Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

PERSONALITY CORRELATES OF PROBLEM DRINKING IN NEW ZEALAND

A dissertation presented in partial
fulfilment of the requirements
for the degree of Doctor of
Philosophy in Psychology
at Massey University.

Full name: Carol Lindsay Worthington.

Year: 1977

ABSTRACT

In an attempt to isolate differential personality characteristics of problem drinkers in New Zealand, 100 problem drinkers, 60 non-problem drinking psychiatric patients, 30 non-problem drinking prison inmates, and 30 abstainers were compared on a number of characteristics extracted from an extensive literature review, preference being given to those which longitudinal studies had indicated might be predisposing to adoption of an addictive rather than a non-addictive pathology.

Predictions were confirmed in that problem drinkers manifested diminished investment in the heterosexual role by being covertly orientated to males rather than females (on a measure of seconds spent eye-fixating on pictures of naked males versus females) while verbalizing overtly a preference for the female picture of each opposite-sex pair, from which it was inferred that "defensive masculinity" functioned to obscure covert masculine inadequacy; problem drinkers were socially isolated, with marked difficulties in establishing close relationships and preferring short-term, superficial, casual encounters coupled with withdrawal from stable emotional commitments (biographical data questionnaire); they were also extremely field dependent (embedded figures), intensely aggressive (inventory and stereoscope), manifested a very short future time perspective (personal events methods), and had considerable difficulties in the area of socialization (inventory). They had also experienced home backgrounds in which they were often deprived of sustained contact with a father, either through lengthy separations or the father's emotional withdrawal or antagonistic, rejecting behaviour. The one prediction not confirmed dealt with an attempt to mobilize anxieties over putative dependency and masculine inadequacy, with the expectation that threat to these would result in greater (spurious) self-sufficiency and masculinity scores on inventories, relative to subjects not threatened. While there was some tentative evidence of threat effect on drinkers and abstainers, results were equivocal and the

null hypothesis could not be rejected. However, patients differed from the other groups in readily admitting to much less self-sufficiency and masculinity. On all measures drinkers were distinguished from patients (other than in the sharing of social anxieties, though patients were not socially isolated or superficial), and from abstainers (except that drinkers, abstainers, and criminals did not differ in declaring themselves extremely self-sufficient and masculine), but on socialization, and on aggressiveness as measured by the stereoscope, drinkers did not differ from criminals whereas abstainers were hyper-conventional.

By comparing young early with old early starters it proved possible to demonstrate that years of chronic inebriety did not influence the characteristics isolated, especially field dependence, aggressiveness, and under-socialization. Younger drinkers were more disturbed than older ones in the areas of aggressiveness and socialization, on inventory measures and on such indices as wanderlust, occupational instability (from preference), impulsiveness, promiscuity, antisocial behaviour during school years (habitual truanting, stealing, disciplinary problems), and having extensive criminal records. 26% whose pathological drinking began after age 40 were much more neurotic-like.

Conclusions were that problem drinkers suffered from a personality disorder more severe than a neurosis, and that early socialization difficulties were those most likely to predict later problem drinking.

ACKNOWLEDGEMENTS

The writer is extremely indebted to the New Zealand Liquor Industry Council, whose generous financial assistance made this research possible.

Thanks are also due to the New Zealand Alliance and the Salvation Army, for their cooperation and assistance with this project, and to the staff of Wellington and Wi Tako prisons and of all those hospitals making subjects available for the research programme:-

Queen Mary hospital, Hanmer Springs; Porirua hospital; Carrington and Kingseat hospitals and the Buchanan Clinic, Auckland; Ashburn Hall and Wakari hospital and the Cherry Farm Admission Unit, Dunedin; and the Department of Psychological Medicine, Princess Margaret hospital, and the Calvary Clinic, Christchurch.

CONTENTS

INTRODUCTION 1

PART ONE: REVIEW OF THE LITERATURE

SECTION 1: "Alcoholism" versus Problem Drinking .. 6

SECTION 2: Personality and Problem Drinking - Introduction 16

SECTION 3: A General Review of Theories of Problem Drinking 24

SECTION 4: Summary 48

SECTION 5: Specific Studies Relating to the Key Issues in Research adumbrated in Sections 3 and 4 51

SECTION 6: Conclusions from the Review of the Literature 87

PILOT STUDIES 91
First Pilot Study 91
Second Pilot Study 109
Conclusions from Pilot Studies 147

PART TWO: THE MAIN STUDY

AIM 148

HYPOTHESES 150

DESIGN 152
Subjects 152
Constructs and Materials 164
Experimental Procedure 184

RESULTS 191
Dependence/independence Conflict 204
Augmented Interest in Males 224
Schizoid Interpersonal Difficulties 237
Psychological Differentiation 250
Aggression 258
Future Time Perspective 269
Socialization 278
Family Background 295

GENERAL DISCUSSION 310

CONCLUSIONS 327

APPENDICES 329
Appendix A: Statistical Material 329
Appendix B: Materials 385
Appendix C: FTP2 Item Preferences, and Criminal Records of Subjects 393

BIBLIOGRAPHY 396

LIST OF TABLES

1.1	Age, Education, and Occupational Status of the First 100 Alcoholics admitted to "The Bridge," 1963	92
2.1	Population Distribution by Age and Years of Education	111
2.2	Means and Standard Deviations for Groups Compared on the MMPI Scales	113
2.3	Comparison of Hanmer and AA Subjects on the MMPI Scales	113
2.4	Means and Standard Deviations for Groups Compared on Navran's MMPI-derived Dependency Scale	115
2.5	Means and Standard Deviations Comparing Groups on Number of Cigarettes smoked Daily	116
2.6	Means and Standard Deviations for Groups Compared on Age of leaving Home	117
2.7	Means and Standard Deviations for Groups Compared on the MMPI Mf Scale	118
2.8	Means and Standard Deviations for Groups Compared on Scales F, Sc, Pa, and Ma of the MMPI	121
2.9	Comparison of Groups on Self-ratings of Difficulties in Interpersonal Relations	122
2.10	Comparison of Groups on Stability or Instability of Interpersonal Relations	122
2.11	Comparison of Groups on Self-descriptions of Childhood Interpersonal Difficulties ..	123
2.12	Means and Standard Deviations for Groups Compared on the HDHQ	130
2.13	Means and Standard Deviations for Groups Compared on MMPI Scales Pd and Ma	131
2.14	Comparison of Groups on Self-report of Criminal History	132
2.15	Numbers of Subjects answering affirmatively MMPI Questions on Childhood Misbehaviour..	133
2.16	Comparison of Groups' Self-report of Parental Problem Drinking and Parental Incompatibility	137
2.17	Comparison of Groups on Ratings of Mother ..	137
2.18	Comparison of Groups on Ratings of Father ..	138
2.19	Comparison of Groups on Separations from Parents occurring before the Age of 16 for longer than One Year	139
2.20	Reasons for, and Number of Instances of, Child-parent Separations	139

3.1	Sources of Subjects, and Numbers from Every Institution	159
3.2	Numbers of Subjects in Original and Replication Groups	160
3.3	Grouping of Subjects by Hospital and by Diagnosis	160
3.4	Subjects on Medication in Groups 1 and Two	162
3.5	Analysis of Variance for Age, Kingseat, Carrington, and Hanmer Hospitals	191
3.6	Analysis of Variance for Education, Kingseat, Carrington, and Hanmer Hospitals	191
3.7	Analysis of Variance on the Massey Test of Verbal Ability, Kingseat, Carrington, Hanmer	191
3.8	Means and Standard Deviations for Population Distribution by Age, Number of Years of Education, and Verbal Ability...	192
3.9	Analysis of Variance for Number of Weeks Hospitalized, Kingseat, Carrington, Hanmer	192
3.10	Means and Standard Deviations for Number of Weeks Hospitalized at Time of Testing ...	192
3.11	Analysis of Variance for Number of Years of Alcohol Abuse, Kingseat, Carrington, Hanmer	192
3.12	Means and Standard Deviations for Number of Years of Alcohol Abuse	193
3.13	Number of Subjects arrested for Inebriety and Serious Offences	193
3.14	Analysis of Variance for Age, Combined Groups Comparison	194
3.15	Means, Standard Deviations, and t-tests for Age, Groups 1, 2, and Combined Groups ...	195
3.16	Analysis of Variance for the Massey test of Verbal Ability, Combined Groups Comparison	195
3.17	Means, Standard Deviations, and t-tests for the Massey test of Verbal Ability, Groups 1, 2, and Combined Groups	195
3.18	Analysis of Variance for Education, Combined Groups Comparison	196
3.19	Means, Standard Deviations, and t-tests for Number of Years of Education, Groups 1, 2, and Combined Groups	196
3.20	Analysis of Variance for Weeks Hospitalized at Time of Testing, Combined Groups	198
3.21	Means, Standard Deviations, and t-tests for length of Institutionalization, shown in Weeks, Groups 1, 2, and Combined Groups..	198

3.22 Means, Standard Deviations, and t-tests for the BSS scale under Threat versus Non-threat Conditions 204

3.23 Means, Standard Deviations, and t-tests for the Fe scale under Threat versus Non-threat Conditions 205

3.24 Means, Standard Deviations, and t-tests for Group 1 PDs (severe threat) versus Group 2 PDs (lesser threat) 205

3.25 Means, Standard Deviations, and t-tests for Group 1 PTs (severe threat) versus Group 2 PTs (lesser threat) 206

3.26 Means, Standard Deviations, and t-tests for Group 1 PDs versus Group 1 PTs under Severe Threat on the BSS and Fe Scales 206

3.27 Means, Standard Deviations, and t-tests for Group 2 PDs versus Group 2 PTs under Lesser Threat on the BSS and Fe Scales 207

3.28 Analysis of Variance on the BSS scale, Combined Groups Comparison 208

3.29 Means, Standard Deviations, and t-tests for BSS scale scores with Threatened and Non-threatened Groups Combined 208

3.30 Analysis of Variance on the Fe scale, Combined Groups Comparison 209

3.31 Means, Standard Deviations, and t-tests for Fe scale scores, with Threatened and Non-threatened Groups Combined 209

3.32 Analysis of Variance for Eye-fixation on Male Pictures, Combined Groups Comparison 224

3.33 Means, Standard Deviations, and t-tests for Eye-fixation score for Pictures of Males, shown in Seconds 224

3.34 Means, Standard Deviations, and t-tests for Eye-fixation scores for Male versus Female Pictures, shown in Seconds 225

3.35 Numbers of Subjects Fixating longer upon Male than Female Pictures 225

3.36 Analysis of Variance for Verbal Preferences for Male Pictures, Combined Groups 226

3.37 Means, Standard Deviations, and t-tests for Number of Male Pictures selected as Preferred Pictures 226

3.38 Means, Standard Deviations, and t-tests for Number of Male versus Female Pictures Preferred 226

3.39 Subjects' Self-descriptions of Isolation, Superficiality, and Instability 237

3.40 Subjects' Self-descriptions of Interpersonal Discomfort and Difficulties in Establishing Relationships 238

3.41 Analysis of Variance on the EFT, Combined Groups Comparison 250

3.42 Means, Standard Deviations, and t-tests for the EFT, shown in Seconds 250

3.43 Analysis of Variance on the HDHQ, Combined Groups Comparison 258

3.44 Means, Standard Deviations, and t-tests for the HDHQ 258

3.45 Analysis of Variance on the Stereoscope, Combined Groups Comparison 258

3.46 Means, Standard Deviations, and t-tests for Number of Aggressive Stereograms reported on the Stereoscope 259

3.47 Analysis of Variance for FTP1, Combined Groups Comparison 269

3.48 Means, Standard Deviations, and t-tests for FTP1, shown in Years 269

3.49 Analysis of Variance for FTP2, Combined Groups Comparison 269

3.50 Means, Standard Deviations, and t-tests for FTP2, shown in Years 270

3.51 Analysis of Variance for Number of FTP1 Responses, Combined Groups Comparison 271

3.52 Means, Standard Deviations, and t-tests for Number of Responses provided for FTP1 ... 271

3.53 Analysis of Variance on the So scale, Combined Groups Comparison 278

3.54 Means, Standard Deviations, and t-tests on the So scale 278

3.55 Analysis of Variance on the So scale, Group 1 Comparison 279

3.56 Analysis of Variance on the So scale, Group 2 Comparison 279

3.57 Means, Standard Deviations, and t-tests on the So scale after removal of Two Questions on Drinking Habits 279

3.58 Comparison of Youngest versus Oldest, and Early versus Middle or Late Starters on Indices of Sociopathy 286

3.59 Comparison of Young Early, Old Early, and Old Late Starters on Indices of Sociopathy ... 287

3.60 Percentages of Subjects with Parental Problem Drinking in their Background 295

3.61	Percentages of Subjects with Parental Psychiatric Illness in their Background	295
3.62	Numbers of Mothers versus Fathers who were Problem Drinkers	296
3.63	Numbers of Mothers versus Fathers who were Psychiatrically Ill	296
3.64	Subjects' Perceptions of Parents, their Compatibility with each other, and Preferences for the Mother	297
3.65	Subjects' Perceptions of Mothers versus Fathers as Warm and kind	297
3.66	Subjects' Perceptions of Mothers versus Fathers as Positive	297
3.67	Subjects' Preferences for Mother versus Father	298
3.68	Percentages of Subjects Separated from One or Both Parents before the age of 16	298
3.69	Percentages of Subjects Separated from One or Both Parents before the age of 16 for longer than One Year	298
3.70	Separation of Subjects from Parents by Death	299
3.71	Separation of Subjects from Parents by Reasons other than Death	300
3.72	Separation of Subjects from Father for longer than One Year	300
3.73	Separation of Subjects from Mother for longer than One Year	300
3.74	Separation of Subjects from Both Parents for Longer than One Year	301
3.75	Separation of Subjects from Mother versus Father for longer than One Year	301

PERSONALITY CORRELATES OF PROBLEM DRINKING IN NEW ZEALAND

I N T R O D U C T I O N

This study is an exploratory investigation of some of the personality and demographic correlates of problem drinking in New Zealand. The study seeks to test the null hypothesis: that specific personality characteristics are not associated with problem drinking. This is associated with the viewpoint that problem drinkers are heterogeneous apart from their excessive drinking, that anyone may become a problem drinker, and that there is no warrant for supposing that persons of one personality type are more likely to become chronic inebriates than are persons of another type. An alternative general hypothesis is suggested: that there may be specific personality characteristics which tend to be associated with problem drinking and which, while probably insufficient in themselves, by implication might make for a vulnerability or a predisposition toward an addictive pathology such as chronic inebriety, rather than toward a non-addictive pathology.

Although the investigation of problem drinking has extended over decades, a review of the literature reveals that understanding of it remains inchoate; there is no common agreement on aetiology, dynamics, or appropriate treatment. Its systematic investigation dates from about 1935 with the establishing of the Yale School of Alcohol Studies, the publication of the Quarterly Journal of Studies on Alcohol, and the founding of Alcoholics Anonymous (Mensh, 1965), but as Mensh (1965, p.1070) complains, "The etiology of alcoholism has been studied in many ways and yet remains confusing. The definition of the condition has somewhat

more consensus, though linked to etiological hypotheses ... This background of definition and presumed etiology offers so little for preventive and therapeutic approaches." Siegler, Osmond and Newell (1968, p.589) pointed out that "The plurality of viable models, and the inconsistency with which they are used, suggests that the problem of alcoholism has not yet been solved to everyone's satisfaction," and in the same vein Wallerstein as late as 1968 was led despairingly to comment, "More than perhaps with any other psychiatric nosologic entity, the effort at understanding and treating alcoholism elicits widely varying psychiatric viewpoints anchored in such philosophically discordant premises that useful discourse can become all but precluded" (p.59). A recent conference was based on the theme that in spite of a burgeoning body of studies the problems of alcoholism in 1940 "still persisted in the 70's" (Filstead and Rossi, 1973, p.1360).

Clinical work and other studies have failed to produce generally acceptable models of problem drinking; as a consequence treatment ranges from psychotherapy, psychoanalysis, aversion conditioning and other forms of behaviour modification, plain abstinence, and legal deterrents, to such irreversible procedures as destruction of the thalamic dorsomedial nucleus as employed by Marconi, Poblete, Palestini, Moya, Bahamondes, and Guzman (cited by Rankin, 1969), based on a purely physiological aetiology.

If problem drinking is largely determined by specific personality characteristics these have proven elusive. Much research has failed to uncover any such differentiae or has discriminated problem drinkers only from normals, and not from other maladjusted groups. However, theorists espousing a predisposition hypothesis imply that faulty research designs might have obfuscated rather than elucidated underlying personality trends; implicit here is the expectation that technical refinement will ultimately reveal the elusive characteristics.

The view that since stress is ubiquitous and alcohol is a universal anodyne, anyone is a potential problem drinker, is opposed by evidence largely of a clinical, speculative, non-experimental nature. However, recent longitudinal studies have provided an impetus toward further research by identifying some personality trends that in childhood distinguished subjects later becoming pathological drinkers from those who did not, therefore being antecedent to drinking; these findings have been reflected in contemporary theorizing about the possible personality origins of such drinking.

Significance for prophylaxis is the most important implication of research in this field: early identification of problem drinkers from other maladjusteds on the basis of differential personality trends raises the possibility of early remedial measures for the high risk group (Filstead and Rossi, 1973; Sanford, 1968). As Wilkinson (1970, p.5) has stressed, " ... treatment is only one side of the coin. To make significant inroads on drinking problems one must get at the causes ... and that means prevention." On the other hand, repeated failure to demonstrate a differential personality aetiology would suggest that research would be better concentrated along other channels. The present study seeks to clarify this issue within a controlled research design.

Hoff (1959), summarizing a conference on alcoholism, stressed the necessity for more personality studies, not only to indicate whether or not alcoholics are discriminable from other groups but also to outline the extent to which research results to date are specific to special populations or are generally applicable, and Wellman, Maxwell and O'Hollaren (1957) have stated, "... it is important to obtain basic descriptive information regarding every sizeable and available alcoholic population, in the hope that the accumulation of such studies will balance out to a fairly realistic conception of the total" (p.393).

A review of the literature reveals that so far this has not been attempted for the New Zealand problem drinking population. Although the major concern of this study is not simply an exploration of an as yet unstudied pathologically drinking population, some indications of the nature of the problem in this country are long overdue, and the comparison of personality and demographic variables found in drinkers elsewhere with those found in this study is an implicit subsidiary aim.

Various models of problem drinking will be reviewed and a set of characteristics extracted that have in the main found support in longitudinal studies; these will then be explored in a controlled objective design. Problem drinkers will be drawn from several sources and compared with non-problem drinking psychiatric patients, non-problem drinking prison inmates and abstainers. Originally the writer intended using two student groups as well, one of which would comprise "nascent problem drinkers" to circumvent the difficulty confronting research in this area: the uncertainty as to whether trends identified are antecedent to or a consequence of years of chronic inebriety (Blum and Blum, 1969, p.41; Plaut, 1967, p.46). Unfortunately this eventually proved to be too difficult and it was possible to extract evidence of disturbances preceding pathological drinking only from adult protocols and by statistical manipulation.

The research question formulated by Lisansky (1967), answers to which seem not as yet to have been generally accepted, is as follows: "What character or personality traits tend to appear in certain individuals, which, together with membership in highly prone social groups, make for a predisposition or a vulnerability to alcoholism?" (p.4). Research should attempt to identify "... those personality factors which are necessary (although not sufficient) to explain the adoption of an addictive psychopathology" (p.12). Lisansky considered doctoral

theses best suited for research in this area because of the stringent conditions under which definite questions must be formulated and clearly answered.

This study will thus explore some of the seminal conceptions within contemporary and other theorizing about differential aetiology with an aim of examining the possibility of identifying differential personality correlates or predictors of problem drinking. The variables will be measured, therefore, in problem drinking and non-problem drinking groups. Possible outcomes of the study are (1) The isolation of differential personality correlates of problem drinking, and (2) The finding of a battery of measures that might aid in early identification of pathological drinkers.

PART ONE

REVIEW OF THE LITERATURE

SECTION 1: "Alcoholism" versus problem drinking.

Before launching into the review proper, a brief digression is necessary to justify substitution of the term "problem drinking" for "alcoholism". The writer has argued elsewhere (Worthington, 1972) that although a distinction is usually drawn between other kinds of pathological drinking and "alcoholism" in terms of physiological addiction, or inability to control or diminish intake once the effects of heavy drinking on health, etc., have been recognized - the "true alcoholic" being held unable to recognize these effects or to reduce intake if he does recognize them (Diethelm, 1955; Izikowitz, 1959; Jellinek, 1960, p.36; Marconi, 1959) - grounds for making such a distinction are not readily substantiated by extant evidence, although the World Health Organization (cited by Stoller, 1969, p.18) still distinguishes episodic excessive drinking, habitual excessive drinking, and alcohol addiction, classifying these separately from one another, while alcoholic psychoses, alcoholism secondary to mental illness, and drunkenness are classified elsewhere. Holloway (1969) has so extensively reviewed definitions of "alcoholism" that a further review would be superfluous.

Writers endorsing disease-entity models of "alcoholism" with physiological dependence (usually defined as loss of control over intake) distinguishing these individuals from the psychologically dependent "problem drinkers" include Block (1963; 1965), Fau and Chateau (1963), Fox (1967; 1968), Hoffer and Osmond (1959), Jellinek, (1960, p.36, p.111), Keller (1960; 1962), Lemere (1956a), Marconi (1959; 1967), Marconi et al (cited by Rankin, 1969), Mardones (1972),

Tintera (1966), and Williams (1948; 1954; 1959; 1967). Fox (1967, pp. 328-329; 1968), a leading "alcohologist", considers personality relevant in only a minority of alcoholics, placing alcoholism fourth to cardiovascular accidents, cancer, and mental illness as the most serious disorder in the U.S.A. Therefore it is not a mental illness and personality plays no necessary role. Debate over disease-entity versus personality disorder still appears in the literature (e.g. Calahan, 1970, pp.1-17; Hershon, 1973; Keller, 1975; Moore, 1972; Robinson, 1972; Roebuck and Kessler, 1972, pp.3-9).

The value of contributions to the physiological dependence approach to date, however, appears nugatory. Underlying this putative physiological dependence resulting in loss of control over intake have been implicated endocrine dysfunctions (e.g. Pelton, Williams and Rogers, 1959; Rogers and Gawienowski, 1959; Tintera, 1966); dietary deficiencies (e.g. Mardones, 1951; 1954; Mirone, 1957; Williams, 1948; 1954; 1959; 1967); metabolic anomalies (e.g. Davis and Walsh, 1970; Lester, 1960; 1961), either predisposing or resulting from pharmacological addictive properties of alcohol (e.g. Jellinek , 1960, p.154); and genetic factors (e.g. Mardones, 1972). Mardones (1972) now favours implication of a major gene located on the X-chromosome, a theory based on linkage of alcoholism with colour-vision defects.

Dietary deficiencies and endocrine dysfunctions, however, are not generally accepted as precursors of alcoholism but, where present, as consequences (Cook, 1963; Marks, 1975), and recent research has failed to demonstrate consistent associations between alcoholism and such genetic factors as blood groups, phenylthiocarbamide taste sensitivity, ABH substance secreted in saliva, or colour-vision defects (Camps, 1972, McCance, 1970; Swinson, 1972; 1973), Smith (1972) producing evidence favouring colour-vision deficit as secondary to alcoholism. Williams (1959)

invoked the concept of an "appestat" in the hypothalamus that might be directly involved in uncontrolled drinking, but some work by Ehrlich (1964)and Miller, Bailey and Stevenson (1950) suggests that while hypothalamic lesions sometimes induce apparently uncontrolled eating in animals already eating, food drive is lowered; the animals would not persist in searching for more food if locating it was at all difficult (as in having to knock the lid from a food-box). This clearly does not parallel the human search for supplies during an alcoholic bout.

The theory of metabolic disorder has been well explored but unfruitfully. Carpenter (cited by Mendelson, 1968), Harger and Hulpieu (1956), Jacobsen (1952), Mendelson (1968), and Newman (1941) reported no differences in rate of alcohol metabolism, or ability to metabolize it, between normals and alcoholics. Mendelson's (1968) data do not preclude the existence of a unique metabolic pathway for alcohol in alcoholics but render it unlikely. Davis and Walsh (1970) have presented a sophisticated hypothesis about formation of an endogenous opiate resulting from an aberration of the neuroamine, dopamine, as a result of excessive alcohol intake, but Goldstein and Judson (1971) were unable to produce experimental evidence of such a possibility.

