05)$ the hypothesis that the vector of mean scores for hostility for the two groups do not differ, must be accepted, (at 5% level of significance).

Again it was unnecessary to consider the second order factors of total hostility and direction of hostility, since if first order factors were different, the second would also differ.

iii) Adjective Check List

Table 7
MANOVA mean scores on the ACL

Factors	Gamma Mean	Delta Mean	Grand Mean
DF(M)	15,765	16,174	16,000
DF(F)	18,294	19,652	19,075
Far	42,941	46,739	45,125
Unfar	5,588	5,304	5,425
S-Cfd	6,353	7,652	7,100
S-CN	7,765	8,087	7,950
Lab	6,353	6,391	6,375
Per Adj.	9,353	11,739	10,725
Ach	9,059	10,435	9,850
Bdm	6,118	8,566	7,525
End	8,706	9,000	8,875
Ord	8,235	9,435	8,925
Int	13,294	13,783	13,575
Nr.	20,118	20,739	20,475
Aff	18,765	20,130	19,550
Het	6,118	7,087	6,675
Exh	-1,647	-,174	-,800
Aut	-,706	-,957	-,850
Agg	-15,647	-13,522	-14,425
Cha	2,529	3,348	3,000
Suc	,059	,043	,050
Aba	2,412	2,391	2,400
Def	6,059	5,217	5,575
Crs(M)	-5,706	-7,260	-6,600
Crs(F)	,647	2,217	1,550

$U = 0,232$ which is distributed as $U_{25,1,38}$ and $F = 1,85$ is distributed as $F_{25,14}$. Since $F = 1,85 < 2,34 = F_{25,14}(0,05)$ the hypothesis that the vector of mean scores for the ACL for the two groups do not differ significantly must be accepted, at the 5% level of significance.

2. Groupings obtained from examining "clusters"

(a) Multidimensional Scaling

Multidimensional scaling refers to a collection of techniques which have been developed for inferring multidimensional metric structure from nonmetric ordinal data. For each of the psychological tests, a measure of dissimilarity is evaluated for each pair of subjects and used to rank the subjects. A simulation technique is used to place the subjects in a multidimensional scaling configuration which places these subjects whose scores are highly correlated, near one another and those which are dissimilar, further apart. A scattergram results when the dimension is chosen to be 2, and from this representation of the subjects, one can observe whether any clustering in the subjects exists.

Two groups could be found in the scalings based on each of the psychological tests and these were found to overlap. Hence 40 subjects could be divided into three groups as follows :-

Table 8
Grouping of subjects according to multidimensional scaling

<u>A</u>	<u>B</u>	<u>C</u>
1	2	3
5	6	4
10	14	7
16	15	8
21	22	9
24	23	11
29	25	12
31	27	13
35	19	17
38		18
40		20
		26
		28
		30
		32
		33
		34
		36
		37
		39
11	9	20

It can be interpreted that groups A and B differ from one another with respect to all three psychological tests, (checked with MANOVA, and significant differences found). The subjects within each of the groups A and B are homogeneous with respect to all three psychological tests. The subjects in group C lie between the groups A and B, i.e. they are similar to group A with respect to some of the psychological tests and to group B with others.

Hence there are two groups which differ with respect to the psychological tests. This clustering may be a true grouping which does in fact exist and is attributable to some or several factors. However, it could also be a false grouping which in fact is due to random variation.

Table 10

Four steps with highest correlation coefficients with A, B, C groupingStep No. 1

Variable entering	12		
Flevel	4,026126	> 3,71	
Standard error of Y		,688124	
Constant	,120579		
	Variable	Coefficient	Std. Error of Coeff
	X 12	,24759	,12339

Step No. 2

Variable entering	1		
Flevel	2,933452		
Standard error of Y		,671259	
Constant	,514737		
	Variable	Coefficient	Std. Error of Coeff
	X 1	-,01833	,01070
	X 12	,23090	,12076

Step No. 3

Variable entering	8		
Flevel	2,559062		
Standard error of Y		,657549	
Constant	,555455		
	Variable	Coefficient	Std. Error of Coeff
	X 1	-,02000	,01054
	X 8	,50830	,31774
	X12	,20896	,11909

Step No. 4

Variable entering	14		
Flevel	5,710086		
Standard error of Y		,618341	
Constant	,685472		
	Variable	Coefficient	Std. Error of Coeff
	X 1	-,02103	,00992
	X 8	,85383	,33195
	X12	,17538	,11286
	X14	-1,66579	,69711

(b) Multiple step-wise analysis of regression

A multiple step-wise analysis was similarly carried out on the data in order to establish the relationship between the same 15 case history factors (independent variables) and the groupings elicited by the multi-dimensional scaling analysis groups A, B and C (dependent variables). Units employed were the same as set out in Table 2, but Y groupings were A = 1 C = 2 B = 3.

The same F level for entrance into the regression was employed, and the analysis is summarised in Tables 9 and 10.

Variable 12, socio-economic class, had the highest correlation with the grouping and was entered into the regression in the first step, having an F level of 4,03 3,71 = $F_{3,10}(0,05)$. The correlation between these two independent variables is positive implying that Group A tended to come from a higher socio-economic class than did group B, Group C falling midway between the two.

(c) The t test

In order to examine the manner in which groups A and B differed, a t test for assessing significant differences between group means was carried out.

i) Cattel's 16PF

Table 11
t-test for the 16 PF

Factors	Mean Group A	Mean Group B	t value	Significant at 5% level	Significant at 1% level
A	7,545	5,333	2,876	*	-
B	4,727	4,222	,597	-	-
C	4,909	3,778	1,768	-	-
E	5,363	2,778	2,727	*	-
F	4,545	2,667	2,051	-	-
G	5,364	5,444	,142	-	-
H	6,182	4,000	2,713	*	-
I	7,727	8,778	1,659	-	-
L	2,909	4,222	1,477	-	-
M	5,455	6,778	1,511	-	-
N	5,455	4,556	1,478	-	-
O	4,545	6,222	2,109	*	-
Q1	4,909	3,889	1,526	-	-
Q2	5,182	7,556	2,418	*	-
Q3	5,636	5,889	,220	-	-
Q4	5,000	5,667	1,049	-	-
QI	5,816	3,000	3,369	-	*
QII	5,079	6,429	2,105	*	-
QIII	3,500	2,166	1,623	-	-
QIV	5,377	4,793	,929	-	-
N	6,296	8,544	3,572	-	*

$t_{18}(0,05) = 2,101$
 $t_{18}(0,01) = 2,878$

Where $t > 2,101$, there is a significant difference between group means at the level of $p > 0,5$. Where $t > 2,878$, there is a significant difference between group means at the level of $p > 0,1$. Significant differences were found on factors A, E, H, O, Q2 QII, at the 5% level of probability and on factors QI and N at the 1% level of probability.

ii) Foulds' HDHQ

Table 12
t-test for the HDHQ

Factors	Mean Group A	Mean Group B	t value	Significant at 5%	Significant at 1%
Total	11,273	21,334	4,351	-	*
Direction	-,364	1,000	,357	-	-
AH	3,182	5	2,487	*	-
PH	1,364	4,111	2,909	-	*
CO	2,727	5,111	2,012	-	-
SC	2,818	5,222	3,054	-	*
G	1,182	1,889	1,348	-	-
			$t_{18}(0,05) = 2,101$		
			$t_{18}(0,01) = 2,878$		

Where $t > 2,101$ there is a significant difference between groups at the 5% level of probability. Where $t > 2,878$, there is a significant difference at the 1% level of probability. Significant differences were found between means of groups A and B on factors AH at the 5% level of probability and SC total hostility at the 1% level of probability.

iii) ACL

Table 13
t-test for the ACL

Factors	Mean Group A	Mean Group B	t value	Significant at 5%	Significant at 1%
Df(m)	20,000	12,667	5,046	-	*
Df(f)	24,545	15,778	5,999	-	*
Far	57,636	35,444	5,933	-	*
Unfar	4,091	5,000	,599	-	-
S-Cfd	10,364	3,778	4,229	-	*
S-Cn	10,273	5,556	2,392	*	-
Lab	8,091	4,333	2,171	*	-
Per Adj	15,273	8,444	4,721	-	*
Ach	14,182	5,111	5,346	-	*
Dom	12,636	2,778	5,482	-	*
End	13,818	5,111	4,389	-	*
Ord	13,364	4,556	4,295	-	*
Int	17,091	11,333	3,502	-	*
Nurt	25,727	17,667	2,707	*	-
Aff	25,909	14,667	5,466	-	*
Het	8,909	5,333	2,122	*	-
Exh	,545	-1,556	1,163	-	-
Aut	-,909	-,778	,070	-	-
Agg	-17,273	-12,000	1,798	-	-
Cha	4,636	2,000	1,513	-	-
Suc	-,909	,444	1,384	-	-
Aba	1,818	3,111	,659	-	-
Def	5,454	4,111	,625	-	-
Crs(m)	10,273	-3,333	3,845	-	*
Crs(f)	2,909	-,778	2,313	*	-
				t18 (0,05) = 2,101	
				t18 (0,01) = 2,878	

Again, where $t > 2,101$ a significant difference between group means exists at the 5% level of probability and where $t > 2,878$, such significant difference exists at the 1% level. On this test, significant differences between group means were found on factors S-Cn, Lab, Nurt, Het, and Crs(f) at the 5% level of probability, and on Df(m and f), Far, S-Cfd, Per Adj, Ach, Dom, End, Ord, Int, Aff and Cres(f) at the 1% level of probability.