Lester (1966) has lengthily reviewed similar approaches to the problem of pathological drinking, concluding that as yet no particular biochemic theory seems to acceptably explain all the facts. While future research might uncover physiochemical anomalies relevant to pathogenesis, the presence of these is to date unproven (Catanzaro, 1968, pp.13-15; Kessel and Walton, 1966, p.65; Mirams, 1963; Sanford, 1968; West, 1972). The fact that a very large number of heavy drinkers are involved with other drugs as well (Brown, Kozel, Meyers and Dupont, 1973; Evenson, Altman, Sletten and Knowles, 1973; Freed, 1973; Holloway, 1969; Kalant, 1962; Ravnsborg, 1965; Rosenberg, 1969a) suggests that some chemical property of alcohol per se, as

a primary determiner of pathological drinking, is not likely to be uncovered.

The concept of alcoholism as a disease-entity with a physiochemical substratum has rested largely on the dictum that once loss of control has developed, so have irreversible physiological changes. The literature abounds with ex cathedra pronouncements that "Once an alcoholic, always an alcoholic" (Smith, 1957a, p.175); that "This condition cannot be cured, for irreversible permanent changes in body chemistry have taken place," (Bell, 1957, p.143); that "The loss of control is very real, and once established is permanent and irreversible" (MacDougall, 1963, p.2); that as little as one glass of alcohol will trigger uncontrollable craving (Rea, 1956, p.79); and that this inability ever again to drink normally is a "... most basic fact - one that no amount of discursive verbiage can obscure" (Williams, 1959, p.452). In a contemporary review of experimental psychopathology Buss (1966, p.444) has also accepted an inevitable triggering effect. In fact there is little evidence for drawing distinctions between "alcoholics" and other heavy drinkers on this basis, or using such arguments as proof of a physiochemical mechanism involved. Numerous studies of Mendelson and colleagues (see Section 3) have shown that under conditions of experimental intoxication with hospitalized alcoholics no triggering effect or craving develops even after prolonged drinking, and studies by Gottheil, Alterman, Skoloda and Murphy (1973), Marlatt, Demming and Reid (1973), Merry (1966), and Paredes, Hood, Seymour and Gollob (1973) support this observation.

Of greater importance in refuting the irreversible body-chemistry-change theory is that a large number of studies and reviews provide overwhelming evidence that many individuals diagnosed as "loss of control" alcoholics have been able, after treatment of various kinds, to return to non-pathological drinking (Anant, 1970; Bailey and Stewart,

1967; Davies, 1962; Davies, Scott and Malherbe, 1969; Ewing, 1974; Gerard and Saenger, 1966; Gerard, Saenger and Wile, 1962; Kendell, 1965; Kendell and Staton, 1966; Pattison, 1966; Pattison, Headley, Gleser and Gottschalk, 1968; Quirk, 1970; Reinert and Bowen, 1968; Robson, Paulus and Clark, 1965; Selzer, 1963). Selzer and Holloway (1957) commented of their study, "The fact that 16 per cent of 83 patients were able to return to social or non-pathological drinking, seems to warrant a second look at the long-cherished theory that no alcoholic can ever become a moderate drinker" (p.114). Indeed, some behaviour modification theorists (e.g. Cohen, Liebson and Faillace, 1971; Cohen, Liebson, Faillace and Allen, 1971; Ewing, 1974; Hamburg, 1975; Paredes, Gregory and Jones, 1974; Schaefer, Sobell and Mills, 1971) have suggested, and provided evidence for, the concept that controlled drinking rather than abstinence is a more realistic treatment goal for at least some alcoholics.

In view of the evidence it is puzzling that the concept of irreversible physiochemical change not only persists, in some quarters, as the primary determinant of pathological drinking but is held to be the distinguishing characteristic between "alcoholics" and other chronic inebriates. That emotional distortions of judgement may be at work is evidenced by reactions to the Davies (1962) article on regained control in alcoholics. As Block (1963, p.116) put it, the patients concerned could not possibly have been "true alcoholics" and that whenever we come across such cases "the diagnosis was wrong." Selzer (1963) reported on his and Holloway's 1957 study in which 13 patients had regained control. When the agency providing research funds for the clinic heard of the intention to publish these findings it so strongly objected that the authors had virtually to withdraw the evidence and "admit" that the patients had been wrongly diagnosed! Lemere (1963), referring to the Davies article, suggested only one solution to the findings: "Granted the diagnosis of pseudo-alcoholism may be difficult to make before the fact,

it can be made afterward, thus preserving our basic concept of an irreversible process. This is the only way we can stick to our guns that a true alcoholic can never drink again. If we ever concede this dictum, we ... will be lost" (p.727). In an attempt to explain such attitudes Lolli (1963) has suggested that conscious acceptance of any pleasurable aspects of addiction to alcohol would appear to many as a challenge to the disease concept of "alcoholism" and would weaken their resolve to help "the alcoholic".

As an alternative to a gratuitous assumption of irreversible physiochemical change underlying loss of control phenomena, commonsense would suggest that after a few drinks the probably universal disinhibiting effects of alcohol would function to permit easier emergence of any usually repressed feelings that might underlie binges while at the same time diminishing self-control and obtunding awareness of the reality dangers of any further alcohol intake at that moment, so that it would appear that an inexplicable loss of control over intake had occurred. Studies on the non-transfer of behaviour learned in the sober state to the drug state and vice versa might support such a view. Storm and Smart (1965) suggest that responses and resolutions of the sober state may be lost through dissociation of the sober self from the intoxicated self, later presenting some evidence for this hypothesis (Storm and Caird, 1967). Diethelm and Barr (1962) have also presented evidence of intoxicated alcoholics' producing conflict material not available to them in the sober state. Difficulties in transfer of learning from one state to the other with a variety of drugs (mostly with animal subjects) have been noted by Belleville (1964), Crow (1966), Gardner and McCollough (1962), Girden and Culler (1937), Goodwin, Powell, Bremer, Hoine and Stern (1969), Otis (1964), Overton (1964; 1966), Ryback (1969), Sachs, Weingarten and Klein (1966), and Weingartner and Faillace (1971). Five of these studies used alcohol as the experimental drug, and Goodwin et al (1969) used intoxicated medical students as subjects.

Vannicelli (1972) found that alcoholics knew far less about their intoxicated selves (could not predict their drunken reactions) than they thought. The writer knew a problem drinker who found, during two years of struggle while he tried limiting himself to just two or three drinks at a time, that after a few drinks his thinking changed and resolutions of the sober state seems to lose their meaning. He would find himself thinking, "Who wants sobriety! Getting thoroughly drunk is marvellous! What wowsers people are who think a man should stay sober," etc. When awakening from his binge he could not clearly recall these thought changes leading to "loss of control," and when beginning to drink he could not clearly recall why he had resolved not to. Hence the protracted struggle.

Traditional ways of separating problem drinkers from "alcoholics" - physiological flaws, metabolic anomalies, loss of control phenomena, irreversible tissue chemistry changes - seem not supported by the evidence. The term "alcoholism" has become invested with such an aura of pseudoscientific jargon that continued use of it would seem to reflect "professional echolalia" and accomplish little other than the perpetuation of this background of false information and pseudomedical moralistic theorizing. If no qualitative distinctions between "alcoholics" and other chronic drinkers were made, the disturbance could be more easily integrated into emotional disorder in general, being seen as a special case of neurosis (Starrels, 1962) rather than a disease-entity the province of the "alcohologist." As Davies (1974) points out, emphasis on "disease" overlooks psychological or sociological causes, misdirects research onto metabolic factors, but most importantly, ignores recognition of problem drinking in its early states, thus hindering prevention.

Recognizing that a terminological revision might be overdue, Chafetz (1970-71) proposed that " ... any recognizable discomfort, disequilibrium or disfunction with alcohol is a symptom of a disturbed state. This contention

has nothing to do with amount or excess - it even includes nonconsumption ... if the mere thought of drinking alcohol produces discomfort or disequilibrium, then an alcohol problem exists" (p.332). He points out that we do not ask, in the case of someone who has a pain, headache, etc., how much of this he must manifest before we agree he has a fever, nordo we treat the fever as a state in itself but only a symptom. " ... there is no such thing as an alcoholic. Just as there is no headache-ic, no fever-ic, no pain-ic, there is no alcohol-ic ... For too long we have been impaled upon the stereotype of 'the alcoholic' and we have not dared to look below the surface" (p.333). Hayman (1967, p.585) makes essentially the same point: that "social drinking" and "alcoholism" are value judgements not permitting objective definition or measurement. The difference between "alcoholics" and other drinkers might simply be the amount required to produce regressive satisfactions, which is an individual matter.

Lehmann (cited by Murray, 1967) has argued that so important is psychological as opposed to physiological dependence that it is no longer correct to distinguish between addictive and non-addictive drugs. Under these circumstances it would be consonant with the evidence adumbrated in this section to dispense with the term "alcoholism" and to adopt Stoller's (1969) suggestion at the Fourth School of Alcohol Studies in Australia that "problem drinking" be substituted. Calahan (1970, pp.1-17), Calahan and Room (1974, pp.4-5), and Hoff (1968) concur with use of this term. For this reason the present study calls its subjects problem drinkers - though their official hospital diagnosis may be that of "alcoholics." The term "alcoholic" will be used only when the work of others is being reviewed.

Perhaps it should be made explicit that a conclusion of the total irrelevance of addictive properties of alcohol is not intended in the above paragraphs, nor is it denied that alcohol is a drug which produces withdrawal symptoms under

conditions of daily heavy drinking since studies cited by Fox and Lyon (1955, p.159) and Jellinek (1960, p.132) have demonstrated these effects. As Edwards (1970) commented, anyone who drinks sufficiently large quantities of alcohol for sufficiently long will develop some such effects; the real question must be, what makes a person choose to drink such large quantities in the first place? While it is rather clear that pharmacological properties of alcohol are unlikely to initiate or maintain pathological drinking, it is probable that they would play a role in any particular drinking bout and would make it more difficult for an individual to give up alcohol. Lisansky (1960, p.319) has said that a broad conception of aetiology assumes the interaction of physiochemical, psychological, and sociological predisposing factors as a basis for the development of addiction: membership in highly prone social groups, psychological patterns of traits, and interaction of traits with the physiological state at any given moment. Certainly, sociological factors influence problem drinking, rates of it varying from culture to culture. Cook (1963) has pointed out that recent studies correlate cultural acceptance of drunkenness with high alcoholism rates. For example, the ritualistic attitude toward alcohol amongst Jewish communities (Bales, 1946; Gray, 1963) and the contempt for alcohol's effects on higher intellectual processes (Lemert, 1956) are often cited as reasons for a low rate of problem drinking in that culture, though rates of drug addiction and neuroses are high (Gray, 1963). In contrast, the French tolerance and approval of heavy drinking and inebriation (Jellinek, 1960, pp.21-28) probably contributes to high alcoholism rates in that culture. Roebuck and Kessler (1972, pp.139-222) have extensively reviewed studies in this area.

Relevant to the present study might be the stereotyping of heavy drinking as behaviour of the "real man" in many Western cultures, thus giving it a ready appeal to individuals in doubt about their masculinity; especially might this be true for those individuals whose social and

educational background has not enabled them to achieve a sense of male identity through occupational prestige. Jessor, Graves, Hanson and Jessor (1968, p.338) found that low socioeconomic status, as a measure of lack of opportunity for self-fulfilment, was significantly associated with heavy drinking. This theme is further developed within the contemporary model of problem drinking (see Section 3, No. 5).

SECTION 2: Personality and Problem Drinking - Introduction.

The central area investigated in this thesis is the relation between personality and problem drinking, which still remains obscure. If personality factors do not largely determine problem drinking outcomes, studies should reveal no personality features in this group that constitute consistent differentiae, relative to normal or non-problem drinking but psychiatrically disturbed groups. A critical review of the research literature suggests that at present it is as reasonable to assume personality diversity amongst pathological drinkers as to postulate specific predisposing personality characteristics.

Almost all studies in this field are subject to one or more of the following deficiencies: control inadequacies, poor methodology, dubious statistical procedures, and especially theoretical misconceptions. As a consequence, models of problem drinking have proliferated though on close examination not all seem viable. The review by Sutherland, Shroeder and Tordella (1950) covering research up to 1949, and that by Syme (1957) covering the intervening period, concluded that alcoholics were heterogeneous in all variables apart from their drinking - a conclusion supported also by Bean and Karasievich (1975), Bejerot (1972), Diethelm (1955, p.6), Fox (1968), Hoffmann, Jackson and Skinner (1975), Horn and Wanberg (1969), Partington and Johnson (1969), Reinert (1968), Roebuck and Kessler (1972, pp.61-128), Sherfey (1955, p.42), and Skinner, Jackson and Hoffmann (1974). Both Sutherland et al (1950) and Syme (1957) commented on the general inadequacy of most studies, Syme concluding, "It may be premature and unjust to claim, as some have, that 'there is no alcoholic personality prior to alcoholism' ... or that 'alcoholism is not determined by generic personality traits or related to them in any specific manner' ... nevertheless, it is rather clear that ... there is no warrant for concluding that persons of one

type are more likely to become alcoholics than persons of another type. Much further thought and research - with more awareness of methodological considerations and theoretical relevancy - is yet needed before any extreme position can be justified in this area"(1957, p.301). Lisansky (1967) considers that research in alcoholism is not without pointers to future investigation and that failure to date to elucidate personality dynamics does not justify a conclusion of their irrelevance.

Many studies on which the above reviews were based used measures such as the Rorschach, with no control for bias at either the production end (Kintz, Delprato, Mettee, Persons and Schappe, 1965, have reviewed experimenter effect on this) or at the scoring end. Klopfer and Kelley (1942) reviewed the Rorschach literature, finding no evidence of a typical Rorschach pattern, records showing neurotic, schizophrenic, depressive, or psychopathic features. However, this means only that such drinkers manifest features of several nosological categories; it bears little relation to psychodynamic features possibly involved. Other studies have used the TAT or similar cards (e.g. Klebanoff, 1947; Mathias, cited by Lisansky, 1967; Singer, 1950), hinting at the apocryphal premise that problem drinkers should manifest entirely different conflicts - presented in content themes - from other groups.

By far the majority of studies have utilized only inventories to probe possibly sensitive areas, with apparent neglect of social desirability factors. This leads to conflicting results. Holloway (1969), for example, found no differences between Australian alcoholics and normals on a dependency inventory while other studies (e.g. Hurwitz and Lelos, 1968) have suggested that dependency might be a conflict area for the drinker and not one in which accurate self-report can be expected.

Many studies have employed very small samples, from which results could be generalized only with caution to the

larger problem drinking population, e.g. Bertrand and Masling (1969) with 20 alcoholics; Billig and Sullivan (1943) with 29 hospitalized and 11 gaoled ones; Boutin (1967) with two groups of 21 in each; Chess, Neuringer and Goldstein (1971) with 13; Coopersmith (1964) with 8; Harris and Ives (1947) with 19; Klebanoff (1947) with 17; Parke and Walters (1966) with two groups of 15 each; and Rhodes, Carr, and Jurji (1968) with 15.

Almost all studies have employed experimental designs including only normal controls (or even no controls at all, e.g. Machover and Puzzo, 1959a) - when clearly non-problem drinking psychiatric groups are required - or volunteers (whose personality difficulties might have induced them to volunteer) have been the only controls used. Sometimes grossly inappropriate groups, such as University staff, (e.g. Coopersmith, 1964) have been compared with alcoholics. McClelland (1972, p.279), implies conclusions for alcoholics' reasons for drinking from studies of Kalin (1972a) and Kalin, McClelland and Kahn (1972) using normal students! Groups that might by the nature of their composition - e.g. abstainers (Sanford, 1968) - shed a unique light on the problem area have almost never been utilized, this being an area of considerable potential almost totally neglected.

Another - understandable - failure of most studies is that while suggestive leads about personality configurations in fully developed problem drinking have been provided, no indication is included that any of these could have preceded the drinking. Fox (1968), Jellinek (1962, p.367), and Landis and Bolles (1946) have argued that any common traits found merely followed from years of excessive imbibition while others (e.g. Lisansky Gomberg, 1968) contend that in alcoholism is seen only the full development of traits present in minor form much earlier. This uncertainty still plagues research into states of terminal problem drinking and undoubtedly has retarded general acceptance of positive findings of a personality pathogenesis in the research literature.

Sampling variations have also confused the picture, for reviewers, some of the earliest work using drinking populations that more closely approached the derelict stereotype (e.g. Bacon, 1944; Malzberg, 1947; Murphy, 1945), and conclusions had to be somewhat revised when different populations became available (Malzberg, 1949; Straus and Bacon, 1951; Wellman, Maxwell and O'Hollaren, (1957). Problems in sampling persist in research; it is rare to find a study drawing samples from more than one source or being cross-validated, results being most usually based on the single experiment but nevertheless extrapolated to an extensive problem drinking population (a position criticized by Haggard and Jellinek, 1942, p.146, for alcoholism studies, and by Guertin, 1966, Lykken, 1968, and McConaghy and Lovibond, 1967, for experiments in psychology in general). Samples are seldom comparable, yet this factor is infrequently considered in explication of conflicting results. There can be little doubt that subjects from upper socioeconomic levels presenting themselves to a private psychiatric facility for psychoanalytic treatment of their drinking (e.g. Knight, 1937a,b; 1938) will differ in some personality features from Skid Row subjects being unwillingly rehabilitated (e.g. Myerson, 1957), for example, but which features constitute important personality differences, and which would still permit reference to problem drinkers as a relatively homogeneous group, have yet to be delineated.

Confusion surrounding the terms "homogeneous group" and "alcoholic personality" reveal a major misconception dominating much research. Examination of early research shows that the theoretical misconception of a global amorphous "whole" or unique constellation of personality characteristics, must have misled many an investigator and confused reviewers, exemplified by a quotation from Haggard and Jellinek (1942, p.152) on the unlikeliness of a "uniform personality" - "The fact that there are epileptics, psychotics, morons, neurotics, and apparently normal

individuals among the inebriates should have indicated the futility of searching for the 'uniform traits'." However even comparatively recently some researchers speak hopefully of finding a "unique personality type" (e.g. Gross & Carpenter, 1971, p.377).

McQuitty (1963; 1966a,b,c) has pointed out that "perfect types" can be hypothetical only and suggested the term "imperfect types" (for classification in general), and as Zigler and Phillips (1961) have commented, some heterogeneity of the species subsumed under a genus is precisely what characterizes genera. Lisansky (1960) clarified the position by stating, "It is necessary to speak not of the'alcoholic personality' or'alcoholic types' but of a constellation or pattern of personality traits common to most alcoholics and characterizing the prealcoholic personality ... This view ... rejects the idea that anyone may become an alcoholic or that there is nothing specifically predisposing toward alcoholism in the premorbid personality" (p.316). Drinkers would be expected to manifest the variety of symptom pictures (neurotic, schizoid, psychotic, depressive, psychopathic) that have been found (e.g. Haggard and Jellinek, 1942, p.152; Moore and Ramseur, 1960a; Sherfey, 1955; Wallerstein et al, 1957), while possibly possessing basic traits that cut across nosological categories. When the search for the "alcoholic personality" is seen in this light, Armstrong's (1958, p.47) comment seems apposite: " ... it would seem ... premature to abandon the search because of failure to date to determine adequate methods or to discover the appropriate investigative tools ... Thus we feel that the quest for an alcoholic personality or constellation of frequently predominant characteristics in alcoholism has barely begun."

The search for homogeneity early on led to the development of scales, mostly MMPI-derived, purporting to distinguish alcoholics from non-alcoholics (e.g. Hampton,

1953; Holmes, 1953, cited by Button, 1956b; Hoyt and Sedlacek, 1958; MacAndrew, 1965; 1967; Manson, 1948; 1949). These scales have sometimes discriminated alcoholics from normals in cross-validation studies, but comparisons with psychiatric cases have not usually confirmed their usefulness for detecting anything other than maladjustment (e.g. MacAndrew and Geertsma, 1964; Rotman and Vestre, 1964), though this has not always been the case (e.g. Rhodes, 1969; Rich and Davis, 1969; Uecker, Kish and Ball, 1969; Vega, 1971; Whisler and Cantor, 1966).

Alcoholism scales are of value in showing that problem drinkers do not perceive themselves simply as neurotics-who-also-happen-to-drink-too-much, but are basically unsound in that their items may bear no theoretical or substantive relationship to problem drinking as such. MacAndrew's (1965; 1967) scale, however, has consistently provided at least three leads worth following up: alcoholics and not neurotics tend to load on factors comprising feminine identification, childhood antisociality, and declared attempts at early independence from parental control. MacAndrew (1967) has specifically suggested further research into differential aetiology on the basis of his hypothesis-generating study.

The search away from homogeneity toward personality diversity within the problem drinking group has produced findings difficult to evaluate. Schaefer (1954) isolated five personality types in 36 alcoholics, using biographical material and psychiatrists' ratings; Goldstein and Linden (1969) isolated four types from 239 alcoholics with the MMPI; Whitelock, Overall and Patrick (1971) replicated this with 136 alcoholics, finding three of the four types; Partington and Johnson (1969) with 186 alcoholics isolated five types on the basis of IQ, clinicians' ratings, and the Differential Personality Inventory, and with this same inventory Skinner, Jackson and Hoffmann (1974) isolated eight types from 282 alcoholics; Mogar, Wilson and Helm

(1970) isolated four MMPI types; Lawlis and Rubin (1971) isolated three types on the 16 PF and a fourth in a second study, with reappearances of earlier types in various replications, and Nerviano and Gross (1973) isolated two types and replicated this with the 16 PF; Stein, Rozynko and Pugh (1971), however, isolated eleven types from 302 alcoholics with the MMPI and other variables. Fuller, Lunney and Naylor (1966) found three types on the Minnesota Percepto-diagnostic test and Shearn and Warren (1967) reported diverse performances on the Kahn test of symbol arrangement. In one final study Barry, Anderson and Thomason (1967) found that alcoholics could be sub-grouped in terms of four MMPI factor-analytic dimensions that were related to good and poor marital adjustment. Unlike other authors these concluded, " ... the similarity among the three groups remains the most obvious finding" (p.359). Recently, Overall and Patrick (1972) have criticized their own earlier study (Whitelock et al, 1971) and endorsed the concept of a unitary theory of alcoholism rather than sub-types of it.

The main difficulty with the above studies is that types found seem to vary according to the procedure and statistical method used, which brings their psychological reality or veridical status into question. Goldstein and Linden (1969), in fact, found their neurotic type to degenerate into a sociopathic type on further study, Bean and Karasievich (1975) found some subjects to change from one cluster to another, and performance on the Minnesota Percepto-diagnostic test and Kahn test is probably related more to IQ, education, and organic deterioration than to personality typology. It is doubtful if any of these studies could be said to have used the "appropriate investigative tools" Armstrong (see p.20) refers to, relying as they did almost entirely on self-report on inventories, and no study investigated similarity of psychodynamic traits among drinkers. No author included non-problem drinking patients in his statistical analysis,

moreover (and all authors had large numbers of subjects who could not be classified in terms of the factors extracted, in spite of the large number of "types" found), so that while it can be said that some diversity has been demonstrated, the relative homogeneity of psychodynamics postulated by workers promulgating predisposition hypotheses has not been disproven. It would seem that these studies have their greatest usefulness in elucidating relationships among inventory scores, drinking patterns, and some broad personality trends, and have in this respect provided much useful data with relevance for treatment.

SECTION 3: A general review of theories of problem drinking.

(1) Learning theory models emphasize general stress and anxiety with the spiralling development of repeated intoxication as a reinforcer of stress-reduction. No particular personality structure would be relevant in pathogenesis of problem drinking. Reinert (1968, pp.44-45) refers to " ... alcoholism as a bad habit ... psychological and physical factors when they exist ... fall into place as contributing but not essential factors ... Sociologists nicely explain the backgrounds necessary to begin the process of learning to be an alcoholic. This process involves the discovery that alcohol can ... give pleasure, reduce pain and fear, raise self-esteem, offer a socially recognized identity, etc." Bandura (1969, pp.533-537) refers to positive reinforcement deriving from the depressant and anaesthetic effects of alcohol in stress situations, and then avoidance of withdrawal symptoms becomes reinforcing. Through social learning alcohol becomes a generalized dominant response to aversive stimulation. Franks (1958) developed a model derived in part from Eysenck's (1947; 1957; 1961) system, explaining it in terms of anxiety plus introversion (speedy conditioning of the drinking response to many anxiety situations). However, use of anxiety-reduction as a critical explanatory principle leaves obscure reasons for psychopathology's being in some cases accompanied by heavy drinking and in other cases not; the model would not differentiate heavy drinkers from other anxious and introverted patients - such as anxiety states and obsessionals - some of whom must have experienced this relief that alcohol is assumed to bring from anxiety.

Eysenckian theory would posit no predisposing personality variables in problem drinking: "Symptoms are learned S-R connections; once they are extinguished or deconditioned treatment is complete" (Eysenck, 1957, p.267). However, the

success of symptom-orientated approaches is equivocal (e.g. Davidson, 1974; Hammersley, 1957; Holzinger, Mortimer and Van Dusen, 1967; Mottin, 1973), and many studies report moderate to severe personality disturbances in patients with years of sobriety behind them: tension, anxiety, inadequacy, depression, or symptoms of major nosological disorders (Flaherty, McGuire and Gatski, 1955; Gerard, Saenger and Wile, 1962; Moore and Ramseur, 1960a; Pfeffer and Berger, 1957; Wellman, 1955b; Wilby and Jones, 1962). Existence of a general conditioning factor which could be made use of either in treatment or as an explanatory principle has always been in doubt, of course (Davidson, Payne and Sloane, 1968; Franks and Franks, 1966; Walton, 1960). Franks's (1970) latest position is that symptom-removal in problem drinking is insufficient and behaviour modification should include changes in the total personality. Emphasis generally seems to have moved in the direction of greater specificity of the stresses possibly involved in problem drinking; Kraft (1971) endeavours to desensitize the individual to social anxiety, believing this to be the core of his drinking problem.

The usefulness of introversion/extraversion dimensions in heavy drinking is problematical, also, drinkers seeming not to be homogeneous along either dimension (Davidoff and Whitaker, 1940; Freed, 1970; Hoch, 1940; Norbury, 1942; Strecker and Chambers, 1938; Vogel, 1961a, b, c; Wenger, 1944). In fact, they seem not to differ appreciably in extraversion scores from normals (e.g. scores obtained in studies by Holloway, 1969, Koller and Castanos, 1969, Rosenberg, 1969a, and Vogel, 1961a, b, differ little from the norms given by Eysenck and Eysenck, 1964).

The anxiety-reduction model (e.g. Bandura, 1969, p.365, pp.533-537; Buss, 1966, pp.451-453; Conger, 1956; Cooper-smith, 1964; Dollard and Miller, 1950; Franks, 1958; Kingham, 1958; Kraft, 1971; and others cited by Walton, 1960, p.1200) would seem to require support for the

propositions that problem drinkers are more anxious than other non-problem drinking subjects, and that alcohol can function to reduce anxiety at pathological dose levels. Rosenberg (1969a) found high anxiety levels in alcoholics (IPAT anxiety test) and Williams (1966) reported student problem drinkers to be more anxious than non-problem drinkers (by adjective checklist), while Hobson (1971) found recovering alcoholics to be more anxious (eye-blink rate) than normals, though less than anxiety neurotics, but in other studies they have been reported as actually less anxious than non-alcoholics, or to show less emotional arousal both normally and during stress, or not to differ from normals in basic arousal level (Boutin, 1967; Chotlos and Goldstein, 1967; Coopersmith and Woodrow, 1967; Rosenberg and Buttsworth, 1969). Rosenberg and Buttsworth (1969) used a forearm blood-flow measure under stress but their alcoholics had much lower resting levels than did anxiety neurotics, agitated depressives and schizophrenics in another study, and approximated normals' levels (Kelly and Walter, 1968). Alcoholics were more anxious than normals but less so than neurotics on Welsh's MMPI A-scale (Rosenberg, 1972), and Smart (1968a) found MAS anxiety level not to be linearly related to alcohol consumption in students. Rosenberg (1972), moreover, reported that MMPI alcoholism scales that differentiated these subjects from psychiatric patients were those not correlating highly with anxiety items.

Whether alcohol can reduce anxiety in pathological drinkers is even more problematical. Vanderpool (1969) found alcoholics' already poor self-concepts to worsen (on an adjective checklist) after drinking, and Williams (1966) reported that while problem drinker students reported more anxiety and depression than non-problem drinker students, there were initial decreases in these two variables but increases in both, in both student groups, with increasing intake (though earlier - 1965 - he reported findings of temporary increases in self-esteem in students drinking at

parties, as had Berg, 1971, though Berg's results were inconsistent over three studies). Keehn (1970) noted that alcoholics did not anticipate feeling less neurotic when asked to complete an inventory as if intoxicated. Mendelson and colleagues studied small groups of hospitalized alcoholics who had unlimited access to alcohol. In all cases there were increases in anxiety and depression as drinking became heavier, with psychopathic aggression, sexuality, and a progressive dysphoria emerging (McNamee, Mello and Mendelson, 1968; Mendelson, Mello and Solomon, 1968; Mendelson, La Dou and Solomon, 1964; Tamerin and Mendelson, 1969; Tamerin, Weiner and Mendelson, 1970). Dysphoric mood change has been noted also by Goldman, Taylor, Carruth and Nathan (1973), Nathan and O'Brien (1971), and Steffen, Nathan and Taylor (1974), though the latter noted decreases in muscle tension. Tamerin et al (1970) observed that the changes taking place were not what the drinkers had predicted, as did Mayfield (1968b) and Vannicelli (1972), concluding that alcohol produces pleasant feelings only at low levels of intoxication. Mayfield (1968a) reported that following intravenous alcohol depressives rated their mood as much improved whereas alcoholics were much less improved and moderate drinkers were more improved than excessive ones. He concluded that there was no affective improvement after ingestion though there may be in normal drinkers. In this connection it is of interest to note that contrary to expectation, manic-depressive alcoholics do not drink excessively in the depressive stage but in the manic phase (Morrison, 1974; Reich, Davies and Himmelhoch, 1974). Higgins and Marlatt (1973) found no increase in alcohol consumption following anxiety arousal (electric shock) in either alcoholics or social drinkers.

So far as alcohol's ability to reduce approach-avoidance conflicts in experimental animals is concerned, evidence is conflicting and certainly not unequivocally supportive of anxiety-reduction interpretations (Cappell and Latané, 1969;

Freed, 1967; 1971; Poley and Royce, 1972; Weiss, 1958). It would appear that anxiety-reduction models of problem drinking have only limited relevance for differential aetiology. Vannicelli (1972) concluded from her work, as did Cappell and Herman (1972) from a literature review, that tension-reduction might have outlived its usefulness in alcoholism and that its persistence might actually inhibit the search for other reinforcers of alcoholic consumption.

(2) In contrast to learning theories of problem drinking, psychoanalytic and related clinical models appear to require some homogeneity of personality characteristics and to have implications for differential symptomatology, though the position here is somewhat confused. In a recent review of theorizing Blum (1966, p.264) has said that " ... psychoanalysts have advanced numerous explanations for what they have observed. It would be an error to attribute to them a unitary theory of alcoholism, or of its etiology, or of the alcoholic personality type ... " On the other hand orthodox theory (Fenichel, 1945, pp.377-379) proposes a model wherein conflicts over orality-dependency and homosexual needs play a major determining role, Fenichel stressing that no-one will become addicted without a basic oral fixation, a tendency to be psychologically dependent upon external supplies for satisfaction, support, and security: "Interests in reality gradually disappear, except those having to do with procuring the drug ... The tendency to such a development, rooted in an oral dependence on outer supplies, is the essence of drug addiction. All other features are incidental" (Fenichel, 1945, p.377).

Satisfaction of oral needs or pathological dependency conflicts was especially stressed by early psychoanalytic writers (Fenichel, 1945, p.377; Knight, 1937a, b; Lolli, 1956; Rado, cited by Rosenfeld, 1965, p.221) as well as by later ones (Browne, 1965; Chafetz, 1959; Moore, 1962; Moore and Murphy, 1961; Rosenman, 1955; Zwerling, 1959; Zwerling and Rosenbaum, 1959), and so were homosexual

drives (Abraham, 1927; Fenichel, 1945, p.379; Juliusberger, cited by Gibbins and Walters, 1960; Lolli, 1949; Rosenman, 1955). Stressed by these writers were the gathering together of drinkers in exclusively male rituals in pubs, preference for male company when drinking, hostility to women, actual homosexual episodes during intoxication, and the sexual difficulties of alcoholics, the large numbers remaining single or becoming divorced. Vogel (1958) considered Western cultural drinking patterns to allow individuals to express in acceptable form some of their homosexual needs through the camaraderie of talking and drinking with men and the entire so-called "masculine" atmosphere and acceptance of drinking. However, there is disagreement by both analytic and non-analytic theorists on whether oral and homosexual conflicts are predisposing, are predisposing but of limited importance, represent reactivations of conflicts once relevant but not currently predisposing, or result simply from alcohol's excessive ingestion (Fox and Lyon, 1955, pp.130-143; Glover, 1957; Hartmann, cited by Blum, 1966; Higgins, 1953; McClelland, 1972, pp.306-307; Tremper, 1972). De Vito, Flaherty and Mozdzierz (1970) contend that alcoholics drink for a variety of ego-threatening situations, not just oral ones, which were brought about by breakdown of the usual personality defence system. However, Fenichel's (1945, p.377) statement is that while drinking may be used to assuage <u>any</u> conflicts, since the depth of the regression will determine which conflicts and symptoms a patient manifests in addition to his alcoholism, the oral-dependent orientation determines the <u>method</u> of coping and assuaging.

Orality is a tricky concept, however, and although orthodox psychoanalysis regards it as inseparable from dependency (Fenichel, 1945, pp.491-492), contemporary theorists, while retaining the conflict concept, usually refer only to the latter term (e.g. Jones, 1968; McCord, McCord and Gudeman, 1960; Plaut, 1969), avoiding the connotation of erogenous zones and innate drives - though

Lisansky Gomberg (1968) agrees with the term "oral fixation" if not too literally defined. In learning theory terminology Bandura and Walters (1959, p.33) refer to dependency as a motive developing through association with primary gratification.

The fact that Fenichel classified alcoholism with such character disorders as impulse neuroses, perversions, criminality, narcotic addiction, and similar disturbances (1945, pp.324-386) - though subsuming compulsive over-eating under ordinary neurosis - indicates awareness of a necessity to postulate deviant personality structure as well as specific conflicts to account for differential aetiology of problem drinking and non-problem drinking pathologies, since not all individuals with oral and homosexual conflicts become problem drinkers. Alcoholism could be seen as a specific solution to specific needs when these were intense and when the remainder of the personality permitted such a response (Levy, 1958). A sociopathic personality structure, then, would presumably be supported by psychoanalytic theory as a necessary prerequisite. As Yorke (1970) has pointed out, some concept of abnormal ego structure would seem necessary for differential aetiology.

Schizoid tendencies have especially been singled out as a major factor in pathogenesis by several clinicians (e.g. Becker and Israel, 1961; Machover and Puzzo, 1959a; Zwerling, 1959; Zwerling and Rosenbaum, 1959), conceptualized in terms of conflicts and anxieties leading to social isolation and alienation and associated with extreme dependency, infantile ways of thinking and acting out of keeping with the IQ, feeling of uniqueness and invulnerability, judgement disruption, etc., and distrust of interpersonal closeness. Button (1956d) also referred to the defence of schizoid withdrawal. Alcohol might facilitate temporary relationships, dull perceptions of loneliness and futility, and function as a defence against ego disintegration by anaesthetizing conflicts, while schizoid traits

of invulnerability, narcissism and alienation could very easily be seen to lead to behaviour that is somewhat unrestrained and inconsiderate of others' needs, with impaired judgement obscuring long-term reality consequences of heavy drinking.

Zwerling (1959, p.547) describes the schizoid matrix as " ... a basic sense of estrangement or separateness from people, of withdrawal from close interpersonal relationships," similar to Machover and Puzzo's (1959a, p.515) description: "An outstanding aspect of their schizoidism is a basic sense of isolation, a kind of encapsulated narcissism which ... restricts the alcoholic to superficial, inconstant and self-centered participation in interpersonal relationships." As well as the schizoid factor, Becker and Israel (1961) emphasized a disturbance in time orientation, only the present time feeling real to the drinker, with consequent inability to delay, impulsivity, and absence of satisfying long-term goals and planning. This "expanded present" concept of time was also referred to by Gliedman (1956), who stressed that the future was not used as a guide to present activity by these patients. Clinebell (1963) singled out the distrustful element in the drinker's personality, deriving from dependence-autonomy conflicts, suggesting that for this reason the drinker turned to the bottle as a more trustworthy source of dependency gratification than people, while Fenichel (1945, p.377) commented that people who are ready to give up all object relations for a drug can never have estimated relations highly. Non-psychoanalytic workers such as Stein, Rozynko and Pugh (1971) have also proffered social introversion as a useful construct worth pursuing in alcoholism, and Jessor et al (1968, p.111) single out personal disjunction and alienation as relevant to deviant behaviour including alcoholism. Within the context of social learning, Kraft's (1971) theory of alcoholism is based on the view that pathogenesis lies entirely in social anxiety.

The similarity of alcoholism to schizophrenic symptomatology has been commented on by Chafetz (1959), Menninger (1938a), and Myerson (1959); Freed (1975) has thoroughly reviewed the literature in this area. There are certainly accounts in the literature of psychoses being unleashed by enforced abstinence (e.g. Gottesfeld, Lasser, Conway and Mann, 1951; Smilde, 1963; Wallerstein et al, 1957, p.159; Winship, 1957, pp.38-40). However, it has never been suggested that a majority of problem drinkers are actively psychotic, Moore (1963) estimating that the number who drink to ward off psychosis is probably only between 5% to 10%. Glover (cited by Yorke, 1970) referred to a localized ego defect in reality testing that linked alcoholic drinking to both psychoses and psychopathies, though in other regards it was more like a neurosis, and Yorke's (1970) review of psychoanalytic theorizing agrees with a concept of disturbed ego structure. While drinking is sometimes conceptualized as purely a neurotic phenomenon, an attempt to ward off suffering (guilt, anxiety, depression), to overcome inhibitions, or, in a few cases, to relieve obsessional ruminations and crippling compulsions (e.g. Podolsky, 1960a), and Fuller (1966), Golightly and Reinehr (1969), Hampton (1951), Morrow (1950), Quaranta (1949) and Wilkins (1952) have stressed this neurotic component, a general conclusion of this section might be that many clinicians consider problem drinkers to be suffering from a personality disorder more severe than are most psychoneuroses, and that factors other than stress intolerance exist within the personality which <u>permit</u> adoption of an addictive pathology.

The role of problem drinking in relation to aggression plays a not inconsiderable part in many psychoanalytic models. Chafetz (1959), Chessick, Looff and Price (1961), Glover (1956a, b), Machover and Puzzo (1959a), Myerson (1959), Simmel (1948), Zwerling (1959) and Zwerling and Rosenbaum (1959) stress augmented aggressiveness and difficulties in its management in problem drinkers, as did Juliusberger (cited by Rosenfeld, 1965, p.220), who was

possibly the first analyst to speak of criminal and sadistic tendencies in this group; Knight (1937b), who saw drinking as a rebellion against the parents as well as a pacifier for disappointment and rage; Menninger (1938b, p.149), who stressed the self-destructive aspects of alcoholism; and White, (1948, p.417), who saw the major conflict of these patients as between aggressive urges and dependency needs. Glover's more sophisticated theory (cited by Yorke, 1970) stressed the drug's pharmacological effects as encouraging the projection of sadistic qualities onto it, love-hate relationships thus being dramatized in the addiction; the drug could be used to anaesthetize dangerous inner "badness" while its effects simultaneously attacked and punished the victim.

Valuable though all clinical observations are, most have involved psychotherapeutic studies only, without control groups (except by implication), and the theories pose formidable problems in testing. As will be seen in Section 5, those aspects that are testable have usually been involved in such inconclusive research designs that any significant contribution they might be making to problem drinking theory remains obscure.

(3) Advocates of what might be called the "sociopathic model" of problem drinking emphasize a socially deviant personality structure as the essential requirement, rather than specific needs or conflicts embedded in that personality structure (Haertzen, Monroe, Hill and Hooks, 1969; Hill, 1962; Hill, Haertzen and Davis, 1962). Hill et al (1962) found drinkers to differ along nosological dimensions but to possess, like drug addicts and criminals, characteristics which were essentially those of social deviance, social controls being shared responses determining the acceptability of deviant behaviours such as drug-taking. Whereas socially proscribed behaviour would cause anxiety in most persons, to the social deviant experimentation with drugs would be acceptable; lacking social controls and counter-anxiety he

would be impulsively acceptant of short-term satisfactions and vulnerable to their repetition. As Barry (1968, p.457) put it, "In normal people, excessive drinking is prevented by social controls." The motivation is not necessarily lacking; rather, it is controlled.

Hill and associates regard social deviance as a general, not specific, predictor of alcoholism, crime, or drug addiction, emphasizing that specific predictors would need to be sought at a different level of investigation.

Others whose clinical work supports a necessary matrix of sociopathy are Greenacre (1945), who refers to alcoholism as a secondary symptom of sociopathy, meaning that any deviant behaviour might prove acceptable to the sociopathic individual; Henderson (1939, pp.58-62); Podolsky (1960b); and Thompson (1959), though others have de-emphasized the significance of such traits, regarding them as not essentially related to problem drinking (Button, 1956c; Fox, 1968; Gerard and Kornetsky, 1955; Navratil, 1959; Ritson, 1968; Rosen, 1960; Starrels, 1962; Wellman, 1955a). Fox (1968) cogently argued that the "moral deterioration" observed in alcoholics results from desperation rather than inclination, and this is certainly one area in which disentangling of antecedents and consequences is particularly difficult.

Socialization was one of the constructs suggested by Stein, Rozynko and Pugh (1971) as useful for alcoholism research, and from a sociological background Jessor et al (1968, p.111) have defined deviant behaviour (including alcoholism) in terms implying the sociopathic characteristics discussed in this section: "The likelihood of ... deviant behaviour will vary directly with the degree of personal disjunction, alienation, belief in external control, tolerance of deviance, and tendencies toward short time perspective and immediate gratification." Jessor and Jessor (1975), in a semi-longitudinal study of boys moving into adolescence,

found that students who continued to abstain showed a conventionality pattern - they placed greater value on achievement in school, less value on independence relative to achievement, greater intolerance of deviant behaviour, were more religious, more involved with parents and friends whose outlook was similar to the parents', and had fewer friends who drank.

Bucklew (1960, pp.109-142; 1967; 1968) has advanced a useful paradigm for psychopathology which would seem to classify the majority of problem drinkers as nearer to sociopaths. This paradigm conceptualizes the "typical" neurotic as one who has managed to "bind up" his conflicts within himself, suffering phobias, anxieties, obsessions, etc. but maintaining a conforming social personality. Non-randomness of association between personality dynamics and symptoms is determined by the relations between the ego (usefully conceptualized as the self-management, self-evaluation and self-observation functions, which avoids hypostatizing it as a homunculus or reifying an entity) and ego-alien elements in the personality. The neurotic, countering ego-alien elements with suppressive defences, suffers intra-personally, whereas the "typical" psychopath or deviant actively supports such elements, which to him may be ego-syntonic. Between these extremes falls the inadequate personality (where Bucklew thought the alcoholic might be located), where there is inadequate self-observation and self-management and impulsivity, conflicts "spilling over" into the social sphere where external controls need imposing. Characterizing the inadequate personality, therefore, is mixed symptomatology (elements from several nosological categories).

In these terms the amount of social conflict problem drinkers become involved in would seem to justify a diagnosis of "inadequate personality"; such conceptualizing elucidates diagnostic inconsistencies in many studies - the difficulties encountered in deciding whether to call them basically neurotic, schizoid, psychotic, or psychopathic. A particularly common subdivision has been into neurotic and psychopathic

alcoholics or characteristics of both categories have been implied to be essential (e.g. Brown, 1950; Buhler and Lefever, 1947; de Palma and Clayton, 1958; Hampton, 1951; Manson, 1948; Parke and Walters, 1966; Rosen, 1960). The neurotic-sociopathic dimension is one of the oldest in problem drinking research, but whether these form distinct sub-groups or whether sociopathic traits are necessary to permit emergence of pathological imbibition and its sequelae is as yet unclear (see, for example, Schuckit's review, 1973). Foulds and Hassall (1969) have related age of onset of heavy drinking to diagnosis, early-onset alcoholics resembling personality disorders (sociopaths) while late-onset alcoholics resemble neurotics. Schuckit, Rimmer, Reich, and Winokur (1970) also found early-onset drinkers to be antisocial and to recall such behaviour even in school years, as did Rosenberg (1969a). Of course, a controlled ("neurotic") versus impulsive ("sociopathic") dimension is implicit or explicit in almost every major theoretical system, and has consistently appeared in factor analyses (Collins, Maxwell and Cameron, 1962; Eysenck and Rachman, 1965; Peterson, 1961). Other alcoholic types that have been posited, such as introverted/extraverted (Franks, 1958; Vogel, 1961a, b, c), reactive/essential (Chafetz, 1959; Knight, 1938; Rudie and McGaughran, 1961), and delta/gamma (Jellinek, 1960, pp.36-41; Walton, 1968) seem basically reducible to this controlled/impulsive dimension.

(4) Witkin and associates have utilized aspects of ego structure in the undifferentiated-ego-functioning model of problem drinking, Witkin, Dyk, Faterson, Goodenough and Karp (1962, pp.387-388) suggesting that perceptual field dependence actually reflects lack of psychological differentiation: it is the ego which is more or less differentiated. Witkin (1965), Witkin, Karp and Goodenough (1959), Witkin, Lewis, Hertzman, Machover, Meissner and Wapner (1954, p.338), and Witkin et al (1962, pp.206-212) consider field dependence to be an essential feature of problem drinking, Witkin et al (1959) holding that the field dependent individual, who is passive and operates global reactions and defences rather

than specific non-rigid coping mechanisms actively developed for specific situations, is especially likely to turn to alcohol as a solution to life's stresses, field independence being associated with more specialized defences. McWilliams, Brown and Minard (1975) consider that field dependent people have limited ability to analyze their own internal processes. Field dependence has been so consistently found in problem drinkers (see Section 5, No. 4) that Lisansky (1967) has expressly selected it as one form of dependence future research should follow up.

Witkin et al (1962, pp.209-210) emphasize that while individuals are apt to develop different kinds of psychopathology in line with their contrasting modes of field approach, level of differentiation is only one determinant of the course of pathological development. Presumably, therefore, specific predictors if any would need to be sought elsewhere, as in the sociopathic model, limited psychological differentiation being not unique to problem drinkers but characterizing the obese, ulcer patients, and patients with identity problems (Witkin et al, 1959; Witkin et al, 1962, p.209). It might be seen as a general predictor, encouraging the adoption of a problem drinking pathology when putative specific predictors (such as particularly intense needs or conflicts, or constellations of defences) are present (though Witkin, 1965, p.327, linked field dependence with emotional dependence by noting that field dependent ulcer patients described themselves as emotionally independent, which was not in line with their physicians' ratings of them, and commented, "It is thus possible that an individual's cognitive style may 'penetrate' his apparent assertiveness and reflect the strong underlying passivity and need for external support ").

This manner of conceptualizing is in line with that of general "ego models" of personality, which place emphasis less on motivation than on ego factors permitting or encouraging motivation to be expressed in a particular manner

(Klein, 1958; Lazarus, 1966, p.343; Murray and Kluckhohn, 1953; Stagner, 1965). Phillips and Framo (1953-4) have suggested that psychopathology would profit from a re-writing in terms of ego states (diffuse-discrete-integrated) rather than in terms of drive states (oral-anal-genital).

(5) In what might be called contemporary models of problem drinking, emphasis seems to rest more on the defensive functions of such drinking. Essential to such models is the assumption that characterizing drinkers is an intense reaction against putative dependency needs and masculine inadequacy - a hypercathexis and façade of extremely masculine and ultra-independent behaviour. Because in Western societies drinking is a socially condoned form of gratification by mouth, and holding one's liquor is also regarded as manly, old infantile cravings for passive-oral gratification are reinforced by the premium of masculinity put upon hard drinking. By such drinking, both the dependency needs and the opposing need for masculine adequacy are gratified, the inadequate male thereby convincing himself and others that he is fulfilling a male role. This theorizing has its roots in psychoanalytic theory, Abraham (1927) being the first to speak of the "masculinity complex" in alcoholics, as did Knight (1938) and Lolli (1956), but has been taken up and elaborated upon by such contemporary theorists as Blane (1968), Jones (1968), Lisansky (1960; 1967; Lisansky Gomberg, 1968), McCord (1968), McCord et al, (1960), and Sanford (1968). Vogel-Sprott (1967b) speaks in learning theory terms of the drinking response being strengthened by its association with manliness. Blane (1974) refers to social learning as influencing symptom choice - the resolution of dependency conflict by alcoholism, because of the socio-cultural meanings attached to heavy drinking.