3. Split-half reliability

A special application of the Spearman-Brown formula is to consider two split-half scores, one based on the odd-numbered item scores and the other on the even numbered items. The correlation between the two halves is found (r_{nn}) and from this the reliability of the total test is estimated.

$$r_{tt} = \frac{2r_{nn}}{1 + r_{nn}}$$

The Kuder-Richardson estimate of reliability was developed because of dissatisfaction with the split-half method. A test can be split into halves in different ways which could yield different estimates of r_{tt} . The most accurate of the practical Kuder-Richardson formula is

$$r_{tt} = \left(\frac{n}{n-1} \right) \left\{ \frac{(\sigma_t^2 - pq)}{\sigma_t^2} \right\}$$

where n = number of items in the test

p = proportion responding in one specified manner

$q = 1 - p$

σ_t^2 = total test variation

As no split-half reliability figures were provided for either the HDHQ or ALC the formula was used to estimate the reliability of these two tests.

Split-half reliability of the HDHQ based on 51 items was ,821.

Using the formula to estimate such reliability of the ACL, a reliability figure of $r = 0,967$ was found.

4. English/Afrikaans translation of ACL

To investigate the effect of translating the ACL, the 40 cases were grouped according to those answered in English and those in Afrikaans. The vector of scores for these two groups were compared using the MANOVA technique, and the means are as follows :-

Table 14
MANOVA mean scores for English and Af rikaans groups on the ACL

Factors	English	Afrikaans	Grand Mean
Df(m)	16,029	15,833	16,000
Df(f)	19,324	17,664	19,075
Fav	45,588	42,500	45,125
Unfav	4,794	9,000	5,425
S-Cfd	6,941	8,000	7,100
S-Cn	7,970	7,833	7,950
Lab	6,235	7,167	6,375
Per Adj	10,912	9,667	10,725
Ach	9,853	9,833	9,850
Dom	7,647	6,833	7,525
End	9,059	7,833	8,875
Ord	9,147	7,667	8,925
Int	13,853	12,000	13,575
Nur	20,912	18,000	20,475
Aff	19,912	17,500	19,550
Het	6,647	6,833	6,675
Exh	-,735	-1,167	-,800
Aut	-,971	-,167	-,850
Agg	-14,941	-11,500	14,425
Cha	3,059	2,667	3,000
Suc	-,059	,667	,050
Aba	2,118	4,000	2,400
Def	5,706	4,833	5,575
Crs(m)	6,500	-7,167	-6,600
Crs(f)	1,412	2,333	1,550

The calculated statistic was $U = 0,356$ which is distributed as $U_{25,1,38}$. This is transformed into $F = 1,01$ which is distributed as $F_{25,14}$. Since $F = 1,01$ $2,34 = F_{25,14} (0,05)$ the hypothesis must be accepted that the vector of mean scores for the two language groups do not differ significantly at the 5% level of significance.

E. DISCUSSION

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1. Interpretation of results

(a) Gamma/delta categories

(i) Case history variables

As indicated earlier, an analysis of regression programme was used to differentiate wives of gamma and delta alcoholics according to case history data. Of all 15 variables examined, only one was significantly correlated with this classification, ($p > ,05$) namely that the gamma alcoholic tended to be a problem drinker at the outset of marriage, and that he tried to hide this from his wife. This tends to confirm the work of Abelson (1974) who showed that gamma alcoholics have an earlier age onset of problem drinking than delta. Hence he is more likely to be drinking excessively at the outset of marriage than would the delta.

All other variables were not significantly correlated to the gamma/delta classification ($p > ,05$). That is, husband's drinking pattern showed no correlation with the length of marriage, and the age of either the alcoholic or his wife. This is surprising in that Abelson (1973) showed a tendency for gamma alcoholics to present for treatment at an earlier age than would delta alcoholics. From this one would have expected a similar tendency of gamma alcoholics to present for treatment at an earlier age than the delta and consequently for their wives to have been younger and the couple to have been married for a relatively shorter period of time.

There was no relationship between husband's drinking pattern and the drinking habits of either the wife or her parents; with the quality of relationships within the family of the wife; with whether the wife had undergone psychiatric treatment, be it prior to, or during her marriage; or with the wife's previous marriage to an alcoholic or problem drinker.

These variables were selected for examination since they generally serve as outward indicants of psychopathology. It must be stressed, however, that all areas of psychopathology were not tapped, and although it has

been shown that wives of gamma and delta alcoholics do not differ on the above factors, it cannot be inferred that the life pattern of these two groups are similar.

No correlation was found between husband's drinking pattern and the number of children the couple have, socio-economic class and home languages, be they English or Afrikaans. The above three factors may be considered to be controls, and these findings indicate that they did not serve as contaminating variables, confounding the present examination of drinking patterns.

(ii) Psychological Tests

Examination of all factors on each of the psychological tests employed, the 16PF, HDHQ and ACL, did not reveal any significant difference between the gamma/delta categories ($p > ,05$). The major implication that may be drawn is that there is no significant difference between wives of gamma and delta alcoholics in the personality variables tapped by the above tests.

(b) Categories derived from multi-dimensional scaling

In order to assess further the efficiency of a concept of heterogeneity amongst wives of alcoholics, a statistical technique of multi-dimensional scaling was applied to the results of the psychological tests for each individual and from this three groups were found. Two of the groups, A and B, differed from one another with respect to all three psychological tests, and subjects within these two groups were homogeneous with respect to these tests. A middle group C, shared characteristics of both groups A and B.

(i) Case history variables

Once again, an analysis of regression programme was applied in an attempt to examine whether any of the 15 variables concerning subject's case history were significantly correlated with the above grouping. Of all variables examined only one, socio-economic class was significantly correlated ($p > .05$). Group A tended to come from a higher socio-economic group than did B, Group C falling midway between the two. As stated earlier one cannot merely infer that the above grouping is accounted for purely by socio-economic factors, since both the groupings obtained and socio-economic class may in turn be correlated with a third superordinate factor.

Despite this, one need examine just how relevant any personality grouping on the basis of socio-economic class may be considered. In his book, "Social Stratification", Bergel (1973) defines such stratification as the differentiation of a given population into hierarchically superimposed groups. Such a differentiation is based on an unequal distribution of rights and privileges, duties, and responsibilities, social values, privations and power amongst members of a society. This definition carries with it the implication of homogeneity within each discreet class group.

Bergel provides a review of the literature examining class differences in fertility, mortality and health; in crime, voting behaviour, family life, education and sex. In their analysis of child development Mussen, Conger & Kagan (1969) quote extensive research outlining the effect of socio-economic class on personality growth. Classes differ in aspects of early development, such as child-rearing and the mother-child relationship (Miller & Swanson, 1960; Compos, 1962 et al). Later in adolescence differing peer group norms have a similar effect (Coleman, 1961). Carrying this further, Centers (1961) outlines the role occupations play in personality development. Authors like Dominian (1974) show how such within group homogeneity is further propagated by the fact that the majority of people tend to marry within their own socio-economic class. Similarly, therapists have long been aware of the need to take cognisance of social class in approaching patients, (Holman, 1967).

In their frequently quoted research project, Hollingshead & Redlich (1937) found mental illness to be unevenly distributed among the five classes: they found that the "psychiatric population" increases steadily as one moves from class 1 to class V, with a small decrease in class V. Thus, status and marital dis ease appeared to be inversely correlated. Moreover, the incidence of psychosis increases from class 1 to class V, and a converse decrease in neurosis occurs, although less sharply. Although certain criticisms may be levelled against the above study, research to date tends to support these findings (Bergel, 1973).

In sum, socio-economic class clearly represents a significant grouping operative in most societies today. That psychological differences were found to be co-incident with these classes is hardly surprising.

(ii) Psychological tests

The three groups were compared with respect to mean scores of results of all three groups were compared with respect to mean scores of results of all three psychological tests, using the MANOVA technique. On finding significant differences between groups A and B, a t test comparing the means scores of these two groups was carried out.

a) 16PF

Mean scores of group A and B differed significantly with respect to factors A (Sizothymia vs. Affectothymia); E (Submissiveness vs. Dominance); H (Threctia vs Parmia); O (Untroubled Adequacy vs. Guilt Proneness); Q2 (Group Dependency vs. Self-Sufficiency; and Q11 (Anxiety vs. Adjustment at the 5% level of significance, and at the 1% level on factors Q1 (Exvia vs. Invia) and N (Neuroticism).

This means that subjects in group A tended to be more warmhearted, outgoing and trustful than group B who tended to be more reserved, detached and critical (factor A). Subjects in group A tended to be

more assertive, competitive and independent minded than group B, who tended to be submissive, dependent and conforming (factor E). In terms of factor H, subjects in group A tended to be more adventurous, responsive and carefree than group B, who tended to be shy, timid and restrained. In terms of factor O, group A tended to be self-assured, placid and secure, whilst group B, apprehensive, self-reproaching and insecure. Subjects in group A tended to be more group dependent than group B who found difficulty complying with group norms. In terms of the second order factors, group B tended to be more introverted, anxious, and neurotic than group A.

b) HDHQ

Examining the grouping according to the HDHQ, groups A and B differed significantly according to factor AH.

AH (Acting out hostility) at $p > ,05$ level of significance, and SC (self-criticism), PH (Projected hostility) and Total hostility at the level of $p > ,01$.

This means that group B tended to be more hostile, to act out and project their hostility, as well as to be more self-critical than group A. The score for total hostility fell outside of the normal range, and hence in terms of Fould's theory, group B presents as a more pathological group than does group A.

c) ACL

Finally, comparing groups A and B according to their scores of the ACL, significant differences were found on factors Df (m & f), defensiveness; Fav (number of favourable adjectives checked); S-Cfd (self-confidence); Per Adj (personal adjustment); Ach (achievement); Dom (dominance); End (endurance); Ord (order); Int (Intrception); Aff (affiliation); Crs(M) (consulting readiness) at the $p > ,01$ level of significance, and on factors S - Cn (self-control); Lab (lability); Nur (nurturance); Het (heterosexuality); and Crs (counseling readiness) at the $p > ,05$ level of significance.