In this model, orality-dependence and doubt over one's masculinity are seen as psychodynamically inextricably interwoven, as exemplified by a quotation from Silber, (1967, p.147): ".. the traumatic nature of the early relationship with the mother ... it is for her that the addict longs, and

yet she provides him with no security whatsoever. The residue of this early ambivalent relationship is sustained via a pathological identification with her which has the effect of permanently compromising his masculinity." Emphasis has thus shifted from a conception of inversion as specifically sexual in aim to feelings of doubt about masculinity that drive the drinker to seek any kinds of relationships with men as a means, presumably, of identifying with them and thereby enhancing maleness. "Male" drinking is seen as a defence against dependency strivings and compromised masculinity, not against "femininity." As Jenkin and Vroegh (1969) have pointed out in another context, masculinity and femininity do not represent opposite poles on a continuum; "less masculine" does not necessarily mean "more feminine." Sanford (1968) specifically refers to underlying dependence with over-compensatory strivings for "maleness" though McCord and McCord (1962, p.428) refer to "feminine" dependent tendencies. Button (1956d) speaks of the wish to be a complete man competing with the wish to be dependent.

Contemporary models have evolved from several longitudinal studies. McCord et al (1960) used material from the Cambridge-Somerville project (a socioeconomically lower-class group), finding that 29 pre-adolescent boys later becoming alcoholic had been outwardly self-confident, emphasizing their independence and masculinity, active or hyperactive rather than passive, and manifesting unrestrained aggression (pp.136-142). This apparent manliness the authors assumed to be a defence against underlying inadequacy and dependence - a façade of intense confident masculinity. In a later report (McCord and McCord, 1962, pp.427-428) they suggest that dependence is in the forefront in adult alcoholics through collapse of this façade.

Jones (1968) used material from the Oakland Growth Study (socioeconomically middle-class). Over the years the 6 male pre-adolescents becoming alcoholic had been rated as impulsive, undercontrolled, overtly aggressive, with unconventional thought processes, extraverted, self-assertive,

emphasizing their masculinity, and handling conflict and anxiety by exclusion from awareness (denial). Control groups of moderate drinkers and abstainers (only 2 of the latter, unfortunately) had been exactly the opposite as children: confortable when dependent, overcontrolled, socially perceptive, and not rebellious. Parenthetically, Jones (1971) found that over the years pre-alcoholic females had shared with the males this unstable unpredictable impulsivity.

Lisansky (1960) proposed the following model for research: an intensification of dependency needs with weak and inadequate defences against them, leading to an intense dependence/independence conflict in the presence of very low frustration tolerance and an unresolved love-hate ambivalence. Drinking reconciled and permitted expression of contradictory needs (being cared for during helpless inebriation, plus acting out phantasies of being a "real man"); expression of the anger in the form of subtle revenge; and self-punishment. In 1967 she suggested follow-up of low frustration and threat tolerance, the handling of aggressive drives, absence of the usual neurotic defence mechanisms, psychosexual immaturity, inability to maintain a stable and responsible role in heterosexual relationships, and dependence explored by perceptual techniques (field dependence). In 1968, writing that Jones's and McCord et als' studies had begun " ... to define psychological predisposition with some specificity," she urged that "In a problem area where ideas are scarce and methodology weak ... the least one can say of two independent research efforts which point up the same trends in their research populations is that the conclusions of the two works are worth further investigation" (Lisansky Gomberg, 1968, p.19).

It is worth noting that these two longitudinal studies used samples from quite dissimilar socioeconomic backgrounds, yet both are in agreement with Knight's (1937a, b; 1938) formulations which were of a clinical nature and derived from patients from upper-class backgrounds. Barry (1968) and Bacon (1974) have correlated amount of heavy drinking in

preliterate societies with frustration and punishment of dependency needs, thus linking anthropological findings with those derived from personality studies.

Two additional longitudinal studies (Robins, Bates and O'Neal, 1962, pp.407-409; Robins, 1966, p.87, pp.240-245) uncovered tendencies toward aggressive self-assertiveness, toughness, antisociality (court records), and general under-control (poor school achievement, impulsiveness, discipline problems, thievery, physical aggression) in children later becoming alcoholic. While dependency is not mentioned, the complex of under-control and aggression is similar to that reported in the other studies. Berry (cited by Freed, 1975) also found group acting-out activities to characterize pre-alcoholic boys.

Although Lisansky Gomberg (1968) remarked that dependence/independence conflict with less than adequate impulse control and emphasis on toughness and maleness seemed to be emerging as a typical pattern for problem drinkers, it should be noted that the Jones and McCord studies drew conclusions from very small samples. Also, McClelland (1972, p.285) has stressed that evidence for dependency is purely inferential in these studies, whereas the variable of tough aggressive ascendance can be demonstrated to increase under drinking conditions - at least in normal students, though Cutter, Key, Rothstein and Jones (1973) failed to confirm this increase in power phantasies on the TAT in intoxicated alcoholics. McClelland lays emphasis on the hypermasculine construct as the important one in pathogenesis, rather than dependence. Kalin (1972b) also theorizes heavy drinking to be a response to the strong need for power, coupled with lack of inhibition, which he regarded as a similar theory to those emphasizing a masculine protest against a feminine identification, such identification and father-absence probably being the cause.

Toughness as a defence against "sissy" tender feelings has been singled out as an explanation for normal boys' emphasis on masculine activities also (Hartley, 1959;

Parsons, 1947). According to Parsons, " ... occupational success may do much to reduce the pressure toward compulsive masculinity. But the difficulty here is that sufficient success to have this effect is attainable only to a minority of the masculine population" (1947, p.177). It is probable that this outlet is barred to many potential problem drinkers, in view of their often limited educational attainments.

Contemporary models have been inconclusively and inadequately explored by research efforts (Blane, 1974) and so far as the writer is aware, no study has yet compared problem drinkers with non-problem drinking maladjusteds on the variables posited relevant to differential aetiology by these theorists. Since longitudinal studies have provided evidence, in a way other studies can not, that these personality characteristics preceded heavy drinking and might therefore have been predisposing, this would appear to be one of the areas research could most usefully explore.

It is traditional to include a chapter on home background, to explicate some aspects of the problem drinker's personality. Psychoanalytic models usually posit disturbances in the child-mother relationship, holding this to promote dependency strivings and aggressiveness (e.g. Chafetz, 1959; Clinebell, 1963; Myerson, 1957; 1959). Other workers stress maternal indulgence rather than rejection, which may give the individual an inflated sense of his own worth (Coopersmith, 1964; Navratil, 1959) or prolong his dependence (Button, 1956d; Knight, 1938), or make the facing of reality difficult. Roebuck and Kessler (1972, p.217) have pointed to the need for more research here, to isolate what might be specific to alcoholics or found in other psychiatric groups. Contemporary theorizing would seem to require more father- than mother- failure, if the father fails to provide his son with a responsible male model for emulation (by being alcoholic himself, withdrawn, hostile, or physically absent) so that in turn the son rejects him and identifies with the mother with resultant

sex-role confusion, or learns a deviant model of masculinity, identifying masculine independence with defiant drunkenness (Jackson, 1962, p.476). Kalin (1972b) and McClelland (1972) consider father-failure to cause a basic feeling of weakness in the son, giving rise to compensatory needs for power and potency.

While an extensive review is outside the scope of this thesis, some relevant studies of parental effect on masculinity and socialization in boys could be cited. Father-absence has been associated with feminine play in boys (Bach, 1946-7), overcompensatory masculinity (Lynn and Sawrey, 1959), petty antisociality (including drinking) in adolescence possibly as a defence against feminization (Siegman, 1966), increased aggression (McCord, McCord and Thurber, 1962), delinquent recidivism (Kelly and Baer, 1969), field dependence (Barclay and Cusumano, 1967; Wohlford and Liberman, 1970), and short future time perspective (Wohlford and Liberman, 1970), and effects on sex-role identification, anxiety, dependency, aggression, antisocial behaviour, delay of gratification, and field independence were reported by Biller (1970). Cartwright and Howard (1966) found that gang neighbourhoods had fewer males in the homes and were female-dominated, which might link overt aggressiveness and male-gang-cohesiveness with fears of feminization, while Miller (1958) spoke of gang structure as expressing a lower-class conception of masculinity. Father-absence by divorce was found to be more conducive to increased aggression in boys than was father-absence by death, and the same applied to ability to delay satisfactions, boys with fathers absent through divorce being less able to delay (Santrock and Wohlford, 1970).

General disruption of the home or parental negligence and rejection have been associated with antisocial behaviour in children (Andry, 1957-8; Brown, 1966; Hewitt and Jenkins, cited by Eysenck, 1955; Rutter, 1967; Wardle, 1961), as has parental sociopathy (alcoholism, drug

addiction, criminality), mental illness, cruelty, and separation with poor impulse control in children (Wagner, 1960). Nervous disorders tend to be associated with an intact home but conduct disorders with a background of broken home (Brown, 1966; Wardle, 1961). Schecter, Carolson, Simmons and Work (1964) found that adult adoptees, when developing psychiatric illness, showed significantly more alcoholism and sexual acting out than did psychiatric patients not adopted. Aggressive boys' fathers tended to show MMPI scales Pd and Sc elevation, suggesting poor impulse control, compared with normal and neurotic boys' fathers (Anderson, 1969). Nylander (cited by Rosenberg, 1969a) reported that children of alcoholic fathers showed more aggressive behaviour and tended to have been admitted to clinics for antisocial behaviour, compared with admitted children who had no alcoholic fathers.

There is some evidence that warmth in the same-sex parent facilitates identification (Helper, 1955; Mussen and Distler, 1959; 1960; Mussen and Rutherford, 1963; Payne and Mussen, 1956; Sears, 1953), and Miller and Swanson (1960, pp.330-331 and p.381) noted that corporally disciplined boys tended to reveal more direct aggression in stories and were peer-rated as more overtly aggressive than psychologically disciplined boys. Heilbrun (1962) found good identification with the father to be associated with superior adjustment in college males, and more masculine males had a more stable sense of ego identity (Heilbrun, 1964). Poor father relationships (in young adults) were associated with elevated hostility scores on an inventory (Hassall and Foulds, 1968), while Kulik, Stein and Sarbin (1968b) found relationship to parents emerging clearly as a dimension of delinquency in adolescent boys. Burk (1972) cites several studies showing the importance of male rather than female models in children's imitative behaviour.

Alcoholism in the parent has often been implicated as affecting children's development. Rosenthal, Ni, Finkelstein and Berkwits (1962) found that behaviour-problem children

with an alcoholic father currently sober had been pushed into early independence by the father, as if he were anxious to prohibit in the son that which he had once permitted in himself, and Mik (1970) reported that of 14 antisocial adolescents, the 7 with alcoholic fathers had failed to identify with the father and were more negative toward him, identifying with the mother instead (Semantic Differential and sentence-completion measures). Children of alcoholics were withdrawn, rebellious, troublesome in school and before courts, compared to those of non-alcoholic parents (Whalen, 1953), and children separated from alcoholic homes had more school problems, more serious illnesses, and more accidents (Chafetz, Blane and Hill, 1971); children at psychiatric clinics but from non-alcoholic homes significantly more frequently somatized their complaints and were (non-significantly) less aggressive. The authors speculated that alcoholic parents might predispose children to externalize conflict. Aronson and Gilbert (1963) reported that sons of alcoholics differed from school mates in showing a personality pattern of passive aggressiveness, the same pattern so often reported for alcoholics (Moore and Ramseur, 1960a; Myerson, 1957; Wallerstein et al, 1957, pp.34, 59, 89, and 127).

Robins, Bates and O'Neal (1962), however, found that the father's alcoholism was less important in predicting the son's alcoholism than was his antisocial behaviour toward his family (desertion, aggression, etc.). When the father showed antisocial behaviour, 40% of the children became alcoholic, but when only the mother exhibited this or the parents were inadequate in other ways, they were no more likely to produce alcoholic children than if they had no known problems.

In this area, however, the old nature/nurture problem has never been settled, and some recent work (some of which has been reviewed by Goodwin, 1971, and Whitlock, 1975), has attempted to relate familial incidence of alcoholism to

genetic inheritance. In a fairly well controlled study, Goodwin, Schulsinger, Hermansen, Guze and Winokur (1973) studied adults separated from alcoholic parents before the age of 6 weeks, compared them with controls separated from non-alcoholic parents, and found the former group to contain significantly more alcoholics (18%) than the control group (5%), which they contended provided evidence of alcoholism as a genetic disorder. However, this study drew dubious distinctions between "alcoholism," "heavy drinking," and "problem drinking," and when it is realized that the control group actually had more "heavy drinkers" and "problem drinkers" than the proband group and that the distinctions rested largely on accurate self-reporting, confidence in the results is undermined since when "alcoholics," "heavy drinkers" and "problem drinkers" were combined, significance disappeared. The methodology of this study has been severely criticized by Tolor and Tamerin (1973), and as they and Whitlock (1975) observed, if genetic factors determined alcoholism in 18% of probands, why not in the remaining 82%?

In a very painstaking study of twins by Partanen et al (cited by McCance, 1970), evidence supported the view that what might be inherited was how much and how often individuals liked to drink, but not addiction and the social consequences of drinking too much, which is really what "alcoholism" is all about; this might be related to work demonstrating that some genetic strains, especially rats and mice, will drink more alcohol than other strains of the same species.

It is clear that much further research is needed in this area, but at present evidence favours such environmental factors as overt parent-child-relationship disruption, rather than parental alcoholism per se, in pathogenesis. As Keller (1975, p.143) recently wrote, "Whether or not a genetic susceptibility or immunity obtains, an infant-rearing and childhood-developmental factor seems decidely to be involved in laying the groundwork of the ultimate psychological vulnerability. The form that this development takes may well

be that of excessive dependency or dependency conflict. ... if the societal attitudes about drinking and drunkenness grant machismo-like or heroic rewards for outstanding capacity to drink, then those who are already most vulnerable are specially set up for alcoholism" (Keller, 1975, p.143).

SECTION 4: Summary.

Extraction of leads from the various models of problem drinking and from clinical and longitudinal studies suggests that problem drinking can be investigated in association with one or more of the following personality characteristics:-

1. Pathological dependency conflicts predisposing individuals toward reliance on external substances that can be incorporated and whose pharmacological effects enable the dramatizing of conflicts and anxieties centring round dependency and masculine inadequacy. In terms of its sociocultural and psychological significance and pharmacological effects, alcohol might uniquely satisfy such opposing needs as dependence and masculine independence. Implied is that while other maladjusted individuals might share the same problems, characteristic of potential problem drinkers is a rejection of the dependency, outwardly, by the reactive embracing of stereotypes of ultra-independence and hyper-masculinity.

2. A concomitant of the above, and of impaired masculinity, might be a pronounced interest in males and male activities, to enhance identification as "one of the boys," with consequent diminished investment in the heterosexual role and an inability to fully participate in the companionship and stability provided within a heterosexual relationship.

3. Schizoid characteristics, especially alienation from interpersonal relationships, social isolation, preference for short-term relationships without deep emotional commitment, etc. The lonely and isolated individual might be particularly vulnerable to substances facilitating relating, sedating awareness of loneliness and isolation, providing superficial companionship, and offering a safer source of dependency gratification than would interpersonal relationships. Other personality aspects associated with schizoid difficulties - feelings of omnipotence and invulnerability, judgement disruption, poor sense of reality - might readily be seen as leading to socially deviant behaviour, including problem drinking.

4. Undifferentiated ego functioning as an aspect of the personality structure in which conflicts might be embedded, possibly influencing the symptomatic expression of anxieties and conflicts. This type of personality structure is regarded as being less influenced by analysis of inner events and active structuring of problems, and more susceptible to the prevailing field, which might render drinkers

particularly vulnerable to compliance with the hortatory norms of the alcoholic sub-culture and the stereotypes of independence and masculinity. In the absence of clear inner structuring of problems, a falling back upon a global, ostrich-like defence such as total avoidance as a manner of coping with reality difficulties might be expected; drinking to avoid problems, in the expectation that this permanently obliterates the problem, is very typical of problem drinkers.

5. Intense aggression, poorly controlled and "spilling over" into the social sphere, which might result in part from the frustrating familial ambience of childhood but might also be seen as the tough, aggressive, self-assertiveness necessary to bolster feelings of tough power in a socially inadequate male. Alcohol facilitates acting out of aggression, at the same time attenuating awareness of this (or completely preventing its recognition through black-outs), constitutes a weapon and an excuse for attacking others, and provides extreme punishment the ultimate of which is self-destruction, unless the process is arrested. The individual with poor aggression control might be prone to many forms of deviant acting out, including problem drinking.

6. Defective ego characteristics such as reduced or inadequate self-criticalness and self-management, leading to impulsiveness and relative orientation to immediate, present-oriented solutions with diminished investment in long-term planning and future goals. Immediacy, with all its unpleasant reality consequences, may not be experienced as aversive by the inadequately self-observant and non-critical individual, whereas restraint may be socially valued by the individual who is more aware of the consequences of his actions and regulates these actions in terms of their future consequences both to himself and to others. This would be directly relevant to the often noted myopic attitude toward the ultimate consequences of heavy drinking shown by the drinker.

7. A tough, socially deviant, unconventional attitude that might undermine the effectiveness of the usual socially shared sanctions against the life style usually associated with problem drinking. This under-socialization and unconventionality allows conflicts to "spill over" into the social sphere where external controls may have to be imposed. Problem drinking behaviour would seem to imply a less than usual concern for the under-socialized activities that occur during acutely intoxicated states.

The hypothetical background of overt parent-child-relationship disruption might be expected to provoke the extreme distrust in interpersonal encounters, to result in augmented aggression because of the frustration of basic needs, to ensure prolongation of dependency needs because there has never been sufficient security in the home for phase-adequate satisfaction of these, and to give rise to an undeveloped personality unable to structure inner

problems and to cope with tension and anxiety other than by acting it out in the social sphere, dramatizing it in the alcoholic bout. Especially might father-failure (physical absence, emotional withdrawal, rejective sociopathic behaviour) be relevant to the pathogenesis of male problem drinking in terms of disrupted sexual identity.

The following section comprises a review of research relevant to the leads outlined above.

SECTION 5: Specific studies relating to the key issues in research adumbrated in Sections 3 and 4.

(1) Dependence, or dependence/independence conflict:

A variety of studies have explored this area under "oral proclivities" and general dependence, the former aspect being studied mainly on the Rorschach. Oral or passive-dependent responses have been reported for alcoholics by Bertrand and Masling (1969), Halpern (1946), Machover and Puzzo (1959a), Maccoby (1972), Moore and Ramseur (1960a), Schnadt (cited by Syme, 1957), Tahka (1966, p.111), and Wiener (1956). Bertrand and Masling, Maccoby, and Wiener controlled for experimenter bias. Maccoby used abstainers as controls, Wiener depressives, and Schnadt neurotics; Machover and Puzzo included no controls. Wiener (1956) added that alcoholics, unlike depressives, seemed not in conflict over oral needs but acceptant, being fixated at an earlier ("oral passive") level of development.

Investigations with inventories provide conflicting and equivocal results. Spiegel, Hadley and Hadley (1970) found alcoholics to claim a (non-significant) preference for strong taste sensations - while minimising auditory, visual, and olfactory sensations - compared with normals and psychiatric patients. They scored as orally passive (rather than orally aggressive) on Wolowitz and Barker's (1968) inventory - though this measure makes no provision for non-oral responses - but the relationship was not confirmed by Kish (1970). Maccoby (1972) with a projective questionnaire found over 80% of Mexican alcoholics and only 37% of abstainers to score as dominantly receptive in assimilative mode (passive), while Zaccaria and Weir (1967) with the Personal Orientation Inventory referred to a "non-self-actualization" syndrome which might imply a basic passivity in waiting for things to happen or improve by themselves. Rosen (1966) obtained Q-sort results of more endorsement of "oral" items by

alcoholics than by psychiatric patients - "They also express the physical symptoms of tension and anxiety, and surprisingly enough more of the items that reflect orality and dependence such as 'When I am lonely or unhappy, I lose my appetite,' or, 'I tend to be a chain smoker,' or, 'I couldn't enjoy a party without lots of food and drink'," (Rosen, 1966, p.1283).

In a survey of interpersonal values alcoholics scored significantly lower on Leadership and higher on Need for Support, compared with psychiatric patients; they were much more demanding than giving (Freed, 1968). Alcoholics declared themselves more acquiescent than either normals or neurotics on Shaffer's (1963) MMPI-derived scale, according to Tarter (1970), and scored significantly lower on Autonomy on the Edwards Personal Preference Schedule compared with Edwards's general adult sample (Fitzgerald, Pasewark and Tanner, 1967; Hoffmann and Nelson, 1971) and on Autonomy on Jackson's Personality Research Form (Hoffmann, 1970). Hoffmann (1970) commented that alcoholics saw themselves as less independent and very submissive, compared with controls, but since Hoffmann and Nelson (1971) found Autonomy scores to be higher in more intelligent alcoholics, the possibility of response distortion cannot be discounted.

Studies utilizing dependency inventories have usually given equivocal results, often only non-significant differences being found between alcoholics and normals or neurotics (e.g. Button, 1956b, and Rhodes and Yorioka, 1968, with Navran's, 1954, MMPI-derived scale; de Palma and Clayton, 1958, with the 16 PF; Holloway, 1969, with the Bernreuter Self-sufficiency scale; Wine and Edwards, 1964, with the Comrey Personality inventory). Button's (1956b) alcoholics declared themselves less dependent than Navran's (1954) neurotics, though somewhat less independent than normals; he concluded they were acceptant of dependence and not in conflict over it. On MacAndrew's (1967) MMPI-derived alcoholism scale they declared themselves to have been independent and free from family rule at an early age,

compared with neurotics. Mozdzierz, Macchitelli, Conway and Krauss (1973) found that alcoholics terminating treatment against medical advice had significantly lower Navran dependency scores than those remaining in treatment. Whether problem drinkers are unwilling on inventories to admit dependence, or are actually less dependent than neurotics, cannot be ascertained from these research designs. Williams (1967b) found problem drinking students significantly less dependent than non-problem drinking students on the Gough and Heilbrun (1965) adjective check-list (low Deference and high Autonomy scores), but in one of three samples they were both dependent and independent (high Autonomy, Deference, and Succorance). Autonomy scores increased after drinking (Williams, 1968). He suggested (1967b) a follow-up of dependence, to ascertain whether problem drinkers were dependent or reactively independent.

The only really impressive support for oral conflict comes from Story's (1968) work. He demonstrated at a very high significance level that when oral drives were (presumably) aroused, alcoholics showed impaired cognitive functioning by regressing to highly concrete associations and proverb interpretations (on a test of 15 single associations subjects had to give to "oral" and "non-oral" words, and interpretations of little-known "oral" and "non-oral" proverbs). Story's work was really an extension of that of Lewis, Griffith, Riedel and Simmons (1959) where the same trend was found with schizophrenics - though Lewinsohn and Riggs (1962) were unable to replicate all of the Lewis et al results, which might raise some doubts about the replicability of the Story study.

The McCord et al (1960) longitudinal study uncovered no evidence of more oral traits (thumb-sucking, excessive mouth play, eating orgies, early age smoking) in boys later becoming alcoholic than in those who did not (1960, pp.30-31), though it is not known if specific enquiry was routinely made in all preadolescent cases or whether these traits were simply recorded only when noticed. The McCords regard

orality as distinct from dependency, of course. In a retrospective study Myerson (1959) reported addictive-like food habits in the childhood of alcoholics, however.

One study worth mention involved a series of bogus tasks depicted to the subjects as measuring self-reliance (Booth, 1969). Subjects were told they were "failures" or "successes" by predetermined arrangement, and were then given the opportunity to repeat the series so that responses which had denoted "failure" or "success" could be altered or subjects could maintain their initial status. Alcoholics consistently maintained failure status, avoiding success, whereas non-alcoholic outpatients consistently sought success and avoided failure. There is certainly evidence that failure (in the sense of punishment) may be selected by subjects under certain conditions, when coupled with reward. Renner (1966) found that with rats, early feeding deprivations could increase the reward value of food so that the adult animals would take food even when shocked for it, a situation in which rats non-food-deprived in infancy behaved aversively, and in this context it is of interest to note that Vogel-Sprott and Banks (1965) found alcoholics to differ from normals in button-pressing for reward (money) even when this was accompanied by punishment (shock).

Current research into the more recent theorizing about the hyperindependent façade in problem drinkers, putatively evoked as a denial of pathological dependence, feminine identification, or impaired masculine adequacy, has not been extensive. Only three studies could be regarded as testing the contemporary viewpoint, so far as the writer is aware. Gynther, Presher and McDonald (1959), using Leary's (1956; 1957) method of multilevel personality assessment, found that the self-descriptive or façade score of the problem drinker (MMPI and checklist or Q-sort) was that of an individual with generous managerial or leadership qualities, whereas the underlying character structure (TAT) revealed an ideal of a passive, friendly, dependent person who looked to others for guidance and leadership. This "façade" score on leadership

is discrepant with the findings of Freed (1968), already cited, however.

Hurwitz and Lelos (1968), also operating within Leary's framework, found that their sample - 36 heavy drinkers employer-referred for treatment with the alternative of this or dismissal - had greatly repressed dependency needs on the TAT, coupled with a hypernormal masculine façade on MMPI and Q-sort. 70% were in conflict over dependence, only 30% having admitted such feelings into their conscious self-image. These results are of interest in suggesting possible existence of this conflict in individuals who would not under a disease-model definition be considered as "alcoholics" but only as "problem drinkers." The results also underline the importance of not necessarily accepting the validity of self-descriptive data. There is a hint of the relevance of possible deception in the study by Goldstein, Neuringer, Reiff and Shelly (1968), who failed to find certain relationships between field dependence and emotional dependence but speculated that, taking high IQ into consideration, the " ... brighter subjects were better able to picture themselves as 'independent' in tests of social dependency" (p.564).

The final study involved delinquent adolescents (Blane and Chafetz, 1971). Boys involved with alcohol tended to show both overt independence (on a dependency-situations inventory) and covert dependence (Witkin's Rod-and-frame test), as predicted. In minimally involved boys, overt or admitted dependence was greater, though there were several different patterns. Whether the Rod-and-frame test can be regarded as an appropriate measure of emotional dependence is, however, problematical.

The pattern of oral proclivities coupled with defensive toughness, maleness, and impulsive self-assertiveness is certainly not specific to problem drinkers, however, having been found in heavy smokers and not in non-smokers by questionnaire methods (Jacobs, Knapp, Anderson, Karush,

Meissner and Richman, 1965; Jacobs, Anderson, Champagne, Karush, Richman and Knapp, 1966; Jacobs, Knapp, Rosenthal and Haskell, 1970; Jacobs and Spilken, 1971), and certainly alcoholics compared with non-alcoholics do tend to be very heavy smokers (Dreher and Fraser, 1967; 1968; Holloway, 1969; Maletzky and Klotter, 1974; Walton, 1972).

One indirect, very tentative source of support for the theory of dependence in drinkers might come from studies suggesting that a majority of them might be last-borns (Blane & Barry, 1973; Chen and Cobb, 1960). This relationship held in large samples in Denmark, Austria, Canada, and Norway (cited by Blane, Barry and Barry, 1971), and Blane and Barry (1973) report it in 20 of 27 studies, though some studies have failed to find it (e.g. Koller and Castanos, 1969; Smart, 1963). Some authors have speculated that last-borns may be "clung to," representing as they do the last baby, and may be made overly dependent for this reason, or there may be specially strong needs to prove the self equal to the older and therefore more competent siblings. Masling, Weiss and Rothschild (1968) found an association between many oral-dependent Rorschach responses and being later-born.

It is clear that not nearly enough work has yet been done on dependence/independence conflict in problem drinkers, as Blane (1974) has recently complained. There does appear to be some limited evidence that problem drinkers are more orally orientated and basically passive-dependent than normals or neurotics, and that they tend to avoid giving evidence of self-reliance or autonomy. Conversely, other studies suggest discrepancy between covert orientation with regard to dependency and the self-image the drinker presents to others. Most research designs do not reveal whether high independence scores found might represent actual functioning or be reactive distortions against underlying dependence. Absent as yet is a study in which inferential anxieties over dependency have been threatened and the subjects' subsequent responses studied to find the hypothesized compensatory

increases in independent and masculine strivings. Whether such a conflict could be provoked, and would be differently dealt with in drinkers and non-problem drinking maladjusted subjects is not yet known. There are as yet no conclusive grounds for assuming problem drinkers to be more dependent, or more disturbed by dependency, than are other patients.

(2) Impaired masculinity, compensatory interest in males:

This concept is much contaminated with varied meanings - sexual inversion, latent homosexuality, feminine identification, anal eroticism, inadequate masculine identification, etc. - and is often used by authors with any or all meanings, adding to a reviewer's difficulties.

Difficulties in accepting the male role (feminine identification, sex-role confusion, homosexual conflicts) were reported by Moore and Ramseur (1960a) using the Rorschach, and Tahka (1966, p.93) noted "feminine" responses though no "homosexual signs". Machover, Puzzo, Machover and Plumeau (1959) found only remitted alcoholics to be significantly more homosexual on this measure, though alcoholics as a group differed from both normals and homosexuals in number of homosexual signs. Findings on the MMPI Mf scale were similar, only remitted alcoholics being significantly less masculine.

Using an ingenious test of photographs of vaginal and phallic symbols for which subjects had to state preferences, Gibbins and Walters (1960) found alcoholics to fall midway between normals and homosexuals on endorsement of phallic cards, significantly different from normals though not from homosexuals. The authors considered results to suggest not that alcoholics have identified with the wrong sex, as has the homosexual, but have failed to identify firmly with either sex.

Inventory results are equivocal and difficult to interpret because of social desirability's affecting many

items, and through failure to discriminate sex-role from sexual orientation (Ross, 1975). Botwinick and Machover (1951) with the MMPI and Terman-Miles, found no evidence of homosexuality, and nor did Landis (1945) and Quaranta (1949) with un-named tests. Brown (1950), Button (1956b), Hampton (1953) and Hewitt (1943; 1960) reported MMPI Mf scores, but only Hampton's were somewhat elevated, though Button (1956c, d) later referred to inadequate masculine identification in the alcoholic. On the CPI Fe scale, scores were in the less masculine direction in three groups of alcoholics (Canter, 1963; Corotto, 1963), but Sanford and Singer (cited by Jones, 1968) reported abstainers to obtain higher Fe scores than drinkers! Opposing Botwinick and Machover's (1951) results with the Terman-Miles, Parker (1959) found alcoholics to score only about half as masculine as moderate drinkers, married ones having higher masculine scores than those divorced, and alcoholics preferring the mother were significantly less masculine. Some of these characteristics appeared also in pre-alcoholic (student) subjects selected by Manson's (1948) ALCADD (involvement with alcohol): those scoring less masculine tended to prefer mothers, to have come from a broken home, and to have more sisters than brothers (Parker, 1969). Parker suggested that the feminizing influence of the preferred mother and sisters, coupled with father-absence, undermined masculine feelings and hindered learning of the male role. He interpreted his findings to indicate that as the illness progressed, subjects showed low latent as well as low manifest masculinity, in line with McCord et als' (1960, pp.141-142) theorizing about collapse of the masculine/independent façade. Rising manifest masculinity and declining latent masculinity seemed associated with drinking, younger subjects adopting or preferring masculine behaviour but identifying with the female role. Park (1962) noted that in college students, heavy drinking was associated with role deviation, the role not being structured in accordance with cultural (work-orientated, disciplined, occupationally successful) expectations for the American male.

If male problem drinkers have identified with the wrong sex, they might be expected to claim a childhood preference for the mother and to reject fathers, since identification is usually with a preferred object. This preference was found by Parker (1969) and Wittman (1939), who compared them with normals; MacAndrew (1967), who compared with neurotics; and Piety (1967), who compared with schizophrenics, neurotics and normals. Ackerman's (1969) fatherless alcoholics reported wanting to be very close to their mothers. Piety's (1967) drinkers reported their fathers as rejecting and unlikeable, compared with neurotics, and Schultz (1969) also found them less acceptant of the father than were controls. Using photograph preferences, Meer and Amon (1963) found alcoholics to prefer older persons, especially women, reject younger males and females, and show a negative attitude toward older men. They concluded that alcoholics yearn for older nurturant women, reject fathers, cannot compete with or relate to their peers, and reject a heterosexual relationship. This study suggested not so much a positive interest in males as a lack of interest in nubile females and an attachment to older women that might compromise normal male strivings, though it is impossible to discount the possibility of a defensive rejection of males in this study. Zamansky (1958) found a discrepancy between overt (verbal) and covert orientation to pictures of males, in male paranoids.

Machover (1949, p.101) holds that drawing of the female figure first, by males, in the Draw-a-Person test usually indicates feminine identification. Laird (1962) found 15.5% of 71 male psychiatric patients and 19% of 101 male alcoholics to draw the female first, significantly different from normals though not from each other, while Wisotsky (1959) found 26.1% of 490 male alcoholics to do so, significantly different from Mainord's (1953) male normals, of whom 5.3% of 132 drew the female first. Craddick and Leipold (1968) reported that 200 male alcoholics drew the male figure significantly smaller than the female, suggesting diminished positive cathexis of the male role.

If difficulties in sexual performance are indicative of weak male identification there is much evidence (though often conflicting when comparisons with neurotics are made) suggesting that problem drinkers are not greatly interested in sexuality and manifest a variety of sexual impairments (Bleuler, 1955; Landis, 1945; Levine, 1955; Spiegel et al, 1970; Tahka, 1966, p.172; Wine and Edwards, 1964; Wittman, 1939). Spiegel et al (1970) found psychiatric patients to claim less sexual disturbance than alcoholics, though MacAndrew (1967) found just the opposite. McCord et al (1960, p.138) reported that 54% of pre-alcoholic boys had fears about sexuality, while Goodwin, Crane and Guze (1971) recorded a history of impotence in one quarter of alcoholic felons, and some homosexuality, significantly more than in non-alcoholic felons; alcoholics also preferred multiple sex partners. Rosenberg (1969a) found 8 of 50 young alcoholics to be homosexual (significantly more than in a comparable neurotic group), and Zwerling (1959) found 11 of 46. McCord et al (1960, p.32) reported a slight tendency for overtly homosexual boys to become alcoholics later, but feminine boys became alcoholics less frequently than those giving the impression of self-confident masculinity. Exactly the opposite was retrospectively reported for their childhoods by Tahka's (1966, pp.200-227) alcoholics, who recalled diffidence and social inadequacy rather than masculine self-confidence. Tahka (1966, p.222) referred to an "... insufficient identification with a paternal person," on the basis of interview material on background, and Rorschach patterns.

The study required by contemporary theorizing should attempt to demonstrate the existence of covert masculine inadequacy together with overt compensatory behaviour and evidence of increased interest in males, with diminished investment in the heterosexual role. Only three studies seem so far to have been related to this approach. Zucker (1968) found intense masculinity, as predicted, on the CPI Fe scale in heavy drinking high-school fourteen-year-olds,

compared with moderate and non-drinkers, but found no support for the hypothesized covert femininity on a measure devised to discriminate between sexes in terms of interest preferences. In another study, defiant, aggressive, troublesome boys (evidencing "protest masculinity") were found to score highly on overt masculinity (Strong Vocational Interest Blank) as well as on covert femininity (Franck drawing test), this pattern being found also in 10 boys who were strongly involved with alcohol (Harrington, 1970). The third study was that of Blane and Chafetz (1971) who, like Zucker but unlike Harrington, were unable to find evidence of covert femininity (Franck drawing test), but they did find overt masculinity on the CPI Fe scale in heavily drinking adolescents.

Worthy of final mention is a clinical study carried out by McGuire, Stein and Mendelson (1966), involving alcoholics and controls allowed unlimited access to alcohol in a hospital setting. The most striking aspect of the alcoholics' behaviour was their phantasying about how the "masculinizing" effects of alcohol would be evident once drinking began. It was associated with "masculinity" - "men did this sort of thing" ("drink," "go wild," "take it"). All experienced a subjective increase in their "sexual power." All felt "more like a man," "more independent." There were no corresponding phantasies in the controls. The alcoholics phantasied that while watching them people would think of them as "masculine," "sexually powerful," "special." The authors speculate that such patients use the drug to enhance arbitrary interpretations of reality and to eliminate sober realizations. "The prideful quality in reporting both past sprees and the belief that others had admired them during previous drinking episodes strongly suggests that their 'glory' had been achieved through intoxication" (p.22). These subjects thus achieved some ego integration and the maleness therein implied to them within the general subculture of chronic alcoholics. Tamerin and Mendelson (1969) reported homosexuality emerging under similar experimental conditions; it was not direct, but

took the form of the men's cuddling one another, crying on one anothers' laps, playing pranks such as hopping into others' beds and tickling them, etc. Studies such as these are marred only by the small number of subjects available for experimentation; only 4 alcoholics and 4 controls in the McGuire et al (1966) study.

A general conclusion to be drawn is that evidence for inadequate masculinity in problem drinkers, with some possible evidence of over-compensation for this in adolescent heavy drinkers, is equivocal but strongly suggestive that this avenue merits further pursuit. It is quite clear also, from conflicting results over many studies, that inventory methods by themselves are unreliable in this area. Impaired masculine identification relative to normal controls, however, has been reported for non-problem drinking psychiatric patients by Beitner (1961) with the Semantic Differential; Grygier (1958) with his own inventory; Kayton and Biller (cited by Kokonis, 1972) with an adjective checklist and the CPI Fe scale; and Kokonis (1972) with inventories dealing with masculine-feminine attitudes and interests and the Machover Draw-a-Person test, which suggests that it might characterize maladjusted groups in general and not be especially relevant to problem drinking. Gough (1957, p.24, pp.34-35) reports a very high Fe score (less masculine) for psychiatric patients, while quite low scores have been made by heavy drinking adolescents (Blane and Chafetz, 1971; Zucker, 1968). The study required by contemporary theorizing, in which conflict over inferential masculine inadequacy would be provoked and reactions in the hyper-masculine direction studied, has not yet been carried out, nor has it been demonstrated that problem drinkers as a group are more interested in males than in females and the heterosexual role, which theory would seem to require if enhancement of maleness is achieved by rejection of "femininity" and emphasis on "masculinity" and identification as "one of the boys."

(3) Schizoid characteristics, interpersonal difficulties:

So far as obvious schizoid characteristics are concerned, evidence is mainly clinical and therefore already cited. However, some Rorschach studies are suggestive of cognitive impairment. Button (1956a,c), Moore and Ramseur (1960a) and Shereshevski-Shere, Lasser and Gottesfeld (1953) found schizophrenic-like performances in alcoholics, Shereshevski-Shere et al commenting, "It is our impression ... that there is a large group of alcoholics who show a level of functioning consistent with preschizophrenic and schizophrenic levels" (1953, p.232). Button (1956c) commented of his several samples that while at admission all were diagnosed as "chronic alcoholism without psychosis," diagnoses made after psychological testing revealed a surprising number of schizophrenic reactions, latent and overt, though mostly assessed as "mild". Alcoholics gave more fabulized combinations and confabulation responses on the Rorschach than did normals (Mabry-Hall, 1967), the author commenting that these are usually found in schizophrenics or in children under ten years. Rapaport, Gil and Schafer (1946, pp.322-359) describe such responses as more characteristic of psychotic individuals. Machover and Puzzo (1959a) with this test and similar measures, plus lengthy interviews, concluded that virtually their whole 46 could be considered schizoid.

With the MMPI, Ceccarelli (1960) obtained evidence of frankly schizophrenic elements, schizoid trends, and social isolation in a large percentage of his alcoholic sample, and Kraft and Wijesinghe (1970) commented on the surprising incidence of "psychotic scale" elevation, while alcoholics obtained elevated scores on Suspicion on the 16 PF (Kirchner and Marzolf, 1974). Butts and Chotlos (1974) found them to be as closed-minded on Rokeach's Dogmatism scale as a group of thought-disordered schizophrenics, significantly more so than normals.

Pronounced schizoid characteristics may apply only to sub-groups of problem drinkers. Schaefer (1954) listed only one withdrawn group amongst his five "types" and Partington and Johnson (1969) listed only one thought-disordered group. It is not yet possible to state with certainty that more schizophrenic-type illnesses are found in a group of alcoholics than in the general population (Freed, 1975).

It is not usually claimed that problem drinkers as a whole have schizophrenic psychopathology, however, but rather that they manifest schizoid trends in being withdrawn, socially isolated, and with extreme difficulties in relating interpersonally. The amount of marital disruption found in the group is an indication that personal relationships are difficult and not strongly valued or entered into with emotional depth. A large proportion remain unmarried and many are subsequently divorced or separated. To cite just a few recent studies, proportions of drinkers remaining single range from 15% to 35% with a rough average of about 25% (Freed, 1968; Holloway, 1969; Koller and Castanos, 1969; Robins, 1966, p.243; Stein et al, 1971; Tahka, 1966, p.54), while the proportions of those becoming divorced or separated range from 28% to 56% with a rough average of 45% (Freed, 1968; Holloway, 1969; Koller and Castanos, 1969; Robins, 1966, p.243; Rosenberg, 1969b; Stein et al, 1971; Tahka, 1966, p.54; Wolf, 1958). Wellman, Maxwell and O'Hollaren (1957) reported somewhat lower figures for both categories - 8% and 21% respectively - from a group of drinkers of very high socioeconomic status. Over three studies about 29% of psychiatric patients were single (Freed, 1968; Robins, 1966, p.243; Rosenberg, 1969b) while about 20% were divorced or separated in those same three studies. Corresponding figures for normals, in three studies, averaged about 14% for single status and about 0% to 7% for divorce/separation (Holloway, 1969; Koller and Castanos, 1969; Wellman et al, 1957).

It would seem that problem drinking groups tend to exceed psychiatric patients and normal populations in being

divorced or separated, though figures would obviously vary depending on the nature and age of the samples. Wittman's (1939) drinkers reported having had many love affairs and 21% had been married more than once, compared with 6% of controls. Goodwin, Crane and Guze (1971) found significantly more alcoholic felons to prefer multiple sex partners, compared with non-alcoholic felons, and Lentz et al (1943) had earlier reported them to admit a preference for mistresses. In three studies (Wallerstein et al, 1957, pp. 186-206) half of the married alcoholics admitted having been unfaithful to their wives. Parenthetically, it must be recognized that the problem drinking itself is seldom the cause of the marital break-up, and the role of psychopathology within the drinker's marriage is becoming increasingly recognized (Bailey, 1961; 1967; Lemert, 1960; 1962; Rathod and Thomson, 1971; Tahka, 1966, p.26). To suggest that problem drinking breaks up the home is to ignore the fact that manic-depression, schizophrenia, chronic depression or anxiety, and the other forms of psychopathology found in non-problem drinking psychiatric populations cannot be easy to live with yet are seldom if ever implicated as causes of marital break-up in such groups.

Evidence regarding problem drinkers' difficulties in relating interpersonally is conflicting. De Palma and Clayton (1958) and Hanfmann (1951) reported gregariousness, Harris and Ives (1947) considered them less disturbed in social-emotional relationships than were neurotics, Wittman (1939) described them as not self-conscious and with lasting friendships, and MacAndrew's (1967) subjects claimed to be more out-going, interpersonally competent and self-confident than a comparable neurotic group, but withdrawal and lack of emotional warmth, interpersonal superficiality, alienation, loneliness, and social inadequacy have been more frequently described (e.g. by Becker and Israel, 1961; Billig and Sullivan, 1943; Bleuler, 1955; Buhler and Lefever, 1947; Button, 1956c; Clinebell, 1963; Hewitt, 1943; Holloway, 1969, p.174 and p.182; Jackson, 1959;

Klebanoff, 1947; Machover and Puzzo, 1959a; Manson, 1948; McGuire et al, 1966; Mindlin, 1960; Moore and Ramseur, 1960a; Rosenberg, 1969a,b; Schnadt, cited by Syme, 1957; Scott, 1958; Seliger and Cranford, 1945; Strayer, 1961; Tahka, 1966, pp.167-168). Problem drinkers were more shy and diffident on the 16PF (Walton, 1968) than were McAllister's (1968) neurotic and personality disorder cases, and more shy than a normative sample (de Palma and Clayton, 1958; Fuller, 1966; Gross and Carpenter, 1971; Kirchner and Marzolf, 1974; McCance and McCance, 1969). Wine and Edwards (1964) found elevation on the Shyness factor of the Comrey Personality Inventory. Alcoholics scored lower on Affiliation than did Edwards's general adult male sample on the Edwards Personal Preference Schedule (Hoffmann and Nelson, 1971) and also lower than did psychiatric patients (Pryer and Distefano, 1970).

Conflicting results may be reconcilable in that gregariousness and ease of relating might apply only to superficial relationships; long-term relationships are those causing drinkers difficulty. Kalin (1972b) aptly referred to narcissistic sociability - short-term and exhibitionistic relating - which he found characterized problem drinking students. Blane (cited by Kalin, 1972b, p.228), Force (1958), and Shulman (1951) have also referred to predominance of short-term relationships, and Jones (cited by Kalin, 1972b, p.228) found high sociability on a CPI scale, coupled with low needs for deep affiliation on the TAT.

Social isolation and solitariness, compared with normals, has been reported for alcoholics by Gath (1969), Hassall and Foulds (1968), and Singer, Blane and Kasschau (1964). Koller and Castanos (1969) reported 60% of 210 to habitually live alone, being significantly more isolated than either normals or a comparable group of psychiatric patients, findings similar to Rosenberg's (1969b) where 52% of alcoholics and only 2% of neurotics lived alone and

almost none of the alcoholics had maintained contact with their families whereas most of the neurotics had. Hassall (1968) found that while only 37.5% of young alcoholics went about with one or two friends, 72.5% of normals did, and 47.5% of the former habitually went about alone (5% of normals). Pre-alcoholic boys, however, were not rated as isolated in Jones's (1968) longitudinal study. Subjects in public hospitals are occasionally diagnosed as alcoholics partly on the grounds of their social isolation, but Singer et al (1964) were able to demonstrate this isolation while controlling it as a factor in diagnosis.

Craddick, Leipold and Leipold (1970) interpreted results of a figure-drawing study to mean that alcoholics had difficulty empathizing with others; subjects had to draw the self and others in various roles (murderer, victim, victim's parents), but alcoholics always drew the self-figure as largest and made all other figures similar to one another.

In a useful study of social interaction in hospitalized alcoholics, Griffiths, Bigelow and Liebson (1973) found them to manifest significantly more drinking when all were in the main ward together than when isolated for 10 minutes after every drink, and to drink more when spoken to even briefly by the staff during the isolation period; there was also significantly more social interaction on drinking than on "dry" days. Freed (1975) speculated that alcohol might have an ego-integrating effect for alcoholics, who might actually perform better when somewhat intoxicated, which would be in line with some of the conclusions of the McGuire et al (1966) study (p.61).

In summary it would appear that there is considerable evidence supporting such schizoid features as social isolation and interpersonal difficulties in problem drinkers, but much further work needs to be done to ascertain the extent to which such difficulties preceded drinking's full development, and whether there are consistent and significant differences between these patients and other maladjusteds in this respect.

(4) Undifferentiated ego functioning:

A perceptual field dependent (undifferentiated) pattern of test scores has been found consistently to characterize problem drinkers (Bailey, Hustmyer and Kristofferson, 1961; Goldstein and Chotlos, 1965; Goldstein, Neuringer, Reiff and Shelly, 1968; Karp, Poster and Goodman, 1963; Rhodes and Yorioka, 1968; Witkin, Karp and Goodenough, 1959; Witkin et al,1954, p.338; 1962, pp.206-211). Karp et al (1963, p.391) suggested findings constituted "... a further step toward identifying 'limited psychological differentiation' as a typical personality constellation in alcoholics."

Comparative studies of field dependence in non-problem drinking psychiatric patients have not been frequent, but in one study (Witkin, Karp and Goodenough, 1959) field dependence was greater in alcoholics than in a group of other patients (mostly paranoid schizophrenics and psychopaths), and in an earlier study (Witkin et al, 1954, p.338) 9 male and 5 female alcoholics were more field dependent than other patients. Numbers were small in both studies, however. Bailey, Hustmyer and Kristofferson (1961) also found no evidence that psychotics were more field dependent on the Rod-and-Frame test, and Koran and Maxim (1972) confirmed these findings in manic-depressives.