Briefly, to describe these groups, group B tended to be more anxious, apprehensive and self-critical than group A (Df); less dependable, conscientious and concerned about others (Fav); anxious, cautious and inhibited (Unfav); less dependable, and lacking in self-control (S-Cfd); more routinised and conventional (Lab); more intolerant, dissatisfied and weak (Per Adj); more apathetic and irresponsible (Ach); more inhibited and unambitious (Dom); to be more impulsive (End), and more absent-minded and confused (Ord); to be more aggressive and impatient (Int); to be less loyal and aware of the emotional needs of others (Nur); to be less trusting in personal friendships (Aff); to seldom seek the company of and derive emotional satisfaction from interactions with the opposite sex (Het); and to be more worried about herself and ambivalent about her status than group A.

In sum the two groups appear to differ significantly with regard to several personality variables, group B being more hostile, neurotic, anxious, inhibited, isolated and unsure of themselves than group A. These are all factors of considerable importance to therapy, the two groups obviously having widely differing needs.

(c) Split-half reliability of HDHQ and ACL

Split-half reliability tests were carried out on the HDHQ and ACL, as no such reliability figures were available for the two tests.

Comparing items on the HDHQ, a reliability figure of $r = ,821$ was obtained. Such a high figure indicates that there is a high correlation between two halves of the test and that the test has a high internal consistency.

A similarly high correlation coefficient was obtained in examining items on the ACL, $r = ,967$. Such a figure indicates a high internal consistency on test items.

(d) English and Afrikaans forms of the ACL

As was shown on table 14 there was no significant difference between the means of all 25 factors on the ACL.

This would suggest that the English and Afrikaans forms are equivalent, and that it was justifiable to use the Afrikaans translation.

2. Methodological criticisms and considerations

(a) Grouping of the alcoholic sample

In the studies of Walton, Ritson & Kennedy (1966), Abelson & Ben Arie (1970) and Abelson (1973), three groups were employed, gamma, delta and an intermediate group which could not be classified as categorically gamma or delta and in fact shares some characteristics of both. Generally, these studies have shown the mixed group to fall midway between the scores of the gamma and delta group on dependent variables assessed. In this study, statistics were calculated using both a gamma/delta grouping, and a gamma/intermediate/delta grouping. In the former case, all closer to gamma subjects were placed in the gamma category and closer to delta in the delta. Changing the grouping in this way made no significant difference to the statistical data, hence only one set of statistics have been included. It was decided to provide the results obtained using two groups, since it was felt, in discussion with the senior consultant psychiatrist that the closer to gamma and closer to delta groups in fact shared more characteristics with the gamma and delta groups respectively, than with each other, i.e. there does not appear to be a clear linear continuum between the gamma and delta alcoholics.

(b) Criteria for selection of subjects

In a preceding section the complexity of alcoholism and the lack of any unified definition of the problem was outlined. Compounding the problem is the fact that alcoholics present themselves for treatment at no specific stage of alcoholism and for no one reason (Pattison, 1975). This is important in the light of Jackson's Work (1954 et al) outlining seven stages through which their wives appear to pass, as the drinking problem increases. Hence there are a multitude of differing factors operative in the family of the alcoholic who presents himself for treatment. In view of the difficulty in isolating all such variables, several controls were imposed.

Only wives of first admission alcoholics were included in the sample. With the current focus on the spouse and family of the alcoholic, most treatment units include the spouse in some form of marital or group therapy. Having been through such psychotherapy, and inevitably learnt about the pathology of the alcoholic and his spouse, it is likely that such women would react to the test situation in an unpredictably different manner to the relatively naive wives of first admission alcoholics. Further, in discussing casework with wives of alcoholics, Bateman (1971) states that the wives' attitude to treatment is increasingly problematic where previous treatment attempts have proven unsuccessful: such women are increasingly ambivalent about using help, filled with shame and guilt, and have little hope of a constructive solution to their problem.

No wives of psychotic or brain-damaged subjects were included in the sample. It was considered important to limit the sample to cases where alcoholism was the primary pathology, brain-damage and psychoticism presenting significantly different problems for the spouse and family.

Wives were all examined within the first week of their husband's admission to hospital. As Rivoir (1971) points out, this is an extremely stressful period, but it was felt to be preferable to examination once she was already engaged in psychotherapy.

That wives are likely to react in a different manner to a stress situation has already been discussed. Nonetheless, it was considered important to attempt to control for such stress, such differential reactions to stress being an important personality variable.

Important to recall is that there is a higher rate of divorce amongst alcoholics than amongst the normal population (Glatt, 1972).

Hence, many alcoholics who present for treatment are either separated or divorced from their wives. There is thus a large percentage of wives who were not tapped by this study, namely wives who left their husbands due to

their alcoholism. Bearing this in mind, it must be stated that the results of this study may be generalised only to wives of alcoholics whose husbands present for treatment whilst they are still living together. (Unfortunately this study did not include any analysis of the proportion of unmarried alcoholics presenting to the above two units during the period in which this study was carried out).

(c) Sampling bias

Comparing the number of subjects classified into each of four groups in the study of Walton, Ritson & Kennedy (1966) using Scottish samples, and that of Abelsohn & Ben Arie (1972) and Abelsohn (1973) using South African samples, there was no significant difference between the percentage of subjects classified into each group for the three respective studies ($p > ,05$).

% of subjects in each socio-economic class

Study	Gamma	Closer to G	Closer to D	Delta
Walton et al 1966	40	12	26	22
Abelsohn & Ben Arie 1970	34	17	27	22
Abelsohn 1974	34	16	30	20
Present Investigation	32,5	10	25	32,5

As is evident from the above, however, the present study does not corroborate previous findings on the distribution of alcoholics into the different groups, differing noticeably from the previous studies. In particular, whereas gamma alcoholism was not often diagnosed, the present study diagnosed these two categories equally. A number of factors might account for this : the William Alater hospital has changed its admission policy over the last two years and now provides a fairly strict assessment programme, one which tends to bias towards including more delta than gamma patients, i.e. preference for admission is granted to those who have a stable job, a factor shown to be more highly correlated with delta than gamma alcoholism. Secondly, many alcoholics admitted were totally excluded on the basis that they were single, divorced or separated.

Finally, in this study there were 17 wives of gamma alcoholics and 23 of delta. In order to counteract the effect of such disproportionality of sample sizes, specific techniques were built into the statistical analyses employed.

Subjects were drawn from the William Slater and Valkenberg Mental Hospitals, these being the two state units in Cape Town for the treatment of alcoholism. As indicated earlier, a disproportionate number were drawn from each unit : 38 from William Slater and 2 from Valkenberg. This is a reflection of both the admission policies of the two units, and the criteria for selection of subjects. In the main, first admission alcoholics are sent to William Slater, and no brain-damaged or psychotic alcoholics are treated at this unit, whilst Valkenberg treats more chronic alcoholics, including those who are brain damaged and/or psychotic.

This is an important consideration in the light of work by Pattison (1975) et al, showing that patients with different personality characteristics are attracted to different units.

However, in view of the fact that these two state treatment centres are the only ones available in the Cape Town area this was unavoidable.

(d) Control Group

No control group of wives of "non-alcoholics" was included, as it was felt that within the context of this study, such a group would provide a somewhat artificial control. Firstly, for all three tests administered, normative data is provided in the manual, the 16PF being one of the few tests with norm tables established for the South African population. These norms are based on samples far larger than would have been employed in a thesis of this magnitude. Secondly, this study has aimed at examining differences within the group of wives of alcoholics, since many studies (review by Edwards et al, 1973) failed to show both differences between wives of alcoholics and wives of non-alcoholic "normals", and of non-alcoholics who nonetheless are experiencing psychological stress. Rather, the assumption throughout, has been that differences within the group of wives of alcoholic's has tended to obscure any such differences between groups.

(e) Data collection techniques : self-report inventories and the interview

All three psychological tests administered were self-report inventories. On a practical basis, such tests enjoy the advantages of ease of administration and scoring. They provide discreet scores which may then be compared against standardised norm tables. As such they are particularly suited to research with groups of subjects, facilitating statistical comparisons of group means. Further, as Anastasi (1970) points out, with all such inventories, some attempts have been made towards empirical validation of scores in each problem area, few such tests relying purely on content validity.

The self-report inventory is, however, susceptible to several criticisms, the most important being the confounding effects of test-taking attitudes and response sets, which although operative to a certain extent in all forms of personality assessment, is more acute in inventories illustrated in the work of Edwards (1957) et al. For this reason tests generally include validity scales to counteract such an effect. As indicated earlier, however, the 16PF and HDHQ have no such validating measures. Further criticism inheres largely from clinicians who agree that in their adherence to standardised verbal stimuli, frequently allowing a choice of only one of two answers, these tests are but crude assessment techniques, providing little "real" information about a subject. They agree that in the domain of personality, the individual can be effectively described only in terms of his own peculiar behaviour interrelationships, rather than in terms of common traits such as inventories provide.

Anastasi (1970) concludes that although an intensive study of the individual undoubtedly yields the richest picture of the personality, such tests, e.g. projective techniques, are as yet wanting in validity and reliability. Hence the self-report inventory serves as the most useful research technique of personality assessment.