It has been contended that field dependence might be a consequence of excessive imbibition rather than a predisposing personality characteristic or, alternatively, might result from brain damage (Bailey et al, 1961; Goldstein and Chotlos, 1965; 1966; Kristofferson, 1968). Goldstein and Chotlos (1966) and Chess, Neuringer and Goldstein (1971) observed Rod-and-Frame test field dependence to diminish during a period of hospitalization, in alcoholics, as did Jacobson (1968) after one hour of sensory deprivation, though the scores of Chess et als' alcoholics never approached those of the non-alcoholics, who were much more field independent, and in a later study by Jacobson, Pisani and Berenbaum (1970), no changes were found after one month's hospitalization. McWilliams, Brown and Minard (1975) found changes toward RFT

field independence after therapy, but the alcoholics' scores were still in the field dependent range. Kristofferson (1968) found alcohol to increase RFT dependence (in normal students), but Harley, Cohen and Silverman (1974) did not find such an alcohol effect with normals. Witkin et al (1954, pp.85-86: 1962, pp.368-379) consider these dimensions to be relatively enduring personality aspects. Apart from Kristofferson's study, intoxication has been unrelated to field dependence: alcoholics tended to perform much the same whether drunk or sober, except on the timed Embedded Figures Test (Karp, Witkin and Goodenough, 1965a); whether the drinking was recent or of twenty years' duration (Karp and Konstadt, 1965); and whether they were current drinkers or current abstainers - though AA members tended to be somewhat less field dependent than non-members (Karp, Witkin and Goodenough, 1965b); and subjects "dry" for two years were even more field dependent than those currently drinking (Witkin, Karp and Goodenough, 1959). Witkin, Goodenough and Karp (1967) found EFT dependence to be stable over a very long period.

It is difficult to implicate brain damage as the cause of field dependent scoring when such a pattern is known to characterize not only alcoholics but also the obese, ulcer patients, asthmatics, somatizing patients, and patients showing direct affective discharge as a primary symptom (Karp, Poster and Goodman, 1963; Witkin, 1965), and when evidence suggests it to be a developmental characteristic, decreasing with chronological maturity (Witkin et al, 1962, p.374; 1967). A recent study, however, has correlated Rod-and-Frame test dependence/independence with such intellectual factors as general reasoning and ability to integrate the perceptual field into a gestalt (Tarter, Sheldon and Sugarman, 1975). Karp, Silberman and Winters (1969) had found EFT dependence unrelated to race or social class, but a recent study by Burdick (1969) found a very small group of Shadel Clinic alcoholics of high socioeconomic status to be somewhat more field independent than drinkers reported in other studies.

Undifferentiated functioning has been found in problem drinkers with measures other than Witkin's. Rhodes, Carr and Jurji (1968) found less social differentiation (on a person-perception measure) than in non-alcoholics, and Reilly and Sugarman (1967), using a sentence-completion measure derived from the theoretical system of Harvey, Hunt and Schroder (1961), showed that a majority fell into the lowest systems of cognitive functioning (concrete and rule-bound), correlated with field dependent functioning on the EFT, while none performed at the most abstract and differentiated level; however, more field independent scores were obtained by subjects who were functioning at higher cognitive levels, which might have implications for Burdick's (1969) results.

Further research on field dependence/independence is clearly needed, in view of the dimensions' possible relations to socioeconomic status and general alcoholic deterioration, and the unsatisfactory nature of those studies comparing problem drinkers with other maladjusteds. Some results are conflicting: in Burdick's (1969) study, and in one group (sober AA members) of Karp et al (1965b), the alcoholics were actually more field independent than non-alcoholics in another study (Rhodes, Carr and Jurji, 1968), as was one of the alcoholic groups of Reilly and Sugarman (1967). Timing of the EFT is not always easy, and individual experimenters' methods might account for these discrepancies, though alternatively there may be real differences in these dimensions relative to the age, intelligence, and socioeconomic status of various samples, and possibly also relative to the length of time elapsing between admittance to hospital and testing. Probably the only solution to these difficulties is repeated measurement of the dimensions in problem drinker/normal/neurotic groups, with salient demographic characteristics of the groups more clearly delineated. Field dependence has in no study (so far as the writer is aware) been shown to antedate problem drinking, though Karp et al (1965a) called for such studies.

(5) Handling of aggressive drives:

Overt hostile expression in alcoholics' Rorschachs has been reported (Machover and Puzzo, 1959a; Moore and Ramseur, 1960a); Jackson (1958) found it mainly in those who were belligerent when intoxicated. Button (1956c) with this test and the MMPI, reported no evidence of the "vitriolic hostility" characteristic of the psychopath, but over-reporting of aggression on four specially chosen TAT cards was an incidental finding by Holzberg, Bursten, and Santiccioli (1955), alcoholics resembling schizophrenics but not neurotics in over-reporting. Numbers were very small. Singer (1950) referred to hostility management problems, using the TAT, as did Jones (cited by Kalin, 1972b, p.226) using Oakland Growth study material. It is a reasonably sound assumption (see p.173) that emergence of many aggressive themes and percepts on measures such as the Rorschach or TAT is positively correlated with overt aggressiveness.

Augmented aggressive feelings revealed by inventories have been reported for alcoholics by Ceccarelli (1960) with the MMPI, Maccoby (1972) with a projective questionnaire, Hassall and Foulds (1968), Kraft and Wijesinghe (1970), Ritson (1971) and Walton (1968) with Foulds's hostility inventory, and Wine and Edwards (1964) with the Comrey Hostility Inventory (though in comparisons with controls only some studies reached acceptable significance levels with respect to this variable). Walton's (1968) gamma alcoholics scored at the mean for a group of prisoners, well above normals' and neurotics' means, and Hassall and Foulds's (1968) young alcoholics obtained very elevated scores. Williams (1967b) with the Gough and Heilbrun (1965) adjective checklist, and Reiter (1970) with the Edwards Personal Preference Schedule found student problem drinkers to obtain significantly higher aggression scores than non-problem drinkers, Williams (1968) later replicating his findings. Kalin (1972b, p.231) reported "intense aggressive ascendancy" in student heavy drinkers, regarding antisocial aggressive behaviour as one way for an inadequate male to express "strength," potency

and power. Williams, McCourt and Schneider (1971) compared alcoholics with psychiatric patients on Kalin's variables, finding the former to be similar to Kalin's problem drinking students on aggressive sociability and aggressive behaviour variables. On the other hand alcoholics declared themselves less aggressive on the Edwards Personal Preference Schedule, compared with Edwards's general adult sample (Hoffmann and Nelson, 1971) and also on Jackson's Personality Research Form (Hoffmann, 1970).

Goodwin, Crane and Guze (1971) found that alcoholic felons had been significantly more sociopathic in childhood than had non-alcoholic felons, and more frequently arrested for fighting, before age 18; they also made more complaints about feelings of rage, hostility, and irritability. Guze, Tuason, Gatfied, Stewart and Picken (1962) also reported a greater incidence of fighting, both before and after age 18, in alcoholic felons compared with non-alcoholic felons, and also noted that the former claimed antisociality and criminality had preceded the onset of heavy drinking. Rosenberg's (1969a,b) young alcoholics reported poor aggression control antedating problem drinking, 40% recalling antisocial behaviour while still at school, while very few of a comparable neurotic group reported this. Drinking behaviour in junior and high-school students was associated with anti-social behaviour (Barron, 1971) and aggressiveness with poor control of it was rated over the years in pre-alcoholics in the longitudinal studies of Jones (1968), McCord et al (1960, p.139) and McCord and McCord (1962, pp.427-428). Robins, Bates and O'Neal (1962, pp.407-409) reported that a majority of children later becoming alcoholics or problem drinkers had a history of antisocial behaviour and court appearances; the alcoholics as children had more antisocial, but not more neurotic, symptoms than those not becoming alcoholics. Goodwin, Schulsinger, Hermansen, Guze and Winokur (1975) found retrospective report of hyperactivity and general antisociality (truancy, delinquency, aggressiveness, impulsiveness) in an alcoholic sample, though the sample was of very small size.

If problem drinkers constitute inadequate personalities, as Bucklew has suggested (see section 3, No. 3), augmented aggression should "spill over" into the social sphere. Studies cited above tend to confirm this association, and more evidence can be adduced from the criminal histories of many such drinkers. Gray and Moore (1941) found alcoholic criminals to have a history of assault more frequently than did non-alcoholic criminals, and "psychopathic aggression" was observed to emerge in alcoholics after ad lib drinking in a controlled hospital setting (McNamee, Mello and Mendelson, 1968; Mendelson, La Dou and Solomon, 1964). There are no grounds for assuming that excessive intake of alcohol causes aggression, since not all problem drinkers have records of assault; it is more congruent with evidence to suggest that its disinhibiting effects trigger latent intense anger.

In view of the evidence there seems little doubt that in many instances augmented aggression or antisociality precede the onset of heavy drinking, but these have not been conclusively associated with an addictive rather than a non-addictive pathology. Buss (1961, p.210) has listed studies in which neurotics were more hostile than normals, though Haas (1965) found overt aggressiveness generally to be typical of psychotics whereas covert, self-directed aggression typified neurotics. Gleser and Ihilevich (1969) with the Defence Mechanism Inventory found that alcoholics differed from normals in showing covert, self-directed aggressiveness, however, normals tending to show outer-directed aggressiveness. Conflicting results may be reconcilable in that, considering the self-destructive nature of problem drinking, it is reasonable to assume that augmented aggression tends to overflow into both inner-directed and outer-directed destructive behaviour rather than into one or the other.

(6) Under-control, impulsivity, "present orientation":

Billig and Sullivan (1943), Buhler and Lefever (1947), Halpern (1946), Jackson (1958), Schnädt (cited by Syme, 1957), Seliger and Cranford (1945) with the Rorschach, and Singer (1950) with this and the TAT, have referred to qualities suggestive of impulsiveness or diminished impulse

control in some problem drinkers: poorly controlled mood swings, lack of superego strength, wanting needs gratified immediately, uncontrolled affective reactions, oblivion to ordinary social sanctions, emotions rather than intellect in control, poor self-appraisal,weak restraint, low inner directivity, and little control of mood or desire.

Inventory results from various problem drinking samples suggest characteristics of boredom, restlessness, impulsiveness, emotional instability, undependability, irresponsibility, antisociality through preoccupation with the self, lack of restraint and under-control (Button, 1956c, and Spiegel et al, 1970, with the MMPI; de Palma and Clayton, 1958, Gross and Carpenter, 1971, and McCance and McCance, 1969, with the 16 PF; Force, 1958, with a Kuder Preference key; Lentz et al, 1943, with a questionnaire; Manson, 1948, with his own inventory taken from the MMPI; Mozdzierz, Macchitelli, Flaherty and de Vito, 1971, with the Guilford-Zimmerman Temperament Survey; Wine and Edwards, 1964, with the Comrey Personality Inventory). Maccoby (1972) found Mexican abstainers to be more orderly, compulsive, and conservative than alcoholics, and Barry, Anderson and Thomason (1967) referred to a "possibly unique to alcoholics" factor of over-active, unpredictable, erratic, odd, and unrealistically orientated behaviour (MMPI). Hoffmann (1970) found alcoholics to be lower on Achievement and Endurance scales on Jackson's Personality Research Form, though Impulsivity tended to decrease with age.

Some of the above characteristics have been shown to antedate alcoholism. Park (1962) found student problem drinkers to differ from student non-problem drinkers in "affectivity" scores (immediate satisfaction wanted), while Kalin's (1972b, p.229) problem drinking students admitted to not being concerned over a lack of order in intrapsychic functioning, as did Williams's (1967b) students on the Heilbrun need scales who also admitted to low self-control. The longitudinal studies of Jones (1968), McCord et al (1960, pp.136-142), Robins, Bates and O'Neal (1962, pp.407-409) and

Robins (1966, p.87, pp.240-245) also support these findings.

Voth (1947; 1965) found alcoholics to report little or no autokinetic phenomenon movement, like psychopaths and paranoids but unlike the majority of normals, anxiety states, obsessionals, and most schizophrenics. Report of extensive movement has been associated with ego sufficiency and reflectiveness, while little movement has been associated with a relative insufficiency to disengage objectively from situations, to be bound to the present, the immediate stimulus, and with impulsive acting out (Voth and Mayman, 1963). Voth (1962a,b) has related "choice" of illness to ego dimensions he feels the autokinetic phenomenon taps, and has speculated (Voth, 1965) that alcoholics may lack ameliorating imaginativeness and therefore cannot envisage satisfactions through sense modalities other than the oral mode.

Indicating possible lack of persistence toward future goals, relative to satisfying immediate needs, is problem drinkers' often reported failure to complete such social tasks as educational attainment or learning a trade (Bacon, 1945; Lentz et al, 1943; Manson, 1948; Moore and Ramseur, 1960b; Robins, 1966, p.244; Rosenberg, 1969b; Selzer and Holloway, 1957; Strayer, 1957). Moore and Ramseur's (1960b) group had a Wechsler IQ of 114.6, intelligence therefore being unlikely to be the cause of the educational failure, at least in that sample. Rosenberg (1969b) found that 80% of his alcoholics differed from neurotics in having left school at the earliest possible opportunity. Levine and Zigler (1973) found alcoholics poorer on a measure of social competence than neurotics generally, competence indices including educational tasks completed and stability of occupational history.

When rigid or over-inhibited impulse control is found in problem drinkers it tends to be associated with clinical improvement (Mindlin, 1959); obsessive-compulsive adjustments and over-control were associated with good prognosis, and Machover and Puzzo (1959b) found more reaction formation and

general over-control in remitted than in drinking alcoholics.

Immediate impulsive action implies an anchoring in the present and reduced investment in future goals and expectations. Problem drinkers were significantly less future-oriented than non-drinkers on a Time Reference inventory (Roos and Albers, 1965), and distinguishable from normals and acute and chronic schizophrenics, though not very different from depressives, in this respect on the same inventory (Foulks and Webb, 1970), having the shortest future time span of all groups. Sattler and Pflugrath (1970) obtained similar results with a story-stem completion measure, relative to normals; both late- and early-stage alcoholics had a significantly shorter future time extension. Smart (1968b) confirmed some of these findings with alcoholics, compared with moderate drinkers, using a Personal Events method (subjects estimating their age when certain important events might happen to them, with discrepancy between age given and chronological age being the measure of extension), and a story-stem completion task. Smart raised the possibility that short future extension might not be a predisposing feature, deriving instead from the alcoholic's awareness that his future does indeed look grim, so that his investment in it is attenuated. However, Smart's work was replicated by Imber, Miller, Faillace and Liberman (1971) with seriously ill medical patients as controls, and Emrick (1970) found no correlation between prospective time span (on the Personal Orientation inventory) and length of sobriety. Similarly, Porter, McCarthy and Pearman (1971) found no relation between time span (story-stem completions) and the threat of death in seriously ill medical patients, compared with those less seriously ill, and Foulks and Webb (1970) found alcoholics to be extremely optimistic about their future on the Time Reference inventory.

Future time extension has shown a definite association with socialization, being consistently shorter in individuals under-socialized by sociolegal definition (for supporting studies see p.178). However, Braley and Freed (1971) with a Personal Events measure found that psychiatric patients (mostly females, about half of them psychotics) showed a very

significantly shorter time span than did normals, so that as yet it cannot be said with certainty that reduced future orientation is relevant to differential symptomatology, particularly as Cappon and Tyndel (1967) were unable to demonstrate it in their group of alcoholics (though using inventory methods very different from those of other investigators). Nor is it possible to conclude, from extant research designs, whether it predisposes to problem drinking, being a relatively enduring reflection of ego immaturity, or is a consequence of living a life that would appear to have no future - though available evidence does not support this latter suggestion. The variety of measures used to estimate extension adds to difficulties in evaluating results of studies.

(7) Socialization:

The amount of social disruption and criminality problem drinkers become involved in is often cited as exemplifying their lack of socialization; however, it can also be argued (e.g. by Fox, 1968) that this disruption derives solely from alcohol abuse.

Evaluating the relationship between drinking and crime is a study in itself, rendered more difficult by investigators' frequent failure to distinguish inebriety-related crimes (drunk and disorderly, casting offensive matter, traffic offences) from serious violations of legal norms, and failure to ascertain whether crimes were concurrent with or antecedent to the heavy drinking. Longitudinal and retrospective studies support the contention that antisociality or court appearances precede heavy drinking (Barron, 1971; Goodwin et al, 1971; 1975; Guze et al, 1962; Robins et al, 1962; Rosenberg, 1969a,b), however, and in the Pittman and Gordon (1962) study most of the non-inebriety-related crimes of chronic drunkenness offenders had been committed before drinking became a problem; serious crime decreased as arrests for inebriety increased. Subjects whose pathological drinking begins before age 30 tend more frequently to have criminal records than do those with later

onset (Foulds and Hassall, 1969; Schuckit, Rimmer, Reich and Winokur, 1970), suggesting that personality factors rather than abuse of alcohol per se are related to criminality.

Only a brief mention of a few studies indicating an association of problem drinking and crime can be attempted here. Glatt (1958), Hassall and Foulds (1968), Moore and Ramseur (1960b), Nørvig and Nielsen (1956), Pittman and Gordon (1962), Rathod and Thomson (1971), and Tahka (1966, p.57) reported criminal records ranging from about 20% to 46%, though Hassall and Foulds (1968) give figures of 75% for alcoholics (excluding such offences as drunk in charge), compared with 25% for matched controls. Robins (1966, p.243) reported 71% and 34% of alcoholics to have been arrested for non-traffic offences and major crimes respectively, compared with 25% and 6% of neurotics. Bartholomew and Kelley (1965) reported a figure of 15.2% for non-inebriety-related crimes and 28.9% for drunk and disorderly charges, with a total of 39.6% of 848 male alcoholics with a criminal record, and Pittman and Gordon (1962) give figures of 37% for arrests for intoxication plus serious violations of legal norms, so there is considerable inconsistency amongst the various studies. Criminality rates were higher amongst alcoholics than in general population samples in six studies (cited by Tahka, 1966, pp.26-27; Ellermann, 1948), but these figures might have been inflated by drunkenness arrests.

In studies of alcoholism amongst criminals, McKenzie (1965) cited a Californian study of 2325 convicted men of whom 30% felt alcohol to be a problem, and in New South Wales over a three-year period 37% of individuals arrested for serious crimes were heavy drinkers, but Gray and Moore (1941) found 66.3% of alcoholics amongst 1637 men in a state prison, and Guze et al (1962) found 43% of 223. It is not always clear that alcoholics' incarceration was for non-inebriety-related crimes, in some of these studies, but Maule and Cooper (1966) found 56% of alcoholics in a sample of 50 criminals, of whom 36% had committed crimes of theft, breaking and entering, fraud, misconduct, and violence, while 46% had been arrested for drunkenness.

MacKay, Phillips and Bryce (1967) noted that more delinquents than students continued drinking after their first experience; there was more "serious" drinking behaviour amongst the delinquents, and more of them than students drank for "tension relief." In a factor-analysis with delinquent lads 14-18 years of age (Kulik, Stein and Sarbin, 1968b), items composing the factor "delinquent role" included using drink excessively, getting drunk, obtaining liquor illegally, and truanting from school. Of psychiatric disorders associated with criminality, only sociopathy, drug addiction and alcoholism were significantly related (Guze, Tuason, Gatfied, Stewart and Picken, 1962; Guze, Goodwin and Crane, 1969), and these results were confirmed in a follow-up. Cases of schizophrenia, manic-depression, neurosis, organic brain syndrome, and homosexuality were not seen more frequently in a criminal population than general population. Rosenberg (1969b) found that stealing and truancy in school years were more characteristic of alcoholics than neurotics in an Australian sample.

Inventory results have been fairly consistent. Psychopathic deviation on the MMPI scale lends credence to the view that problem drinkers resemble sociopaths, elevated scores on the Pd scale being reported by Button (1956b), Goldstein and Linden (1969), Goss and Morosko (1969), Harris and Ives (1947), Hewitt (1943; 1960), Hill (1962), Hill et al (1962), Hoffmann, Loper and Kammeier (1974), Hoyt and Sedlacek (1958), Kline, Rozynko, Flint and Roberts (1973), Kristianson (1970), MacAndrew and Geertsma (1963), Manson (1949), Overall (1973), Rosen (1960), Rubin (1948), Spiegel et al (1970), and Whitelock, Overall and Patrick(1971). In fact, Hoffmann, Loper and Kammeier (1974) and Loper, Kammeier and Hoffmann (1973) found that Pd and Ma scales could almost predict which college students would later become problem drinkers. Goldstein and Linden's (1969) and Whitelock et als' (1971) work suggests that impulse control difficulties might not characterize all alcoholics, however.

Using the Differential Personality Inventory, Hoffmann,

Nelson and Jackson (1974) found that desocialization, socially deviant attitudes and impulsivity were characteristics that did not change at re-test after detoxification, though several personality characteristics did, and thus were probably stable characteristics of alcoholics. Nerviano (1974) found loadings on asociality in alcoholics on the 16 PF, but as these were associated with anxiety loadings he concluded that the undependability, self-indulgence and slackness were manifestations of a severely neurotic life style, self-protective devices, rather than asociality per se.

MacAndrew and Geertsma (1963) have criticized the MMPI Pd scale for its "alcoholismic" questions (drinking excessively, in trouble with the law, not living the right kind of life), though MacAndrew's later studies (1965; 1967), omitting the two questions on drinking habits, showed the scale still able to distinguish between alcoholics and neurotics with Pd-like loadings such as "having been a disciplinary problem in school." Whether the scale would have discriminated drinkers and non-drinkers had these questions been omitted in the other studies is unknown.

Scores at the under-socialized end of the CPI Socialization scale have been reported for alcoholics by Allen (1969), Canter (1963), Corotto (1963) and Stein, Rozynko and Pugh (1971), whereas So scores of abstainers (Sanford and Singer, cited by Jones, 1968) and psychiatric patients (Gough, 1957, p.34) were much higher. So scores of Allen's (1969) and Corotto's (1963) cases were, in fact, lower than those obtained by Donald (cited by Gough, 1960b) and Gough (1960b) from Federal Reformatory inmates! However, like the Pd scale So has two questions on drinking habits, and it is by no means certain that group differences obtained would persist after omission of these.

Alcoholics have tended towards unconventionality in several studies. They were less conservative and less respectful of established ideas (16 PF inventory) than were McAllister's (1968) personality disorder and neurosis cases

(Walton, 1968), and de Palma and Clayton (1958) referred to a 16 PF profile of Bohemianism and lower superego strength. Lentz et al (1943) noted that they reported being more tolerant of moral code deviations, dishonesty, helping others to cheat, keeping mistresses, and approving of the abolition of all censorship, compared with non-drinkers. Their unconventional occupational instability is well documented (Bacon, 1944; Hochwald, cited by Tahka, 1966, p.26; Moore and Ramseur, 1960b; Strayer, 1957; Tahka, 1966, p.54) though there have been conflicting reports (e.g. Selzer and Holloway, 1957), and it has often not been established that the frequent job and geographical changes result from preference, the assumption usually being made that steady jobs cannot be held because of drinking, but Lentz et al (1943) found drinkers to admit a preference for many changes of job. Goodwin, Crane and Guze (1971) found a history of "wanderlust" in 48% of alcohólic felons but in only 23% of non-alcoholic felons, and corresponding figures were reported by Guze et al (1962) - 33% and 18% respectively. Jones and Borland (1975) found that alcoholics had not drifted downward occupationally because of drinking but that their very first job had been of lower status and this occupational failure antedated drinking by several years. An association between alcoholism and the freedom to roam inherent in the sea-faring life has also been noted (Kjølstadt, 1966; McCance and McCance, 1969; Tahka, 1966, p.26). McCance (1970) cited findings by Brun-Gulbrandsen and Irgens-Jensen that Norwegian seamen drank heavily as a group, but that the incidence of alcohol abuse was higher in those of lower education, those from orphanages, foster-homes or broken homes, and those with high neuroticism scores.

It is clear that comparison on the variable of under-socialization needs to be made with non-problem drinking psychiatric subjects, and that inventory comparisons must exclude questions on heavy drinking. Imperative is more evidence that undersocialization and unconventionality precede heavy drinking; in particular, the relation between problem drinking and criminality needs more careful exploration. Nevertheless, this does appear to be one area in problem drinking research where findings from a variety of sources

tend to be more consistent and less conflicting.

(8) Family Background:

The background of the problem drinker might best be categorized under those disturbances in child-parent relationships that Wagner (1960) found associated with socialization disorders in children: separations from parents arising from death, divorce, or desertion; parental cruelty; sociopathic behaviour (parental drug addiction, alcoholism, criminality); and mental illness. As Wagner pointed out, these are largely ways of studying parental impulse control.

To cite just a few comparatively recent studies, the number of problem drinkers who had lost one or both parents before the age of 15 ranged from 30% to 48%, with a rough average of 40% (Borowitz, cited by Brown, 1966; Koller and Castanos, 1969; Rosenberg, 1969b; Wahl, 1956), while somewhat fewer neurotics tended to have been separated from their parents, numbers ranging from about 16% to 35% with a rough average of 28% (Brown, 1966; Forrest, Fraser and Priest, cited by Brown, 1966; Rosenberg, 1969b). Normal controls tended to have somewhat fewer separations again, from 16% to 26% with a rough average of 21% (Koller and Castanos, 1969; 1970; Brown, 1966). It is difficult to compare studies because in some cases the figures for separation do not include loss other than by death, divorce or desertion and in other cases the age of loss is not at all clear (e.g. Hassall, 1968, found that 58% of problem drinkers and 40% of normal controls had been separated from parents for a variety of reasons, but whether this had occurred by age 15 or later is unclear). In Hassall's (1968) small group of 40 drinkers, 4 were adoptees, which seems a surprisingly high number. Koller and Castanos (1970) found that prisoners had lost a very large number of parents, also: short-term prisoners 36%, long-term prisoners 49%. Holloway's (1969) Australian study revealed no greater incidence of broken homes in alcoholics compared with normal controls, though it is possible her comparison was restricted to death, divorce and desertion figures only, but Rosenberg's (1969b) Australian study found

that 48% of drinkers and 16% of neurotics had been separated from the father for at least 30 months and usually much longer, by age 15.

Ackerman (1969) reported that more alcoholics than controls had lost fathers by divorce rather than by death. Koller and Castanos (1969) noted that while controls losing parents tended to remain with the surviving parent or to attend boarding school, alcoholics typically went to institutions such as orphanages or foster-homes, 29% having been orphanage-reared (11% controls), and more alcoholics than controls had lost both parents (22% and 8½% respectively). Neurotics might not have suffered, on the whole, such noxious childhood experiences as home disruption (Bratfos, cited by Rosenberg, 1969b; Brown, 1966; Greer, 1964; Robins, 1966, pp.255-256), and fewer neurotics than alcoholics had been separated from parents for longer than 30 months in Rosenberg's (1969b) study.

Reports of unhappy child-parent relationships for problem drinkers have filtered through but all are retrospective reports, of course (Hassall, 1968; Manson, 1948; Pascal and Jenkins, 1960; Rosenberg, 1969a; Wahl, 1956); these studies compared drinkers with normal controls, on the whole, though Rosenberg (1969b) found that while neurotics had experienced considerable disharmony and conflict with parents, this had been contained within the home rather than erupting into overt social-sphere disruption as with drinkers. Drinking behaviour in junior and high-school students was associated with a rejecting family environment in Barron's (1971) study.

In the McCord et al (1960) longitudinal study, high alcoholism rates were associated with maternal inconsistency (affection alternating with rejection), maternal and paternal escapism, maternal deviant behaviour and resentment of her role, paternal rejection and punitiveness, parental antagonism, and low parental demands and subnormal restrictiveness (p.55, pp.71-82). The McCords speculated that low expectations, lack of supervision, and lack of restriction give the child an inadequate perception of his future adult

role, while maternal inconsistency intensifies dependency strivings. With a small group of these subjects from unbroken homes, McCord (1972) demonstrated that 62.5% of them came from backgrounds with an antagonistic father and cold (but dominant) mother, compared with 23.5% of criminals and 18.8% of non-deviants, which could undermine masculine identification and lead to sex-role confusion. Emphasizing a similar aetiological relationship to problem drinking, Levine (1955) referred to an identification with a preferred mother, a great dependence upon her, and a non-sympathetic father who could not be identified with, with diminished interest in heterosexuality as a consequence - a constellation likely to be associated with a passive, homosexual (latent) individual.

Some studies have reported an association between large families and problem drinking (Feeney, Mindlin, Minear and Short, 1955; Koller and Castanos, 1969; Smart, 1963; Wahl, 1956), general population comparisons showing considerably smaller families - though Birtchnell (1970) has criticized many earlier studies in this area on methodological grounds, finding no tendency for problem drinkers to come from larger families when decade of birth was controlled, - though he did find a significant tendency for neurotics to have come from smaller families compared with other diagnostic groups. Associations between large families and poor maternal health, over-crowding, lower intelligence, delinquency, and physical immaturity in children have been reported by Hare and Shaw (1965) and between this and poor self-concepts in children (Sears, 1970). Under some circumstances (if parents are inadequate or rejecting, for example) being a member of a large family might disturb identity development.

A fair percentage of problem drinkers tend to have come from a background where one or both parents were "alcoholics" or very heavy drinkers. Over six comparatively recent studies about 27% to 60% of drinkers reported problem drinking parents, a rough average being 42% (Goodwin et al, 1971; Hassall, 1968; Holloway, 1969; Rosenberg, 1969b; Selzer and Holloway, 1957; Winokur and Clayton (1968), though there are comparatively few studies reporting problem drinking amongst first degree

relatives of neurotics. Rosenberg (1969b) found neurotics to have had a lower incidence of parental alcoholism than did alcoholics, however (56% of fathers, 10% of mothers of alcoholics and 38% of fathers and 10% of mothers of neurotics). Guze et al (1962) found that 50% of alcoholic felons but only 33% of non-alcoholic felons reported alcoholism in their backgrounds.

A few studies report presence of psychiatric illness in parents of drinkers. In four studies about 17% to 48% of drinkers reported a psychiatrically ill parent, a rough average being 26% (Goodwin et al, 1971; Rosenberg, 1969a; Selzer and Holloway, 1957; Winokur and Clayton, 1968), while Rosenberg (1969b) reported that 24% of neurotics reported psychiatric illness in a parent compared with 20% of problem drinkers.

Contemporary theorizing would seem to require more father-failure than mother-failure, and a few studies support this contention. Weak or absent fathers were reported by Levine (1955), with difficulties in identifying with him (Levine, 1955; Tahka, 1966, p.128), and Ackerman's (1969) fatherless alcoholics felt they had never experienced enough attention from a man during childhood. Preference for the mother and/or better relationships with her have been reported for drinkers by Gynther et al (1959), Hassall (1968), Levine (1955), Moore and Ramseur (1960b), Rosenberg (1969a,b), Schultz (1969), Tahka (1966, pp.131-132), Wahl (1956), and Wittman (1939). Rosenberg (1969a,b) noted that neurotics less frequently reported rejecting, disinterested, or antagonistic fathers.

Borowitz (cited by Brown, 1966), Hassall (1968), Koller and Castanos (1969), Mezei and Levendel (1970), Moore and Ramseur (1960b), Oltmann and Friedman (1967), Rosenberg (1969a,b), and Wahl (1956) reported more father-loss than mother-loss by death, divorce, or other separations in alcoholics, while Dennehy (1966) found more father-loss in alcoholics between the ages of ten and fifteen, but not when total loss before age fifteen was included.

Taken as a whole, studies suggest that many problem drinkers have experienced deprivation in relationships with the paternal parent - punitiveness or rejection, indifference, absence by death, divorce, or desertion, or pathological drinking. Most authors have not presented comparable figures for non-problem drinking neurotic or normal subjects, however, and many have not distinguished father-loss by divorce or desertion from loss by death, whereas some studies suggest that loss by divorce is associated with more serious psychopathology in boys (e.g. Santrock and Wohlford, 1970). Whether any of the findings reported above are associated with problem drinking rather than non-problem drinking pathology can be explored only by further studies. Most studies suffer from being retrospective reports only; consistency of findings is the only solution here, apart from longitudinal studies.

SECTION 6: Conclusions from the review of the literature.

A. General Conclusions:

1. There would appear to be a personality-to-pathological drinking link other than via neuroticism or anxiety reduction.

2. Viable theories of problem drinking should incorporate not only putative needs that might be satisfied in such drinking but take into account which personality types would consider coping with such needs through such drinking.

3. While there is evidence of some personality diversity amongst problem drinkers, research in this area has not dealt with personality variables that might bear a direct psychodynamic relationship to adoption of an addictive rather than a non-addictive pathology. It seems inadequately appreciated that problem drinkers as a group might share some characteristics predisposing toward pathological drinking yet still vary along other personality dimensions.

4. The review revealed that conflicting results abound in problem drinking research. Some factors relating to this, in addition to those referred to on p.18, might be the following:-
(a) Sex and personality of the investigator might be more important in some areas of investigation than seems to be assumed. With regard to putative dependency and masculine inadequacy, it is quite possible that problem drinkers would emphasize masculinity and independence with a male investigator whereas a female might elicit more material relating to dependency anxieties. It is also noticeable that some investigators' reports show a consistent pattern - their subjects reveal themselves as lower on autonomy, leadership and endurance, less aggressive, less independent, and considerably submissive, relative to findings of other, possibly more threatening, investigators.
(b) Age of subjects at time of investigation might produce some of the discrepancies noted. Younger problem drinkers might be those more inclined to present a masculine façade, whereas older drinkers might be less concerned about their manliness.
(c) Length of hospitalization at time of testing is more relevant than is always realized. Hoffmann, Nelson and Jackson (1974), Libb and Taulbee (1971) and Uecker, Kish and Ball (1969) have demonstrated that before three to four weeks after admission, problem drinkers' scores may not be reliable indicators of stable personality characteristics.
(d) There is some evidence that age of onset of problem drinking bears an important relationship to personality diversity sometimes found within the group; this factor should be investigated in further studies.
(e) Too much reliance on inventories has obscured distinctions between actual personality differences and the individual's need to present himself in a distortedly favourable light. Many investigations have utilized the MMPI Mf and CPI Fe

scales as measures of "femininity" or homosexuality, but quite apart from social desirability's distorting effects with these inventories, Ross (1975) has demonstrated that they should not be regarded as in any way measures of sex orientation (i.e. homosexuality, latent or overt) but only as measures of sex role.

5. There is some evidence from longitudinal studies, and studies with very young drinkers (possibly incipient problem drinkers) that some personality characteristics have preceded the development of problem drinking, as follows:-
(a) Problems relating to conflicts over dependence/independence (Blane and Chafetz, 1971; Hurwitz and Lelos, 1968; Jones, 1968; McCord et al, 1960, pp.136-142; Williams, 1967b).
(b) Problems relating to inadequate masculinity or to hyper-masculinity (Blane and Chafetz, 1971; Harrington, 1970; Jones, 1968; McCord et al, 1960, pp.136-142; McCord and McCord, 1962, p.428; Park, 1962; Parker, 1969; Zucker, 1968).
(c) Problems in interpersonal relationships (Jackson, 1959; Kalin, 1972b).
(d) Problems over handling of aggression, which tends to be overtly expressed (Barron, 1971; Goodwin et al, 1971; 1975; Guze et al, 1962; Jones, 1968; Kalin, 1972b, p.231; MacAndrew, 1967; McCord et al, 1960, p.139; McCord and McCord, 1962, p.425; Reiter, 1970; Robins et al, 1962, pp.407-409; Robins, 1966, pp.240-245; Rosenberg, 1969a,b; Williams, 1967b; 1968).
(e) Impulse control tends to be poor (Berry, cited by Freed, 1975; Jones, 1968; Kalin, 1972b, p.229; Park, 1962; Williams, 1967b).
(f) Problems with under-socialized behaviour - crimes committed before heavy drinking's onset (Pittman and Gordon, 1962; Robins et al, 1962, pp.407-409; Robins, 1966, p.87, pp.240-245).

6. There is some evidence from a few, not very satisfactory, studies that problem drinkers can be differentiated from non-problem drinking psychiatric patients as follows:-
(a) Problem drinkers are more "oral," passive, have needs for support, or avoid self-reliance (Booth, 1969; Freed, 1968; Rosen, 1966; Schnadt, cited by Syme, 1957; Tarter, 1970; Wiener, 1956), or show premature strivings toward independence (MacAndrew, 1967).
(b) Problem drinkers reveal impaired masculinity in showing more homosexuality (Rosenberg, 1969a), and a possible confused sexual identification manifested in preference for the mother and closeness to her rather than to the father (Piety, 1967; MacAndrew, 1967). Spiegel et al (1970) elicited more complaints of sexual problems, though MacAndrew (1967) found fewer problems than with neurotics.
(c) Problem drinkers are more interpersonally disturbed, shown in an elevated divorce/separation rate (Freed, 1968; Rosenberg, 1969b; Wolf, 1958), more social isolation (Koller and Castanos, 1969; Rosenberg, 1969b), greater shyness and diffidence (Walton, 1968), and less affiliation (Pryer and Distefano, 1970). Contrasting reports from Harris and Ives (1947) and MacAndrew (1967) suggest that they are less socially disturbed than neurotics.

(d) Problem drinkers are more field dependent compared with psychotics (Witkin et al, 1959) and a group of psychiatric patients (Witkin et al, 1954, p.338).
(e) Problem drinkers are more aggressive (Holzberg et al, 1955; Rosenberg, 1969a,b; Williams et al, 1971).
(f) Problem drinkers are anchored in the present rather than looking forward to a more remote future (Foulks and Webb, 1970 ; Voth, 1947; 1965) and lacking in persistence for long-term goals such as educational ones (Rosenberg, 1969b), as well as being less socially competent (Levine and Zigler, 1973).
(g) Problem drinking is significantly more frequently associated with crime, excluding inebriety-related offences (Guze et al, 1962; 1969; Robins, 1966, p.243), and drinkers are less conservative, i.e less respectful of established conventional ideas (Walton, 1968); they also claim to have been disciplinary problems in school (MacAndrew, 1967; Rosenberg, 1969b).
(h) Problem drinkers tend to have been separated from parents more frequently, before the age of 15 (Rosenberg, 1969b), and to report rejecting or antagonistic fathers (Rosenberg, 1969a,b).

7. Evaluation of extant work renders equally plausible the null hypothesis being investigated in this thesis and its suggested possible alternative, though there are many suggestive leads worth following up. The literature survey indicates that the following improvements should characterize future research:-
(a) Wide sampling, to ensure adequate representation of the drinking population and to allow for variation.
(b) Substantial numbers of subjects must be used, to allow for the possibly diverse nature of problem drinking.
(c) Replication of the study should be made before firm conclusions are drawn.
(d) Criterion groups for comparison should be selected not just for availability but for relevance in illuminating possibly important differences between groups - e.g. abstainers within the temperance movement, and psychiatric groups who are by definition under stress but who do not drink pathologically. Use of "normal" groups alone is unlikely to elucidate possible aetiological differentiae.
(e) The research design should include a means of establishing the antecedent or consequent nature of at least some of the variables found.
(f) Objective experimental measures should be developed and applied. Reliance on inventories alone is unwise - though as adjuncts and "fact finders" they are invaluable - and subjectively scored projective measures are too easily influenced by the experimenter's expectations.

B. Specific Leads Emerging from the Literature Survey:

The following aspects emerge as supported possibilities for identifying personality correlates of problem drinking:-

1. Exaggerated independence and masculinity as defensive reactions to anxieties over underlying dependency needs and masculine inadequacy.

2. A concomitant of the above defence might be a pronounced interest in males and male activities, with diminished investment in the heterosexual role.

3. Severe interpersonal difficulties, problems with establishing or maintaining close and satisfying interpersonal relationships, avoidance of close relationships with emphasis on superficiality and short-term encounters.

4. An undifferentiated ego functioning as the matrix in which conflicts might be embedded.

5. Augmented aggressiveness, poorly controlled and erupting into the social sphere.

6. Inadequate ego functioning in terms of self-criticalness and self-management, associated with emphasis on living in the present, without long-term planning for distant goals.

7. A concomitant of inadequate self-criticalness and self-management would be under-socialization, unconventionality, impulsivity, with conflicts "spilling over" into the social sphere where external controls have to be imposed.

Also worth follow-up is a possible background of overt parent-child-relationship disruption, especially father-failure, which might be related not only to actual structural deficits in personality development but to the learning of shared conventional patterns of responses.

P I L O T S T U D I E S

FIRST PILOT STUDY

INTRODUCTION:

The material out of which this thesis developed was accumulated by the writer during one year of observation of and participation in weekly group therapy sessions at the Salvation Army's home for alcoholics in Wellington, "The Bridge." Material from "The Bridge" is unavoidably unsophisticated and non-statistical; it was originally gathered during clinical sessions and at these sessions it was not always possible to take notes. Hence, much that should have been recorded probably was not. Moreover, the population was constantly changing. It is therefore possible to adúmbrate trends only. Although such data gathering is open to mordant criticism, this seems not an adequate reason for its omission.

The material quoted was written down by the writer as it was spoken at these meetings; some of it was tape-recorded when patients requested individual interviews and were seen in the rooms of Alcoholics Anonymous.

SAMPLE:

Approximately 17 men were housed at "The Bridge" during the course of a week, but an additional 8-18 AA members often arrived to participate in the therapy sessions. Numbers present in any one session, therefore, could vary from 15 or so to 25 or 35. Some idea of the characteristics of this population can be gleaned from the following table for the first 100 patients admitted in 1963, the year the writer first worked there.

TABLE 1.1

Age, Educational, and Occupational Status of the First 100 Alcoholics admitted to "The Bridge," 1963*

Age:	43 years	
Education:	2 no formal education	
	32 primary education (about 5 years)	
	64 secondary education (about 2 years)	
	2 university education	
Occupation:	36 labourers	5 storemen
	8 cooks	2 miners
	2 nursing orderlies	1 woolclasser
	2 carpenters	1 hairdresser
	1 plasterer	2 sawmillers
	3 business executives	3 fitters
	2 travellers	2 public servants
	3 drivers	1 baker
	10 seamen	1 butcher
	5 painters	2 engineers
	1 doctor	3 clerks
	1 bricklayer	3 self-employed businessmen

Age at which drinking commenced ranged from 5-29 years with an average of 16½ years, 10% had used drugs excessively, in addition to their problem drinking, and 4% were hospitalized more than once for drug addiction. 50% of the sample had received treatment prior to entering "The Bridge" - 26% on Roto Roa Island, 38% in public hospitals, 6% in private hospitals, and 46% in psychiatric institutions. 9% had been in trouble with the law. 52% preferred beer, 40% preferred hard liquors, and 8% wine. 19% had taken non-beverage alcohol such as methylated spirits more than once.*

MEASURING INSTRUMENTS:

Clinical interview material, and material derived from group therapy discussions.

In the second Pilot Study, statistical data covering the areas adumbrated in anecdotal form in this first Pilot Study is presented. In this study there was no way of reporting even the percentages of subjects who expressed particular views since the data are not mutually exclusive; this omission was rectified in the second study.

*Figures extracted from "Fourth Annual Report from 'The Bridge,' 1963."

RESULTS:

The material has been categorized into areas relevant to those arising from the literature review and the aims of this thesis.

(1) Dependency:

Some of the men made statements suggestive of dependency, but they were admittedly in a minority. One timid fellow told the writer, "I'm not a man without alcohol. My trouble is I need constant praise from my wife for everything I do, such as shifting a chair for her or washing up. I have to drink, to give myself confidence. If she doesn't praise me I get to feel I'm no good, very tense, and I have to drink then. Sometimes my wife begs me to give it up for the sake of the children ... I love my children, of course, but I know I'll never manage without alcohol. I'm not a man, not a complete man, without it."

One subject complained that although he had often been arrested, "They never fed me." He stressed that alcoholics should have a "sponsor," somebody "on tap" for them, to help solve problems.

One man who had been raised in an institution and many times gaoled as an adult, said that 70% of prisoners he had known had committed offences "just to get back inside, to get looked after." They "could not make it" on their own. Another who now has a permanent job necessitating his living in a hospital, said, "I got institutionalized - I got to like returning to hospitals. In there I felt secure and never needed a drink." Another had had many men "adopt" him - provide him with a bach in their garden or a room in their house, even giving him pocket-money when he was down and out. He always repayed this with sudden drinking "when things are going well." This might be interpretable as a defensive rebellion against the dependency implicit in being treated as a child.

One individual had been in the habit of consuming two sherries with his mother, every night before tea. One evening they had been to a film and she entered the house while

he garaged the car. When he came inside he found her sitting dead in a chair. From that night onward he would sit at the table as usual, with the two sherries, but the two would become four, the four fourteen, and this would go on for most of the night. He always drank sherry, and always the brand he and his mother used to have. (Information was obtained from the subject's only friend).

One man and his wife, with whom the writer worked for a short period, had a dependent relationship with each other such that neither could live with or without the other. The wife (at one time a dexamphetamine addict) would do nothing to establish any separate independent existence for herself, yet she complained constantly that this was the husband's fault - he had ruined her nervous system, made her unfit for any activities, left her without any tension tolerance, and so on. She periodically asserted her independence and deserted him, complaining that he and the children had "swallowed my personality," but always returned "because of guilt" over the children or knowing "that he can't manage without me." In fact she could not live alone and while away would seek out other men, supplying her husband with details of her sexual acting out when she returned. For his part, the husband said he wanted her to "live her own life" yet whenever she took a step toward it - such as finally being prodded by the writer into joining a W.E.A. evening class and attempting to gain a small qualification toward a career - he panicked. Once, when she was almost forced by the writer to attend the class, the husband phoned as soon as she had departed, saying that she must have her own life, he was glad she had gone, etc., but pretty soon he began wondering if she would desert him and run off with another man, might not come home at all, etc., and finally he admitted that he felt quite disturbed to be without her in the house. He talked for over an hour on the phone - about as long as the wife was away! Once, when she deserted, he phoned to say that this time he had had enough, he was going to divorce her "even though she is sick and needs me," but that he would give her the 28 days the law allows before bringing proceedings against

her. The writer called his bluff, saying she had a legal friend who could arrange for proceedings to commence immediately, but he replied in tones of horror that he could not possibly do such a thing to her and would give her the full 28 days. He knew full well, as did the writer, that she would be back on the evening of the 27th. day - and she was! Once, when he had been persuaded to try Antabuse and had remained sober for two weeks, he came home from work every night to find her intoxicated! In fact, though, he seldom worked, always claiming a bona fide reason for financial dependence on the State: his back had cracked up, or his knee-cap was playing up again.

In other men the rebellion seemed to have the upper hand. Some reported sobriety just to prove the wife wrong when she spoke of dependence on alcohol. One left home at 17, saying he wasn't going to be tied to his father's apron. Another drank heavily when his wife went away, not because he missed her, he said, but just that he "got off the chain." A woman friend of one always praised him for attempts at sobriety, which infuriated him because it made him feel a "good boy" instead of tough, masculine, and independent. One had a horror of being tied down with women; he said that virgins whose maidens he had taken always became "too demanding afterwards," "too possessive," "all over" him. He said that love is a state of bondage but that it can be free if the lover wants to do those things for the beloved that feel like bondage to the man who does not love. One should not really hold opinions because these "imprison one's thoughts." Another complained of his love life, "Women always want to hold you, they won't let you go afterwards."

The refusal these subjects showed to have anyone control their drinking, make them reduce it, or in any other way control their lives, might be seen as an assertion of autonomy, of independence. Several were observed to press the writer, or someone else, into making a statement and would then compulsively disagree with it; one said he always steeled his mind against agreeing with others' opinions and another, after almost forcing a statement from the writer about his

future, replied, as she knew he would, "Now that you have said I should enter hospital I feel inclined to do just the opposite."

(2) Masculine inadequacy, preference for males:

Homosexuality was a subject never raised at therapy meetings nor spontaneously referred to by anyone, nor were sexual difficulties ever discussed except by one individual in private sessions. The only statement that could be construed as indicating a preference for males came from a subject who said he had changed from Catholic to Protestant faith because God, as he saw him, was a male and women should not be mixed up with religion.

There was always much discussion about "drinking other men under the table" and so on. One said he had always since adolescence sought the toughest and heaviest-drinking men to drink with and that he derived great satisfaction from out-drinking them. Altogether, 27% claimed to become more grandiose and exhibitionistic when drinking.* There was much use of the label "alcoholic," which seemed to give the individual a sense of identity and ego integration as a worthwhile male: this often took the primitive form of boasting about how much liquor could be held at a sitting, the amount of money spent on it, how other men were forced to admit themselves "under the table" before this one was, etc., including usually a quite boastful parading of all the "disgusting and truly alcoholic" things done under the influence of alcohol. One, meeting the writer for the first time and learning she was a psychologist, launched immediately into, "Well, Carol, you're looking at a real alcoholic. I was the worst ... but since 1959 my life has changed... I'm a saved man, saved by Jesus ... I used to be the meths king of New Zealand." After only one or two drinks he would think he was a marvellous singer or entertainer. The contrast between the feeling he conveyed - that he was really somebody quite special by virtue of alcoholic status - and the dingy, foul-smelling, poverty-ridden back room of someone's house where the "King" lived, to which the writer was once invited, was heart-rending.

* Figures extracted from "Fourth Annual Report from 'The Bridge,' 1963."