A diagnostic semi-structured interview was conducted by the experimenter, during which a case history was taken. Anastasi (1970) notes that this

technique is particularly suited to the eliciting of a life history, emphasising the importance of the sensitivity of the interviewer in eliciting verbal information and detecting cues in the interviewee's behaviour. Although open to a criticism of experimenter bias, all interviews were thus conducted by one interviewer. Davis (1971) examines the interview technique in depth pointing out how subjects appear to fall on a continuum between repressing and sensitizing; that dependent on their specific personality, subjects will underplay or exaggerate information. This is particularly relevant to the information gathered in this study where only one diagnostic interview was held and where such personal data and parental relationships were discussed.

It must be admitted that this study was not "blind", i.e. information regarding husband's drinking pattern was available to experimenter at the time of the interview. In an attempt to obviate such experimenter bias, social workers' reports were used to corroborate the above information.

3. Major implications of the results

Except for one variable, i.e. that wives of gamma alcoholics tend to marry men who at the outset of marriage already have a drinking problem, no significant differences between the two groups were found on various personality tests and aspects of the wives life history. The possible implications of the above are many and are summarised below to be elaborated upon thereafter.

- (i) There are no differences in personality characteristics, and relative psychopathology between wives of gamma and delta alcoholics.
- (ii) Such differences in personality characteristics and relative psychopathology might exist, but the techniques employed failed to elicit these differences.
- (iii) Bearing in mind the above, one might question whether in fact heterogeneity does exist within the group of wives of alcoholics.
- (iv) Wives of alcoholics may form a heterogeneous group but not on the lines prescribed by their husband's pattern of drinking.

The major finding is that there are no significant differences in personality variables and certain aspects of life history between wives of gamma and delta alcoholics. This conclusion is, however, necessarily limited to the three tests administered and the particular areas explored in the histories.

On the one hand, as indicated earlier, both personality tests and life history variables were selected with important criteria in mind. All personality tests met the requirements of a suitably high reliability and validity: the 16PF is a broad assessment tool covering extensive aspects of personality; the HDHQ tapped hostility, a variable which has been recognised as significant in research in this area; and the ACL takes the subjects' own assessment of her personality into account. Factors specific to the life history of the subjects were selected on the basis of their having been frequently reported in the literature (e.g. review by Edwards, Harvey & Whitehead, (1973) and their relevance to a diagnosis of psychopathology. Hence it was felt that in examining the above factors, one would be tapping area particularly pertinent to the personality and psychological health of the subjects.

On the other hand it must be admitted that several areas of personality were not investigated in this thesis. Despite the fact that the battery of tests employed do attempt to provide a fairly extensive assessment of personality, the use of no three tests can claim to cover all such aspects. For example, although the 16PF is considered a broad assessment of personality, it bases such a claim on its having been derived from a multitude of tests. As such it is necessarily limited by the tests from which it was derived. As far as the HDHQ and ACL are concerned, although there were important considerations employed in selecting these tests, it may well be possible that the two groups do differ with respect to variables other than hostility or the variables tapped by the ACL. Similarly, only 15 variables relating to the wife's life history were examined, and it can be argued that certain important variables may have been neglected.

This is important since, as Abelson (1973) points out, it is unlikely that any two groups would differ according to all personality variables possible, and it is possible that the specific variables tapped in this thesis were those on which these groups did not differ. That is, the fact that no significant differences were found on the above factors does not necessarily rule out the possibility of personality differences between the two groups. Despite the above comments, it is felt that these tests and case history data did tap sufficient personality variables and areas of particular relevance to both wives of alcoholics and a gamma/delta classification. As such it is felt that the gamma/delta classification, although a useful diagnostic aid in the treatment of alcoholism, does not have a similar value in the assessment and treatment of the wife of an alcoholic.

Accepting the finding that wives of gamma and delta alcoholics do not form two discreet psychiatric groups, should one still consider a concept of heterogeneity to play an important role in the treatment of the wife of the alcoholic? In the introduction reviewing all aspects of the literature on alcoholism, a recognition of such heterogeneity was strongly recommended. It was decided to test an hypothesis of heterogeneity employing a criterion which had proved useful in diagnosing and treating the alcoholic himself, namely, alcoholic drinking pattern. This thesis focused on the examination of the relevance of the gamma/delta classification, rather than a general examination of the efficacy of heterogeneity amongst wives of alcoholics. Finding no significant grouping on the basis of husband's drinking pattern alone does thus not

allow one to assume the concept of heterogeneity to be erroneous.

What are the theoretical implications of this study? Firstly it must be emphasised that this study in no way undertook an assessment of the efficacy of various theories, but rather used the current theories to make predictions about a group of people.

The results have failed to show any significant grouping of personalities according to husband's pattern of drinking. Rather, they indicate that some grouping exists but this is not correlated with the above gamma/delta classification. One is now faced with the problem of assessing the results in terms of the theoretical assumptions upon which the rationale of this study was built.

Showing no significant grouping amongst wives of alcoholics corresponding to their husband's pattern of drinking in no way detracts from the importance of the gamma/delta classification with respect to alcoholics themselves. Rather, one must examine why such grouping failed to be reflected amongst their wives.

In the introduction it was pointed out how each of the three theories employed in the understanding of the wife of the alcoholic is open to several criticisms. Briefly to recap, the disturbed personality theory views the wife and her behaviour in terms of personal pathology existing prior to the onset of marriage, marriage to an alcoholic or pre-alcoholic being seen as the wife's attempt to satisfy her own pathological needs. It was pointed out how personality disturbance type theories vary widely and lack any experimental validation such that they appear to represent clinical impressions based on limited case studies. Further the central concept of decompensation, i.e. that the wife will decompensate on her husband's recovery, appears to have found little experimental support (Futterman, 1953). Alternatively, although the earlier introduction pointed out how in fact the gamma alcoholic appeared to be more pathological and socially visible, it was in no way assumed that the delta alcoholic is to be regarded as a psychologically "healthy" man. Hence finding no difference between the two groups examined cannot be considered proof of the inadequacy of the theory.

Stress theories, ala Jackson (1954) et al, view psychopathology in the wife as a function of changing patterns of adaptation to a severe stress situation. Limitations of such work include the fact that stress leads to a more proficient level of performance until a critical threshold is reached. (Yirkles & Dodson, 1908) and that such a threshold differs

for individuals (Appley & Trumbull, 1967) dependent on such factors as past experiences. This implies that under increased stress the individual may well show an increased level of positive adaptation. Reconsidering the gamma/delta classification again, it was pointed out earlier how the stresses which the gamma alcoholic imposes on his wife may differ from those of the delta, but it was not assumed that the wife of the delta alcoholic underwent no stress at all. One cannot ignore the fact that she was forced to interact with a man whom at virtually no time was without alcohol. Hence, again finding no differences between the 2 groups does not disprove the theory.

Finally, the psychosocial theory attempts to include both external social stress factors and the personality of the individual, viewing pathology in terms of the interaction of these two factors.

Important is that such interaction does not have a linear effect, rather that despite a severe stress situation, a "healthy" personality may be able to cope and will not necessarily present with psychopathology. This theory poses the greatest difficulty in predicting how one member of a marriage will react given certain information about her partner. On the one hand this renders the theory almost impossible to disprove. However, this is the most realistic theory in that it takes into account the two major factors which have been shown to play a significant role in the development of psychopathology in a married couple (Edwards, Harvey & Whitehead, 1973).

Taking this one step further, one need ask whether in fact variables not examined in this study are operative in the development of psychopathology. Orford (1975) has criticised the bulk of research on the alcoholic's spouse in that it tended to become too specific i.e. the marital relationship of the alcoholic has been treated as a unique situation and little cognisance has been taken of advances in general research on marital disharmony and pathology. The above criticism is not entirely valid in that the above theories have been drawn from current theories of marital disharmony. However, researchers in this area appear to have been too specific in their viewing marriage to an alcoholic as operating in a vacuum. Clearly, insufficient attention has

been paid to both relationships with other family members and extra-familial relationships, e.g. extended family and associates at work. Family therapists like Ackerman (1958), Satir (1964), Bloch (1973) and many others have moved away from focusing solely on the marital couple to viewing the manner in which the couple is affected by such "outside" forces as enumerated above.

Returning to the wife of the alcoholic, that wives of alcoholics form a heterogeneous group is evident. However, such heterogeneity appears to be unrelated to the classification of her husband's drinking pattern. Of all the variables examined, only that of social class appeared to correspond with the personality grouping obtained. It is highly likely that other variables which have not been tapped by this study are operative in such a categorization, and it may well be that these variables lie outside of the marital relationship, i.e. in the broader family dynamics, or in such areas as satisfaction in work or associations with friends.

F. BIBLIOGRAPHY

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- Abelsohn, D.S. The Age Variable in Alcoholism
Unpublished M.A. thesis, U.C.T. 1973
- Abelsohn, D.S. & Ben-Arie, C Self-Acceptance and Patterns of Alcohol Drinking
Unpublished thesis, U.C.T. 1970
- Achte, K Correlation of ABO blood group with alcoholism
Duodecim, 1958 : 74, 20-8
- Ackerman, N.W Treating the troubled family
New York. Basic Books, 1966
- Ackerman, N.W. Family Psychotherapy Today
Family Process, 9, 123, 1970
- Ackerman, N.W. & Behrens, M.L The Family Approach and Level of Intervention
American Journal of Psychology, 1968, 22, 5.
- Albretsen, C.S & Vaglum, P. The Alcoholic's Wife and her Conflicting Role
Scandinavian Journal of Social Medicine 1973 1, 7-12
- Amir, Z; Amir S & Corcoran, M.E A possible artifact in studies of alcohol consumption rats. Quarterly Journal of Studies on Alcoholism 1973 : 34, 524-6
- Anderson, T.W An introduction to multivariate statistical analysis
New York. John Wiley & Sons. Inc., 1958
- Annastasi, A Psychological Testing
London, Macmillan C., 1970
- Anonymous Authors Comment on "The Alcoholic Game" : some A.A. Viewpoints. Quarterly Journal of Studies on Alcoholism 1970, 31, 180-7
- Bailey, M.B. Alcoholism and Marriage : A review of Research and Professional literature. Quarterly Journal of Studies in Alcoholism. 1961, 22, 1, 81-97
- Bales, R.F Cultural differences in rates of alcoholism : Quarterly Journal of Studies in Alcoholism, 1946. 6, 480-99
- Barry iii, H Psychological factors in Alcoholism in The Biology of Alcoholism Vol. 3, (ed) Kissen, B & Henri, B
New York, B. Plenum Press, 1974.

- Beels, C.C & Ferber, A Family therapy : a view.
Family Process, 1969, 280-318
- Bergel, E.E Social Stratification. New York
Mc Graw-Hill Book Co. 1962
- Berne, E Games People Play. Harmondsworth, Penguin
Books, 1964.
- Bernstein, B Social class, language and socialization 157-178
(in) P. P. Giglioli (ed) Language and Social Class
Harmondsworth. Penguin Books, 1972.
- Blane, H.T The personality of the alcoholic : Guises of
Dependency. New York. Harper & Row, 1968.
- Blane, H.T & Chafetz, M.E Dependency conflict and sex-role identity in
drinking delinquents, Quarterly Journal of Studies
on Alcoholism, 1971 32 : 1025-39
- Blane, H.T., Overton, W.F
& Chafetz, M.E Social factors in the diagnosis of alcoholism.
Quarterly Journal of Studies on Alcoholism, 1963
24 : 640-663
- Blizzard, P.H Community Attitudes to Mental Disorders. Wellington
University of Wellington, 1966.
- Bloch, D.A. Techniques of family psychotherapy : a primer.
New York. Grune & Stratton, 1973.
- Bloch, D.A Alcoholism : Its Facets and Phases
London. Oxford University Press, 1962.
- Bloch, M The Children of the Alcoholic.
Unpublished Honaus Seminar, U.C.T. 1974
- Blum, E.M. Psychoanalytic views of Alcoholism : A review
Quarterly Journal of Studies in Alcoholism.
1966 : 27 : 259-99
- Bouchard, T.J. Sixteen Personality Factor Questionnaire (in)
Buros, O.K (ed) The Seventh Mental Measurements
Year Book. Highland Park. The Gryphon Press, 1972
- Brown, J.S. & Cowell, C.R. Alcohol and Conflict Resolution : a theoretical analysis.
Quarterly Journal of Studies on Alcoholism. 35 :
66-85, 1974.
- Bryant, C.D. & Wells, J.G. Deviancy and the family. Philadelphia
F.A. Davis Company (1973)
- Calahan, D. Problem Drinkers : a national survey, San Francisco
Jossey-Bass, 1970.

- Cameron, D.C. Some comments on "The Alcoholic Game". Quarterly Journal of Studies on Alcoholism, 1969, 30, 951-952
- Cappell, H & Herman, C.P. Alcohol and tension-reduction : a review. Quarterly Journal of Studies on Alcoholism, 1972 : 33, 33-64
- Cattell, R.B. Personality and Motivation Structure and Measurement New York : Harcourt Brace, 1957.
- Cattell, R.B.; Eber, H.W. & Tatsouta, M.M. Handbook for the 16PF Questionnaire. Champaign, 1111. Institute for Personality and Ability Testing, 1970.
- Centers, R. The psychology of social classes : a study of class consciousness. New York. Russel & Russel, 1961
- Chen, E & Cobb, S. Family structure in relation to health and disease. Journal of Chronic Disease. 1960, 12 : 544-567
- Chodorkoff, B. Alcoholism and ego function. Quarterly Journal of Studies on Alcoholism, 1964, 25, 292-9
- Chodorkorff, B. Alcoholism : some theoretical considerations. Archives of General Psychiatry, 1971, 24, 169-73
- Clifford, B.J. A study of the wives of rehabilitated and unrehabilitated alcoholics. Social Casework, 1960, 41, 457-460
- Collins, J; Kreitman, N; Nelson, B; Troop, J. Neurosis and Marital Interaction; III. Family Roles and functions. British Journal of Psychiatry, 1971, 119, 233-242
- Conger J.J. The effects of alcohol on conflict behaviour in the albino rat. Quarterly Journal of Studies on Alcoholism. 1951, 12, 1-29.
- Conger, J.J. Reinforcement theory and the dynamics of alcoholism. Quarterly Journal of Studies on Alcoholism, 1956 : 296-305.
- Corder, B.F.; Hendricks A. & Corder, R.F. An MMPI study of a group of wives of alcoholics. Quarterly Journal of Studies on Alcoholism, 1964 25, 551-554.
- Cruz-Coke, R. & Varela, A. Colour-blindness and alcohol addiction. Lancet, 1965, 2, 1348.
- Davies, D.C. The Concept of Alcoholism (in) The Medical Annual, 2-19, Bristol : John Wright & Sons, 1969.

- Davis, J.D. The interview as arena. Stanford. Standord University Press, 1971.
- Deniker, P; Saugy, D & Ropert, M. The Alcoholic and his wife. Comprehensive Psychiatry, 5, 374-383, 1964.
- Dicker, S.E. The effects of methylpentynol on ethanol drinking and on water metabolism in rats. Journal of Physiology, 1958, 144, 138-147.
- Draper, & Smith Applied regression analysis. New York. John Wiley & Sons, Inc., 1966.
- Drewery, J. & Rae, J.B. A Group Comparison of Alcoholic and Non-Alcoholic Marriages using the Interpersonal Perception Technique. British Journal of Psychiatry, 1969, 115, 287-300
- Edwards, A.L. The social diserable variable in personality assessment and research. New York. The Dryden Press, 1957.
- Edwards, P; Harvey, C. & Whitehead, P.C. Wives of Alcoholics : A Critical review and Analysis. Quarterly Journal of Studies on Alcoholism. 1973, 34, 112-132.
- Emery, E. Characteristics of Guinness Drinkers
Document No. 567 London : Tavistock Institute of Human Relations, 1960.
- Freighner, J.P.; Robins, E; Guze, S.B.; Woodruff, R.A.; Winokur, G & Munoz, R. Diagnostic Criteria for use in Psychiatric Research. Archives of General Psychiatry. 1972, 26, 57-64
- Field, P.B. A new cross-cultural study of drunkenness (in) D. J. Pittman & C.R. Snyder, (ed) Society, Culture and Drinking Patterns. New York : John Wiley & Sons, 1962.
- Forsander, O. & Salaspuro, M. Voluntary ethanol consumption as related to Ketone bodies metabolism in rats. Life Science, 1962, 1,467
- Foulds, G.A. Personality and Personal Illness. London. Tavistock, 1965.
- Foulds, G.A.; Caine, T.M. & Creasey, M.A. Aspects of Extro- and Intropunitive Expression in Mental Illness. Journal of Mental Science, 1960, 106, 599-610.
- Foulds, G.A. & Hassall, C. The significance of age at onset of excessive drinking in male alcoholics. British Journal of Psychiatry, 1969 115, 1027-1032.
- Fox, R. A Multidiscrepancy approach to the Treatment of Alcoholism. American Journal of Psychiatry, 1967, 123, 769-778

- Freed, E. X. Effect of alcohol on conflict behaviour. Psychological Reports, 1968, 23, 151-9
- Freed, E. X. Alcohol conflict : rule of drug dependent learning in the rat. Quarterly Journal of Studies on Alcoholism 1971, 32, 13-28.
- Freud, S. Three contributions to the theory of sex. Nervous and Mental Disorders monograph, 1930, 43-74.
- Fuller, G.B. Research in Alcoholism on the 16PF Test. I.P.A.T. Information Bulletin, 1966, No. 12.
- Fuller, G.B.; Lunney, G.H. & Naylor, W.M. The role of perception in differentiating sub types of alcoholism. Perceptuo-motor Skills, 1966, 23, 735-743
- Futterman, S. Personality trends in wives of alcoholics. Journal of psychiatric social work, 1953, 23, 27-41
- Glatt, M. The Alcoholic and the Help he Needs. London Priory Press Ltd., 1972.
- Goodwin, D.W. Is alcoholism hereditary? Archives of General Psychiatry. 1971, 25, 545
- Goodwin, D.W. & Guze, S.B. Heredity and Alcoholism in The Biology of Alcoholism New York : Plenum Press 1974.
- Gottheil, E; Alterman, A.I. Skoloda, T.E. & Murphy, B.F. Alcoholic's pattern of controlled drinking. American Journal of Psychiatry. 1973, 130, 418-22
- Goss, A & Morosko, T.E. Alcoholism and Clinical Symptoms. Journal of Abnormal Psychology, 1969, 74, 682-4.
- Gough, H.G. The Adjective Check List as a personality assessment research technique. Psychological Reports 1960, 6, 107-122.
- Gough, H.G. & Heilbrun, A.B. The Adjective Check List : manual. Paulo Alto . Consulting Psychologists Press, 1965.
- Guilford, J.B. Fundamental statistics in psychology and education McGraw Hill Book Co., 1965
- Hollingshead, A & Redlich, F. Social class and mental illness. New York, 1934
- Holman, P. Child psychiatry and the social setting. British Journal of Psychiatry, 1967, 113, 1165-1168.
- Holt, R.R. Individuality and generalization in the psychology of personality : an evaluation. Journal of Personality, 1962, 30, 377-402.

- Jackson, J.K. The adjustment of the family to the crisis of alcoholism. Quarterly Journal of Studies on Alcoholism, 1954, 15, 562-586.
- Jackson, J.K. The adjustment of the family to alcoholism. Marriage & Family, 1956, 18, 361-369.
- Jackson, J.K. Family structure and alcoholism. Mental Hygiene, 1959, 43, 403-406.
- Jackson, J.K. Alcoholism and the Family., 472-492 in Pittman, D.J. & Snyder, C.R. (ed) Society, Culture and Drinking Patterns. New York, Wiley, 1962.
- Jellinek, E.M. The Disease Concept of Alcoholism. New Haven. College Press, 1960.
- Jellinek, E.M. Cultural differences in the Meaning of Alcoholism, in Pittman, D.J. & Snyder, C.R. (ed) Society, Culture and Drinking Patterns. New York, Wiley, 1962.
- Kahn, M & Stellar E. Alcohol preference in normal and anosmic rats. Journal of comparative physiological psychology, 1960, 53, 571-575
- Kakihana, R & Mc Clean, G.E. Development of alcohol preference BALB/C mice. Nature, 1963, 199, 511-2.
- Kendell, R.E. Normal drinking by former alcohol addicts. Quarterly Journal of Studies on Alcoholism, 1965, 26, 247-57
- Keller, M. The Oddities of Alcoholics. Quarterly Journal of Studies on Alcoholism, 33, 4, 1147-1148.
- Kessel, N. & Walton, H. Alcoholism. Harmondsworth, Penguin Press, 1969
- Kreitman, N. Mental disorder in married couples. Journal of Mental Science. 1962, 108, 438-446.
- Kogan, K.L.; Fordyce, W.E. & Jackson, J.K. Personality Disturbances in Wives of Alcoholics. Quarterly Journal of Studies on Alcoholism. 1963, 24, 627-639.
- Kotis, J.P. Initial sessions of Group Conseling with Alcoholics and their Spouses. Social Casework, 1969, 49, 228-232.
- Kreitman, N. Mental Disorder in Married Couples. Journal of Mental Science. 1962, 108, 438

- Kreitman, N. The Patient's Spouse. British Journal of Psychiatry. 1964, 110, 159.
- Kreitman, N; Collins, J; Nelson, B; Troop, J. Neurosis and Marital Interaction. I. Personality and Symptoms. British Journal of Psychiatry, 1970, 117, 33-46
- Laing, R.D. & Esterson, A. Sanity, Madness and the Family. Baltimore. Penguin, 1964.
- Lemert, E.M. Dependency in Married Alcoholics. Quarterly Journal of Studies on Alcoholism, 1962, 23, 590-609
- Lester, D. Self-selection of alcohol by animals, human variation and the etiology of alcoholism. A critical review. Quarterly Journal of Studies on Alcoholism, 1966, 27, 395-438.
- Levin, J. & Karni, E.S. Demonstration of Cross-Cultural Invariance of the CPI in America and Israel by the Guttman-Lingoes Small Space Analysis. Journal of Cross-Cultural Psychology. 1970, 1, 253-260
- Lewis, M.F. Alcoholism and Family Casework. Family, 1937 18, 39-44.
- Lisman, S.A. Alcoholic "blackout" : state dependent learning? Archives of General Psychiatry, 1974, 30, 46-53.
- Madden, J.S. & Jones, D. Bout and continuous drinking in alcoholism. British Journal of addiction, 1972. 67, 245-250.
- Mayo, P.R. & Bell, J.M. Hostility and Personality in a Student-Teacher population. British Journal of Social and Clinical Psychology. 1971, 10, 375-8.
- Mc Clearn, G.E. & Rodgers, D.A. Genetic factors in alcohol preference of laboratory mice. Journal of Comparative Physiological Psychology, 1961, 54, 116.
- McClelland, D.C.; Davis, W.N., Kulin, R & Wanner, E. The Drinking Man. New York, The Free Press, 1972.
- Minuchin, S. Families & Family Therapy. Cambridge, Harvard University Press. 1974.
- Mitchel, H.E. & Mudd, E.H. The Development of a Research Methodology for achieving the Co-operation of Alcoholics and their Non-Alcoholic wives. Quarterly Journal of Studies on Alcoholism, 1957, 18, 649-657.
- Mussen, P.H.; Conger, J.J. & Kagan, J. Child development and personality. New York Harper & Row, 1969.
- Myers, A.K. Alcohol choice in Wistar and G-4 rats as a function of environmental and alcohol concentration. Journal of Comparative Physiological Psychology, 1962, 55, 41-49.

- Nelson, B; Collins, J;
Kreitman, N & Troop, J. Neurosis and marital interaction. II: Time Sharing and social activity. British Journal of Psychiatry 1970, 117, 47-58.
- Nielsen, J. Mental Disorders in Married Couples (Assortive Mating) British Journal of Psychiatry. 1964, 110, 683.
- Orford, J. & Guthrie, S. Coping behaviour used by wives of alcoholics. Paper read at 28th International Congress on Alcohol and Alcoholism, Washington, D.C. 1968.
- Orpen, C. The Identification and Prediction of Managerial Effectiveness : A Pilot Study with South African Executives. Journal of Behavioural Science. 1972, 1, 251-53.
- Orpen, C. The Cross-Cultural Validity of the EPI Inventory in a test in Afrikaans-Speaking South Africa. British Journal of Social & Clinical Psychology. 1972, 11, 244-47.
- Orpen, C. The Relationship Between Extroversion and Tough-Mindedness in a "Tough-Minded" culture. Journal of Psychology. 1971, 78, 27-29.
- Osmond, H. Blood Sports? Comment on "The Alcoholic Game" Quarterly Journal of Studies on Alcoholism, 1969, 30, 945-948.
- Overstone, I.M.K. The Development of Neurosis in the Wives of Neurotic Men. Part 1 : Symptomology and Personality. British Journal of Psychiatry. 1973, 122, 35-45.
- Overall, J.W. & Patrick, J.H. Unitary Alcoholism Factor and its Personality Correlates. Journal of Abnormal Psychology. 1972, 79, 3, 303-9.
- Partanen, J; Brunn, K & Markkanen, T. Inheritance of drinking behaviour. New Brunswick Rutgers University Centre of Alcohol Studies, 1966.
- Pattison, E.M. A critique of alcoholism concepts; with special reference to abstinence. Quarterly Journal of Studies on Alcoholism, 1966, 27, 49-71.
- Pattison, E.M. Comments on "The Alcoholic Game". Quarterly Journal of Studies on Alcoholism, 1969, 30, 953-956
- Pattison, E.M. Rehabilitation of the Chronic Alcoholic (in) The Biology of Alcoholism Vol. 3 : Clinical Pathology (ed) Kissen, B & Bergleiter, H. Plenum Press. New York, 1975.
- Pattison, E.M.; Coe, R & Rhodes, R, J Evaluation of Alcoholism Treatment : a comparison of three facilities. Archives of General Psychiatry, 1969 20, 478-88

- Pattison, E.M.; Courlas, P.G.; Patti, R; Bogg, M & Mullen, D. Diagnostic-Therapeutic Intake Groups for Wives of Alcoholics. Quarterly Journal of Studies on Alcoholism, 1965, 26, 605-616.
- Penrose, L. Mental Illness in Husband and Wife. Psychiatric Quarterly Supplement, 1944, 18, 161.
- Pervin, L.A. Personality : theory, assessment and research. New York John Wiley & Sons, Inc. 1970.
- Phillip, A.E. The constancy of Structure of a Hostility Questionnaire. British Journal of Social and Clinical Psychology. 1968, 7, 16-23.
- Phillip, A.E. The Development and Use of the Hostility and Direction of Hostility Questionnaire. Journal of Clinical Psychology. 1970, 26, 67-70.
- Pittman, D.J. & Snyder, C.R. (ed) Society, Culture and Drinking Patterns. New York John Wiley & Sons, 1962.
- Pixley, J.M. & Stiefel, J.R. Group therapy designed to meet the needs of the Alcoholic's wife. Quarterly Journal of Studies on Alcoholism. 1963, 24, 2, 304-314.
- Pond, D; Ryle, A & Hamilton, J. Marriage and Neurosis in Working Class Population. British Journal of Psychiatry. 1963, 109, 592.
- Press, S.J. Applied multivariate analysis. New York. Holt, Rinehardt & Winston, Inc., 1972.
- Price, G.M. A study of the Wives of Twenty Alcoholics. Quarterly Journal of Studies on Alcoholism. 1945, 5, 620-627.
- Rabinowitz, S. Multidimensional Personality Study of Homosexual and Transvestites. Unpublished Masters thesis, 1970.
- Rabinowitz, S. Multidimensional Study of Dialysis Patients. Unpublished Doctorate thesis, 1974.
- Rae, J.B. The Influence of the Wives on the Treatment Outcome of Alcoholics : A follow-up study at two years. British Journal of Psychiatry. 1972, 120, 601-613.
- Ritson, B & Hassall, C. Management of Alcoholism. Livingstone, Edinburgh & London, 1970.
- Robinson, D. The Alcoholic's addiction : some implications of having lost control over the disease concept of alcoholism Quarterly Journal of Studies on Alcoholism. 1972, 33, 1028-42
- Rover, L.G. Sixteen Personality Factor Questionnaire (in) Buros, O.K. (ed) The Seventh Mental Measurements Year Book. Highland Park. The Gryphon Press, 1972.

- Rutter, M; Lebovici, S;
Eisenberg, L; Sneznevskij, A.V.;
Sadoun, R; Brooke E & Lin. T.
Sanford, N
- Satir, V.
- Schuckit, M; Rimmer, J; Reich, T;
& Winokur, G.
- Slater, E. & Woodside, M
Slater, E & Roth, M.
- Stein, L.I.; Niles, D. &
Ludwig, A.M.
- Steiner, C.M.
- Storm, T & Caird, W.K.
- Storm, T & Smart, R.G.
- Szasz, T.S.
- Thuline, M.C.
Tomsovic, M
- Trotter, A.B.; Gozali, J;
Cunningham, L.J.
- Ullman, A.D.
- van der Spuy, H.I.J.
- Vogel, M.D.
- The Tri-axial Classification of Mental Disorders in
Childhood. Journal of Child Psychology and
Psychiatry, 1969, 10, 41-61.
- Personality and Patterns of alcohol consumption.
Journal of Consulting and Clinical Psychology. 1968.
32, 13-17.
- Conjoint Family Therapy. California. Science &
Behaviour Books, 1967.
- The Bender Alcoholic. British Journal of Psychiatry.
1971, 183-184.
- Patterns of Marriage. London, 1951.
- Clinical Psychiatry. London. Bailliere, Tindall &
Cassell, 1974.
- The Loss of Control Phenomenon in Alcoholics.
Quarterly Journal of Studies on Alcoholism. 1968,
29, 598-602.
- The Alcoholic Game. Quarterly Journal of Studies
on Alcoholism. 1969, 30, 920-938
- The effects of alcohol on social verbal learning in
chronic alcoholics. Psychonomic Science, 1967, 9,
43-44.
- Dissociation : a possible explanation of some features
of alcoholism and implications for its treatment.
Quarterly Journal of Studies on Alcoholism. 1965,
26, 1, 111-115.
- The ethics of addiction. American Journal of Psychiatry
1971, 128, 5, 33-38.
- Colour blindness and alcoholism. Lancet, 1967, 1, 274.
- Binge and continuous drinkers : characteristic and
treatment follow up. Quarterly Journal of Studies on
Alcoholism. 1974, 35, 558-564.
- Family participation in the treatment of alcoholism.
Personnel and Guidance Journal. 1969, 48, 140-143.
- Socio-cultural backgrounds of alcoholism (in) S.D.
Bacon (ed). Understanding alcoholism. The Annals
of the American Academy of Political & Social Science
1958, 315, 48-54.
- The influence of alcohol on the mood of the alcoholic.
British Journal of Addiction, 1972, 67, 255-265.
- The relationship of Personality Factors to Drinking
patterns of Alcoholics : An Exploratory Study.
Quarterly Journal of Studies on Alcoholism. 1961,
22, 3, 394-400.

- Walton, H.J. Personality as a Determinant of the form of Alcoholism. British Journal of Psychiatry. 1968, 114, 861-6.
- Walton, H.J.; Ritson, E.B. & Kennedy, R.I. Response of alcoholics to clinic treatment. British Medical Journal, 1966. 2, 1171-1178.
- Warner, R.H. & Rosett, H.L. The effects of drinking on offspring : an historical survey of the American and British literature. Journal of Studies on Alcoholism. 1975, 36, 1395-1420.
- Whalen, T. Wives of Alcoholics. Quarterly Journal of Studies on Alcoholism. 1953, 14, 632-641
- Whitaker, C. Acting out : Theoretical & Clinical Aspects. New York. Grune & Stratton, 1965.
- Wynne, L. Some indications and contra-indications for exploratory family therapy. (in) Bosormenyi-Nagy, I & Framo, J (ed) Intensive Family Therapy. New York. Harper & Row, 1965
- Yerkes, R.M. & Dodson, J.P. The relation of strength of stimulus to rapidity of habit formation. Journal of Comparative Neurology and Psychology, 1980, 18, 459-482
- Zarrow, M.K.; Aduss, H & Denison, M.E. Failure of the endocrine system to influence alcohol choice in rats. Quarterly Journal of Studies on Alcoholism. 1960, 21, 400-413.
- Zwelling, I. & Rosebaum Alcoholic Addiction and Personality in Arieti, S (ed) 623-44. American Handbook of Psychiatry. New York Basic Books, 1959.
- Zuk, G.H. & Rubinstein, D. A review of concepts in the study and treatment of families of schizophrenics (in) Boszormenyi-Nagy, I. & Framo, J. L. Intensive family therapy : theoretical & practical aspects. New York. Harper & Row. 1966.

G. A P P E N D I X

APPENDIX 1
CASE HISTORY SUMMARY

Husband's drinking pattern

Length of marriage

Age : Mr. _____ Mrs. _____

Drinking pattern - Mrs.

Drinking pattern - Parents F

M

Family background (Mrs.)

Husbands drinking at marriage hidden _____ yes _____ no _____

Psychiatric treatment (Mrs.) before _____ after _____

Socio-economic class

No. of children

Previous marriage to alcoholic

Home language

NAAM:

P. N. N.:

Aanwysings: 'n Lys woorde word onder aangegee wat gebruik kan word om nense te beskryf. Lees hulle gou deur en maak 'n kruisie voor elke een wat u voel beskryf u self. Moenie u ontstel nie oor duplikasies of ander woorde wat u miskien al gemerk het nie. Werk gou en moenie te veel tyd bestee op enige spesifieke woord nie. Probeer eerlik wees en let op vir daardie woorde wat u beskryf soos u werklik is, en nie soos u graag wil wees nie.

Verstrooid.
 Antief.
 aanpasbaar.
 avontuurlik.
 aanstellerig.
 liefdevol.
 aggressief.
 wakker.
 afsydig.
 ambisieus
 angstig.
 apateties.
 waardeurend.
 rusiemakerig.
 astant.
 kunstig.
 aanmatigend.
 aantreklik.
 outokraties.
 onbeholpe.
 verbitterd.
 lawaaiig.
 grootpraterig.
 baaspelerig.
 kalm.
 bekwaam.
 onversigtig.
 veranderlik.
 sjarmant.
 opgeruimd.
 beskaaf.
 nelderdenkend.
 skrand.
 onverfynd.
 kil.
 alledaags.
 klaerig.
 ongewikkel.
 verwaand.
 vol selfvertroue.
 verwaand.
 nougeset.
 konserwatief.
 bedagsaam.
 tevrede.
 konvensioneel.
 koel.
 samewerkend.
 moedig.
 lafhartig.
 wreed.
 nuuskierig.

sinies.
 waaghalsig.
 agterbaks.
 verdedigend.
 opsetlik.
 veeleisend.
 betroubaar.
 afhanklik.
 moedeloos.
 vasberade.
 waardig.
 diskreet.
 wanordelik.
 ontevrede.
 verwarbaar.
 wantrouig.
 oorheersend.
 dromerig.
 vervelig.
 gemaklik.
 ver wyf.
 doeltreffend.
 egoisties.
 emosioneel.
 energiek.
 ondernemend.
 entoesiasties.
 ontwykend.
 opwenbaar.
 regvordig.
 vitterig.
 beangs.
 vroulik.
 wispelturig.
 koketterig.
 dwaas.
 kragtig.
 vooruitsiende.
 vergeetagtig.
 vergewend.
 formeel.
 reguit.
 vriendelik.
 ligsinnig.
 puntenerig.
 goedhartig.
 sag.
 mismoedig.
 aantreklik.
 goedgeaard.
 vraatsig.
 aansienlik

hardkoppig.
 gevoelloos.
 haastig.
 koppig.
 gesond.
 hulpvaardig.
 gespanne.
 eerlik.
 vyandig.
 humoristies.
 gejaag.
 idealisties.
 verbeeldingryk.
 onvolwasse.
 ongeduldig.
 impulsief.
 onafhanklik.
 onverskillig.
 individualisties.
 ywerig.
 kinderagtig.
 informeel.
 vindingryk.
 terughoudend.
 inisiatief.
 vol insig.
 intelligent.
 beperkte belangstelling
 wye belangstellings.
 onverdragsaam.
 ondernemend.
 onverantwoordelik.
 prikkelbaar.
 vrolik.
 goedhartig.
 lui.
 bedoord.
 logies.
 rasrig.
 lojaal.
 manierlik.
 manlik.
 volwasse.
 sagmoedig.
 metodies.
 sagsinnig.
 ondoord.
 matig.
 beskaaf.
 buierig.
 kywerig.
 natuurlik.

sensuueagtig.
 luwaaiërig.
 tegemoetkomend.
 walgluk.
 eiewys.
 opportunisties.
 optimisties.
 georganiseerd.
 oorspronklik.
 uitlewend.
 uitgesproke.
 ywerig.
 geduldig.
 vredeliewend.
 eienaardig.
 volhardend.
 hardnekkig.
 pessimisties.
 vol planne.
 plesiersoekerig.
 aangenaam.
 selfversekend.
 verfynd.
 prakties.
 vol lof.
 presies.
 bevooroordeeld.
 ingedagte.
 progressief.
 preuts.
 stryërig.
 eienaardig.
 stil.
 gooi gou tou op.
 redelik.
 verstrooid.
 realistis.
 verstandig.
 opstandig.
 roekeloos.
 nadenkend.
 ontspanne.
 betroubaar.
 afkeurend.
 teruggetrokke.
 vindingryk.
 verantwoordelik.
 rusteloos.
 terughoudend.
 onbuigbaar.
 lewenslustig.
 ongeskik.
 sarkasties.
 egosentries.
 vol selfvertroue.
 selfbeheers.
 self-opofferend.
 selfbejammerend.
 selfkastydend.
 selfsoekend.
 selfsugtig.
 sensitief.
 sentimenteel.
 ernstig.
 kwaai.

wulps.
 oppervlakkig.
 skerpsinnig.
 onbekwaam.
 windmaker.
 uitgeslape.
 skaam.
 swygzaam.
 eenvoudig.
 opreg.
 slordig.
 stadig.
 slu.
 selftevrede.
 snobisties.
 gesellig.
 saghartig.
 gesofistikeerd.
 spandabel.
 ruggraatloos.
 spontaan.
 tewendig.
 stabiel.
 gelykmotig.
 streng.
 suinig.
 standvastig.
 sterk.
 koppig.
 onderdanig.
 vatbaar vir suggesties.
 nukkerig.
 bygelowig.
 agterdogtig.
 simpatiek.
 taktvol.
 taktloos.
 spraaksaam.
 tempesamenteel.
 gespanne.
 ondankbaar.
 deeglik.
 nadenkend.
 spaarsaam.
 sku.
 verdraagsaam.
 liggeraak.
 hard.
 vertrouend.
 natuurlik.
 ambisieloos.
 doodgewoon.
 onkonvensioneel.
 onbetroubaar.
 begrypend.
 gevoelloos.
 doodbedoord.
 inhibisieloos.
 onintelligent.
 naar.
 onrealisties.
 gewetenloos.
 onselfsugtig.
 onstabiel.
 wraaksugtig.

veelsydig.
 hartlik.
 versigtig.
 swak.
 neulerig.
 heilsaam.
 wys.
 teruggetrokke.
 gevat.
 gekwel.
 grapmaker.

H. D. H. Q. AFRIKAANS FORM.

P. en P.I.Vraelys.

PERSOONLIKHEITSVRAELYS
(HDHQ)

deur T.M.Caine
en G.A.Foulds

Van.....

Naam.....

Ouderdom.....

Geslag.....

Beroep.....

Huwelikstaat.....

Datum.....

Instruksies:

Voltooi asseblief hierdie vorm deur 'n sirkel te trek om "Reg" of "Verkeerd" na elkeen van die bewerings op die volgende bladsye. Indien u moeilik tot 'n besluit kom, vra uself af of u dink dat die bewering in die geheel... waar of vals is en trek 'n sirkel om die toepaslike woord.

1. Meeste mense maak vriende omdat hulle die vriende moontlik kan gebruik.Reg Verkeerd
2. Ek blameer nie 'n persoon wat iemand wat hom daartoe leen, uitoorlê nie.Reg Verkeerd
3. Gewoonlik verwag ek om suksesvol te wees in alles wat ek doen.Reg Verkeerd
4. Ek het nie vyande wat my regtig kwaad wil aandoen nie.Reg Verkeerd
5. Ek wens ek kon ophou om my te kwel oor dinge wat ek gesê het wat moontlik ander mense se gevoelens kon seermaak.Reg Verkeerd
6. Ek dink feitlik enigiemand sal 'n leuen vertel om uit die moeilikheid te bly.Reg Verkeerd
7. Ek neem niemand kwalik wat alles aangryp wat hy in die wêreld kan kry nieReg Verkeerd
8. Ek baklei die hardste met myselfReg Verkeerd
9. Behalwe myself weet ek wie verantwoordelik is vir meeste van my moeilikhedeReg Verkeerd
10. Party mense is so baasspelerig dat ek lus voel om die teenorgestelde te doen van wat hulle verlang, al beseft ek dat hulle reg is.Reg Verkeerd
11. Sommige van my familie het gewoontes wat my baie hinder en kwaad maakReg Verkeerd
12. Ek glo dat my sondes onvergeeflik isReg Verkeerd
13. Ek maak baie min rusie met my familieReg Verkeerd
14. Ek het al dikwels verloor omdat ek nie vinnig genoeg kon besluit nieReg Verkeerd
15. Dit is baie maklik om mense vir my bang te maak, soms doen ek dit vir die pretReg Verkeerd
16. Ek glo dat ek 'n verdoemde mens isReg Verkeerd
17. Op skool is ek soms na die hoof gestuur vir wangedragReg Verkeerd
18. Soms het ek in iemand se pad gestaan as hy iets wou doen, nie omdat ek iets sou wen nie maar oor die beginsel van die saakReg Verkeerd
19. Meeste mense is eerlik net omdat hulle bang is om uitgevang te wordReg Verkeerd
20. Soms hou ek daarvan om mense wat ek liefhet, seer te maakReg Verkeerd.
21. Ek het nie die regte soort lewe gelei nieReg Verkeerd
22. Soms voel ek asof ek myself of iemand anders moet seermaakReg Verkeerd

23. Dit lyk asof ek net so slim en bekwaam is as ander mense.
Reg Verkeerd
24. Ek terg soms diereReg Verkeerd
25. Ek word soms kwaadReg Verkeerd
26. Ek is heeltemaal selfversekerdReg Verkeerd
27. Dikwels kan ek nie verstaan hoekom ek so kwaad en knorrig was
nie.Reg Verkeerd
28. Ek vrees om voor 'n moeilikheid of krisis te staan te kom
Reg Verkeerd
29. Meeste mense sal 'n leuen vertel om vooruitgang te maak
Reg Verkeerd
30. Soms het ek al gevoel dat die moeilikhede so opgehoop het dat
dit te veel was om te bowe te komReg Verkeerd
31. As mense nie vir my vies was nie sou ek meer suksesvol gewees
het.Reg Verkeerd
32. Ek het dikwels gevind dat mense jaloers was op my goeie idees,
net omdat bulle nie eerste daaraan gedink het nie .Reg Verkeerd
33. Meeste van die tyd voel ek asof ek iets verkeerd of boos ge-
doen hetReg Verkeerd
34. Ek het al baie opgehou met iets net omdat ek my bekwaamheid
betwyfel hetReg Verkeerd
35. Iemand het iets teen my.Reg Verkeerd
36. As iemand iets aan my gedoen het, voel ek dat ek hom terug
moet betaal, net oor die beginsel van die saak . .Reg Verkeerd
37. Ek is oortuig daarvan dat ek deur die lewe mishandel word.
Reg Verkeerd
38. Ek glo dat iemand my agtervolgReg Verkeerd
39. Soms het ek 'n sterk begeerte om iets verkeerd of skokkend te
doenReg Verkeerd
40. Ek word maklik in 'n argument betrek.Reg Verkeerd
41. Dit is die veiligste om niemand te vertrou nie . .Reg Verkeerd
42. Ek word maklik ongeduldig met mense.Reg Verkeerd
43. Soms dink ek dat ek vir niks goed is nieReg Verkeerd
44. Ek wonder dikwels watter verborge rede iemand het wat iets
goeds vir my doenReg Verkeerd
45. Ek word gou kwaad maar kom gou weer daaroor. . .Reg Verkeerd
46. Soms voel ek lus om alles om my stukkend te slaan .Reg Verkeerd
47. Ek glo dat mense teen my saamsweerReg Verkeerd

48. By tye voel ek baie nuttelosReg Verkeerd
49. Soms voel ek lus om met iemand te baklei . . .Reg Verkeerd
50. Iemand het probeer om van my te steel . . .Reg Verkeerd
51. Ek het min selfvertroue.Reg Verkeerd
-

APPENDIX 4Mean scores on psychological tests for groupings A, B, C.1. Cattell's 16PF

Table 15
Mean scores for groups A, B, C on the 16PF

Factors	Group A	Group B	Group C	Grand Mean
A	7,545	5,333	6,000	6,275
B	4,727	4,222	3,350	3,925
C	4,909	3,778	3,750	4,075
E	5,363	2,778	3,750	3,975
F	4,545	2,667	3,250	3,475
G	5,364	5,444	5,450	5,425
H	6,182	4,000	4,250	4,725
I	7,727	8,778	8,350	8,275
L	2,909	4,222	4,100	3,800
M	5,455	6,778	5,950	6,000
N	5,455	4,556	5,350	5,200
O	4,545	6,222	5,950	5,625
Q1	4,909	3,889	4,850	4,650
Q2	5,182	7,556	6,400	6,325
Q3	5,636	5,889	5,850	5,800
Q4	5,000	5,667	6,400	5,850

(ii) Fould's HDHQ

Table 16

Mean scores for groups A, B, C on HDHQ

The mean scores for each group were :

Factors	Group A	Group B	Group C	Grand Mean
AH	3,182	5	4,350	4,175
PH	1,364	4,111	3,900	3,250
CO	2,727	5,111	6,500	4,750
G	1,182	1,889	3,250	2,375

(iii) Adjective Check ListTable 17Mean scores for groups A, B, C on ACL

Factors	Group A	Group B	Group C	Grand Mean
Df(m)	20,000	12,667	15,300	16,000
Df(f)	24,545	15,778	17,550	19,075
Fav	57,636	35,444	42,600	45,125
Unfav	4,091	5,000	6,350	5,425
S-Cfd	10,364	3,778	6,800	7,100
S-Cn	10,273	5,556	7,750	7,950
Lab	8,091	4,333	6,350	6,375
Per Adj	15,273	8,444	9,250	10,725
Ach	14,182	5,111	9,600	9,850
Dom	12,636	2,778	6,850	7,525
End	13,818	5,111	7,850	8,875
Ord	13,364	4,556	8,450	8,925
Int	17,091	11,333	12,650	13,575
Nur	25,727	17,667	18,850	20,475
Aff	25,909	14,667	18,250	19,550
Het	8,909	5,333	6,050	6,675
Exh	,545	-1,556	-1,200	-,800
Aut	-,909	-,778	-,850	-,850
Agg	-17,273	-12,000	-13,950	-14,425
Cha	4,636	2,000	2,550	3,000
Suc	-,909	,444	,400	,050
Aba	1,818	3,111	2,400	2,400
Def	5,545	4,111	6,250	5,575
Crs(m)	-10,273	-3,333	-6,050	-6,600
Crs(f)	2,909	-,778	1,850	1,550