The need to be "somebody" was marked. One man brought papers from his office and spent an hour going over such details: the writer learned at which desk the man sat, what he had for lunch and the hour he had it, and so on, reminiscent of a young child whose mother has visited the school, saying, "That's my desk, that's my teacher." The need to display a worthwhile self sometimes took the form of dropping the names of important people casually into the conversation as if they were personal friends, or the claim might be made that no other alcoholic had been helped by so many important people - specialists, cabinet ministers, and so on - or photographs of the family estate and the three cars he used to possess might be produced. One subject's satisfaction derived largely from his having been arrested more frequently for alcoholism than any other New Zealand drinker. He actually managed to get his name into the newspaper for holding this record. One man boasted of how he had spent on drink, in a matter of months, the $36,000 from the sale of his farm. Others could not understand why they were not promoted to executive status after only a few months in a job. A frequently expressed view was that the alcoholic, when sober, was somehow so much better to have around, had a greater capacity for work and so on, than the non-alcoholic worker.

(3) Schizoid interpersonal difficulties, bizarre ideation, etc:

Perhaps the most outstanding characteristic of the "Bridge" population was the disturbance in interpersonal relationships. Patients showed very little warmth in relating to one another, very little understanding of, and considerable hostility toward, one another, and extreme difficulties in establishing or maintaining close relationships. Many also manifested definitely odd behaviour or queer ideation, such as magical beliefs, that almost bordered on the psychotic.

Interpersonal relationships appeared to provide these men with little satisfaction, for they were too fraught with hostility or lack of concern for the other person, or made impossible by shyness and inferiority feelings or by the rebellion against the dependency implicit in relationships,

with a fierce rejection of being tied down to wives and family responsibilities, friends, or jobs. Most agreed they found it difficult to make friends, that drinking friends were not close friends, and that they felt this to be why so many simply took to their beds at weekends, not knowing what to do with their time. They complained of always being "loners," feeling tense and embarrassed when with people. One said, "I've never been able to talk, never. I try but I just can't talk in groups." Another said, "I wouldn't go anywhere if I had to mix with people. I could do things on grog I wouldn't attempt when sober." Some complained that the "Bridge" should arrange socials for them, to help overcome these inhibitions. The Manager therefore arranged a picnic, but when he turned up - on his day off - to drive them to the location, no-one had arrived! On another occasion they pressed for the establishment of a bowls club. He arranged this but on the opening night no-one would walk the 500 yards down the street to it! Again, they pressed for the establishment of a workshop, but when this was taken seriously they all backed down, protesting that the difficulties would be too great, too much effort would be involved, etc. Altogether, 22% claimed to drink to avoid loneliness, and 31% claimed to be more active and friendly when intoxicated, only 7% feeling they became more withdrawn when drunk.*

In some, however, withdrawal was pronounced when they drank. These men would become furious if spoken to or, in one case, even if smiled at. They were in a minority, though. Some preferred isolated occupations such as crane-driving or lighthouse-keeping, or isolated hobbies such as glider-flying. There was an almost schizophrenic tendency to drop relationships if these seemed threatening. One uncouth and unfriendly individual suddenly became approachable and phoned the writer three times in one week to discuss his problems. The following week the writer arrived at the group session with a chill, and instead of remaining there the whole evening - and spending it with him, as he possibly expected - she went home after one hour after explaining to this man that she was ill. Although he must have discerned her hoarseness, his face was positively murderous as she left and he never again

*Figures extracted from "Fourth Annual Report from 'The Bridge,' 1963."

spoke to her or acknowledged a greeting. On other occasions a man would spend a freezing winter's evening in the writer's car for private discussion of some problem, sometimes till one a.m. or later, and would depart with the warmest of thanks for help, only to behave the following week as if we had never met or worse, to publicly insult the writer, ridicule her comments during a therapy session, etc. One man returned from the South Island where he had been for a year, to spend an evening at "The Bridge." He was leaving next morning, probably never returning again to Wellington, and had come just to say his farewells. He was pleased to see the writer and we spent a pleasant evening together discussing his progress. However, when it was time to depart and the writer rose to her feet, instead of saying the usual things one says when one expects never to see a friend again, this man rushed to the door, shouted over his shoulder that it had been nice seeing the writer, and disappeared into the night before she could utter a word! Apparently, the idea of a parting tinged with any emotion at all was more than he could tolerate. Forming friendships readily but suddenly breaking them was characteristic of this man.

Another section of the patients expressed queer ideation or odd behaviour. One sat in an almost catatonic stance and was never observed to move (or speak) during sessions. He had been a lighthouse keeper all his life. Another would become incoherent while speaking, darting his eyes furtively in a paranoid fashion round the room, and would finally break off with the statement that some days one could not talk, one had to be in the mood. Another man always spoke as if delivering lines from a play, theatrically and with appropriate dramatic gestures. The writer later learned that he had once been a considerable success in a Noel Coward play and had never stopped playing the role. One man complained that he could not talk without a chair between himself and his listener, which he would place there and rock back and forth while speaking. Another used to rub his eyes until they were red and raw as soon as speech commenced, while stuttering severely, and several others had mild or severe

MASSEY UNIVERSITY
LIBRARY

speech impairments. One used to pull violently at his nails and skin while speaking, almost tearing bits off himself. Another used to hand the writer a cup of tea while standing like a statue, about two feet away, with the cup at the end of his stiffly extended arm, unsmiling. One had a violent eye tic. Another always covered his mouth when speaking, so that he could barely be heard, and another made peculiar biting movements at the smoke he exhaled, sometimes doing this when not smoking! One had the fixed idea that if a bus conductor gave him "small change" - pennies rather than silver, or silver rather than notes - it meant he was being considered inferior and he would seethe with hatred. One with a long prison record suddenly became converted and would answer questions only by Biblical quotations, referring to the Bible to see what God had said on the topic.

One man was convinced he was psychic. During the war he would have premonitions of danger and would move from where he was standing, to see his post being destroyed seconds later by enemy fire. Once he felt he should not go on a scouting trip; the members of this were, of course, ambushed and killed. On another occasion a voice commanded him not to commit suicide when he was about to do so. In a religious conversion experience he felt he was entered by the spirit of God; he was very literal about this experience for when wanting "inner peace" he would mutter, "Out, Satan; in God," or ask of his Higher Power, "Well, what do you want to do with me today?" He always conferred with God, when chairing a meeting, about what he would say, how problems would be handled, etc. Before his conversion he felt empty, superficial, but he " ... realized that Christ was the person I'd been seeking when I drank, that He was the material representative of God the spirit." His aim was to live in life eternal with this spirit. "God is perfect, man imperfect, so man can talk to God only through Christ because he won't receive messages from anybody else." He also showed some ego splitting; he spoke of a part of himself that "goes away at times" - when women got too possessive, for instance - and said he felt relaxed and languid when it

returned. "Are there two minds? ... If I am only one person, yet some part is observing another, what is this other? It can't be me."

Possibly associated with schizoid ego weakness was the men's horror of discovering anything about themselves. One blanched when asked to do some tests for the writer and rushed to lock himself in his room, saying as he departed that if he learned anything more about himself he would drink or go mad. Several expressed this anxiety, saying that learning about the self would drive them back drinking. One agreed reluctantly to do the tests but did not arrive; he not only left "The Bridge" but broke his probation and left the country! Several complained that if they did the moral inventory programme of AA it would drive them back to drinking, or that they avoided drinking only by constant vigilance against tension. One said, "If I get tense, the only thing I know is to rush to that bottle to get relief." "You drink to escape," said another, "but if you're an alcoholic you can't escape your nerves." A recovered one said that fundamentally the alcoholic "does not want to suffer, does not like nasty feelings." Many refused to read, saying that learning about theories of drinking might upset them; they did not wish to be concerned with their problems, preferring instead that these be magically whisked away. Typical comments were: "What good will books do you? They only stir you up and make you anxious." ... "Nobody knows the answer to anything; no-one knows the workings of the human mind; what's the point of reading somebody's theory about it?" ... "I don't believe in reading books" ... "I just wouldn't think about it; if I started thinking about my personality or my faults I'd start drinking again. I'm not interested in anything about it; I just want to stay sober and not die in the gutter." Another remarked of the 12 AA steps to sobriety, "If I started doing this programme I'd have to be thinking about it all the time. A fellow'd go mad, thinking all the time." One, determined to conquer at least some basic essentials, took over a year to read the AA book, at one page per night. Most admitted that they had never voluntarily read a book.

(4) Feelings of hostility, poor aggression control:

Aggressiveness was actually so characteristic of this population that the writer took very few notes on its expression, having very quickly become habituated to its constant presence.

Many subjects acted out their hostility without qualms. Some recalled impulsively smashing all the wife's furniture because she objected to their drinking or general behaviour; one threw a portable radio through the television screen when his wife suggested he drank too much. Another was arrested for trampling on his son's head in a fit of drunken fury; he had soiled his underpants while drunk, and on returning home he awakened his son and forced the latter to don the pants and tell the wife he had made the mess. When the son refused, the patient threw him to the ground and kicked him on the head (information was confirmed for the writer by the hospital psychologist who examined him after this event). In a later episode his wife had him arrested when he hit her over the head with a block of wood. One man owed $124 rent but had no qualms as "they" were pommies and he was "intensely anti-social towards immigrants." Others, in a general discussion, agreed that if a man had unpleasant feelings he should lose his temper "otherwise he will explode." He would be "trampled on by workmates" if he did not yell at them. One man said, "I used to feel persecuted. People had it in for me. If a person stared at me I'd bash him." Another said, "I'd get white rage inside but wouldn't show it, but I'd drink to 'fix' them; it was destructive drinking, just to punish others by killing myself." Sometimes the aggessiveness was more snide; one man gleefully related how he used to conceal his alcohol in his hot-water-bottle and consume it at 2 a.m. under his wife's nose, when she thought he was merely hugging the bottle for warmth. Another capped this story by describing how, when he lived on a farm, he used to promise his wife faithfully that he would not dismount from his horse during the day and therefore would be unable to drink; he had alcohol hidden away in all the trees on the farm, and the "funny" part of the story involved the wife's

perplexity when she knew he would not have dismounted yet had arrived home clearly drunk.

(5) Under-socialization: reduced self-control and criticalness, present-orientation, unconventionality:

The alcoholic way of life seemed not reprehensible to the majority of these subjects. Complaints about suffering from a "disease" seemed to arise only when the drinker could no longer imbibe his customary amounts without grave interference to his functioning. As one succinctly but ruefully put it, "It's a pity alcoholism always ends in gaols, hospitals or insanity because otherwise it's bloody marvellous!" Social drinking was not sought: subjects verbalized desires to reach blackouts or oblivion, entering the bar "for the express purpose of getting drunk," saying that if they ever drank again it would be to get "blind, stinking, rotten drunk," that "drink is the most important thing in my life." Others said, "I started to drink for oblivion, to knock myself out cold with spirits," or "I would love to drink again, making a big-shot of myself at parties and at the bar." One said he had decided to "really live" and then reform (stop drinking) at about 65. Many admitted that they used "The Bridge" as a sobering-up place before another battle with the bottle, while others told the writer of alcoholics who took aversion cures just to get the free liquor associated with it (how much of this was bravado is, of course, anyone's guess). Another said he never drank much at parties; when he "wanted a proper go" he would always visit a bar, "just getting tiddly" at parties not satisfying him. One complained that social drinking would be of no use to him because no feeling would go with it; when not drinking he felt "out of things, on the wrong side ... booze helps me to talk better, fight with people, refuse to pay the grocer's debts." When the contentedness of sobriety was discussed one evening, one 4-month-sober individual snorted that in his view contentedness for the alcoholic lay in oblivion, for nothing else gave pleasure except drinking. In a discussion all agreed that they would not enjoy a party without alcohol - what else was there to enjoy! One said that he would not visit a home without liquor in it: "What would be the point?" An honest

one almost had himself thrown from an AA meeting when he chose as his opening remark, "I've always wanted to be a professional piss-head." He claimed that drinking was his career, in a quite fundamental sense, and that he would probably carry on for another 6 years or so, to have a "final fling." Sadly another said, "Without drink, what have I? I go to work, eat lunch, stop at five, walk home, wait for tea-time, sleep, then go to work again." One developed tremendous tolerance and "nearly went mad when I could not get drunk." "I just love a party, just love this way of life, standing in a bar, king of the world, ordering drinks," said another. One occasionally drank socially - he was a 10-years-dry AA member - but said that these drinks "never meant a thing" to him; when he was going to "really drink" he would "clear the decks," retire to his room, lock himself in with a record-player and his supplies, and abandon himself to weeks of drinking. Any other drinks he took (and still takes) were "abstract, not part of the pattern," and so never led to so-called loss of control. In view of the intention to become drunk, expressed by so many of the men, it seems somewhat pointless to invoke such a concept as loss of control. It would also seem that from their verbalizings about drinking, outlined above, their reasons for and attitude toward it were not those of the conventional drinker.

A quite impulsive attitude, a living outside of reality at times, seemed to dominate many. They would throw over months of sobriety or abandon a long-striven-for goal just because of an argument with a fellow employee or because they "just happened to be passing a bar", or someone invited them to have a drink and they "unthinkingly" accepted. They might abandon themselves to months of drinking because sobriety had been "unintentionally" broken this way. One, abstinent many months, suddenly found himself walking to the station to catch a train for the Hutt. He did not ask himself why - there was "some kind of shindy" going on in his stomach, "a kind of screaming," he said - and it was not until he reached the Hutt and ran into some old friends that he "remembered" he always went to the Hutt for one purpose only: to drink!

One gained the impression that he was just blindly and impulsively acting out, without any reason being brought to bear on his actions at all.

With the lack of control over fate that some of these men seemed to feel went an impatience, and a kind of chance-orientation, as if the man was not quite sure what he might do next. Illustrating the impatience is the man who visited a psychiatrist every night for a week, but "At the end of the week I still didn't know what had caused my drinking so I never went back." He actually expected the psychiatrist to uncover and cure the trouble in just a few days. Another man would sit in his taxi but if he didn't get an immediate fare he would storm into the nearest pub, in a terrible temper, "unable to wait in a vacuum" as he put it. Exemplifying the chance-orientation (not being in control of events) was the remark of one made after a discussion on self-control: "A man never knows from one day to the next whether he will drink. Nobody knows, nobody can predict. You go to bed at night knowing you won't drink again but the next morning you might take a drink. I know I'll drink again" - the previous week he had said just the opposite, that he never would again - "Take murderers: they don't know they're going to do a murder; they are sane the day before." Another man said he had done the 12 AA steps and had prayed every day but that nothing had happened to cure his drinking! He had not thought of taking any steps himself to prevent it. Thus expressed is a kind of appeal to fate to intervene for the individual, or for an outer power to establish standards of behaviour, rather than an inner conviction that the self has power to determine, in some respects, the future. As one man put it, having lost faith in God in his teens he drank "because there was no God." If there was no God there was no moral law to stop anyone from injuring another; therefore, his standards of right and wrong were as valid as anyone else's. There were apparently no inner reasons for kindness - only outer laws.

An example of unreality arose when one man suddenly announced after the therapy session that he had decided to take the writer to coffee, make a pass at her, and kiss her

goodnight. She accepted the coffee. However, every time he took her to coffee he would suggest intercourse and would stamp and yell, albeit somewhat playfully, when she pointed out that her position at "The Bridge" was that of psychologist, not nubile female. He finally came round to thinking that perhaps, after all, what one wants to do may not be what one should do, though it felt as if it were! The writer later learned that he believed she had coffee with him only because she was secretly in love with him - though she had made her position abundantly clear - and that he was sure she would never ultimately let her husband and children stand in his way!

Subjects seemed to have great difficulty appreciating their effect upon others, revealing thereby their defective self-criticalness. One said that he had to be always right, never wrong. When asked how it came about that his wife had tolerated his appalling behaviour at home for so long he snorted, "Tolerated it! What do you mean? She hasn't the right to criticize, she's only my wife ... a man has to be master in his own home!" He went on to say that he always did as he pleased, which involved treating his wife and five children as if they had no rights at all. He was shocked into sobriety when the older children finally confronted him, telling him they were too ashamed of him to bring their friends home and that they wished him to leave. It had never occurred to him that they had any thoughts about his behaviour at all! Another man drank heavily every day, broke things in the home of his married sister (with whom he lived), vomited on the carpet, passed into stupor in front of her two young children, yelled and screamed when crossed, and finally set fire to his bed one night while intoxicated. He could not understand the "miserable attitude" of the husband who finally asked him to find lodgings elsewhere. It eventually dawned on him, however, what effect he must be having on them and this shocked him into attempted sobriety. He still recounts this episode in a tone of great puzzlement as to how he could have failed to understand his effect upon others. One man sold everything he owned to get alcohol, remarking of this that he had "no sense of responsibility at all." In similar vein but this time a benign example, a man chairing an AA meeting which extended

well beyond the usual evening time quipped, "Who would like eggs for breakfast?" His joke was well received, but an hour later he was still circulating, asking who would like eggs for breakfast and expecting the same laughter. It seems to the writer that these anecdotes illustrate this outstanding lack of self-criticism in the drinker, his almost total unawareness of the effects he has upon others. His discovery that others are aware of him and respond to his behaviour seems to arise almost serendipitously, if it arises at all.

Recovering subjects often realize how egocentric they have been, and how little they have understood the rights of others. One remarked, "The alcoholic's 'I' is very marked; we always think 'I want.' It takes years to realize others have the same wants ... in the old days, what I wanted, that was it." Another commented, "Self-centredness is the root of my trouble ... I had to lose the 'alcoholic ego'." Another drank "because the world didn't recognize how wonderful" he was, a view for which he later developed considerable healthy shame.

DISCUSSION:

The most outstanding characteristics of this problem drinking population seemed to be the disturbances in interpersonal relationships, lack of self-criticality, acceptance of unconventionality, and reduced impulse management with small regard for future reality consequences of present actions. Withdrawal, avoidance of interpersonal closeness, refusal to be tied down, feelings of uniqueness, and mildly bizarre ideation such as magical thinking were frequently demonstrated. Preoccupied with his own difficulties and needs, the drinker tended to act out without consideration for those few significant others who might be in his life, treating them as lesser beings or "things" without rights or feelings of their own, discharging aggressive tension and other feelings impulsively, and undeterred for as long as possible by reality consequences - a personality constellation whose recognition is really implicit in AA thinking, namely, the idea that drinkers must reach "rock bottom" before making a

serious effort to change their life-style.

Very little material was recorded that clearly related to dependency needs, or to preferences for males other than that there was abundant evidence for pleasure taken in out-drinking other men, and being "the worst alcoholic" clearly enhanced feelings of worthwhileness as a male. However, the personality disorder permitting socially deviant eruptions of motives, rather than the motives themselves, appeared to be more readily demonstrable.

It cannot be too strongly emphasized that anecdotal and clinical material probably does not paint an entirely reliable picture of events, conveying as it does the impression that all subjects felt this way about such-and-such. The changing population made it quite impossible to estimate how many of the men would have verbalized views similar to those quoted, if given the opportunity, though it is also true that most of the material was gathered during discussions in which most subjects participated, and not just taken from a few good talkers. It is also possible that other workers would categorize differently the material reported.

CONCLUSIONS:

The conclusions drawn from this seminal study are combined with those of the second Pilot Study and presented at the end of that study.

PILOT STUDIES

SECOND PILOT STUDY

INTRODUCTION:

The aim of this study was exploratory, to serve as a base for further study of general personality characteristics of problem drinkers; to obtain a general picture of difficulties likely to be encountered in full-scale testing; and to develop and improve a biographical data questionnaire. A group of problem drinkers was compared with a group of normal controls, in terms of those personality and demographic variables relevant to the aims of this thesis.

SAMPLE:

The patient sample comprised 24 male problem drinkers - 15 diagnosed as alcoholics from Queen Mary hospital, Hanmer Springs, and 9 males from one Alcoholics Anonymous chapter in Wellington. 28 males were in residence at Hanmer but 7 were medically unfit for testing, leaving a total of 21 available. Of the AA subjects the number attending this particular chapter varied from 8 to 15.

Hanmer patients are most likely representative of other drinkers in New Zealand hospitals of this type. According to the Superintendent (personal communication), "Patients are admitted here from all parts of New Zealand. We have no screening procedures ... All types of alcoholics are accepted. However, we endeavour to exclude ... those who are brain-damaged, mentally subnormal, and the so-called psychopathic personalities, i.e. those who are unable to profit from the treatment experience."

Controls were 12 males from a large manufacturing concern, none of whom had ever been in treatment for drinking or for psychiatric illness. On testing, one was found to be a latent psychotic, and one admitted to being a homosexual.

Originally, 30 problem drinkers and 18 controls were in the research design, but preliminary surveys indicated that male and female drinkers presented somewhat differing profiles, suggesting that combining sexes into one group was inadvisable. Unfortunately, this left only the smaller groups of 24 male drinkers and 12 male controls available for comparison. Furthermore, the group of current drinkers (hospitalized) was found in some respects to differ from the currently non-drinking AA subjects, so that these groups can be combined only with caution. A further reduction occurred when one AA and 3 Hanmer subjects failed to complete the MMPI. Statistical results for such small groups can be interpreted only with the utmost caution. Two-tailed t - tests were employed on these groups, and in some cases chi-square tests were used, but often numbers were too small to permit the latter test.

The problem drinkers and controls differed educationally, as can be seen from Table 2.1. More controls than drinkers had completed college to examination level or had attended for four years, compared with drinkers' tending to leave after one or two years. As in other studies (see p.75) drinkers tended, therefore, not to have completed educational requirements. In age and years of education these N.Z. drinkers are comparable to those in other studies (e.g. Fitzgerald, Pasewark and Tanner, 1967; Fowler, Teel and Coyle, 1967; Goss, Morosko and Sheldon, 1968; Jones and Parsons, 1971).

In the Hanmer group drinking had been a problem for an average of 20.0 years (range 3½-28 years), and in the AA group 15.0 years (range 10-35 years). The Hanmer patients had an average length of sobriety of 8 ½ weeks (range 1-13 weeks) and the AA subjects 5.0 years (1¼-10 years).

TABLE 2.1

Population Distribution by Age and Years of Education

	N	Mean	S.D.	t	p
Age, PDs	24	45.25	10.52		
Age, Controls	12	47.83	10.25	0.700	N.S.
Educ., PDs	24	10.64	2.37		
Educ., Controls	12	13.08	2.87	2.703	<.02

21% of drinkers (5 subjects) had only primary education, compared with 17% of controls (2 subjects); 67% (16 subjects) had some college education, compared with 42% (5) of controls; and 13% (3) had some university education, compared with 42% (5) of controls.*

MATERIALS:

Measuring instruments included the MMPI, Machover Draw-a-Person test (Machover, 1949), the Object Relations Technique (Phillipson, 1955), the Rorschach test, and a Biographical Data questionnaire developed by the writer (only the revised version of this, which was used in the main study, is shown in the Appendix, p. 389). As only two of these measures were used in analysis of results, only these are described.

The MMPI was selected because it was felt that in view of controversy over the diagnostic characteristics of problem drinkers, scales developed from differential item endorsement by various psychopathological groups might prove useful in indicating subjects' resemblances to other groups. The extensive use of the MMPI elsewhere would enable useful comparisons to be made for the N.Z. sample, it was felt, and various other scales relevant to the aims of this thesis (dependency, hostility) could be derived from it.

The questionnaire was designed to provide demographic information, as well as to further explore those leads emerging from the "Bridge" study. It specifically enquired into presence of personality disturbances both current and retrospective (feelings of inferiority, worthlessness, alienation, difficulties in relating interpersonally); criminal record and other sociopathic trends; marital and occupational stability; educational level; and conscious

*All percentages have been rounded to the nearest whole number throughout this study.

reasons for heavy drinking. A section on family background was included, based on the Multiproblem Family Index of Bloch, Behrens, Guttenberg, King and Tendler (1959), which provides information on the parents' impulse control: it enquired into parent-child separations and their cause, parental problem drinking, parental sociopathy or mental illness, parental incompatibility, and parental cruelty. The BDQ was designed as a simple, open-ended, unsophisticated exploratory type, to elicit free responses providing leads to be later followed up. Its aim was to encourage subjects to discuss themselves and their background freely, and in the hope that superior rapport would promote more honest reporting, this instrument was administered after completion of all other measures.

Only MMPI and BDQ results are reported. Problem drinkers found the Object Relations test too difficult and many refused to complete it, while others confined themselves to descriptive details only; the Machover proved too difficult to score objectively; and as the Rorschach was not controlled for bias at either scoring or production end it was used only to assist the writer to clarify her ideas.

RESULTS:

TABLE 2.2

Means and Standard Deviations for Groups Compared on the MMPI Scales

Scale	PDs	S.D.	Controls	S.D.	t	p
N	20		12			
K	12.55	3.59	18.50	4.79	3.999	<.001
F	7.75	3.38	3.91	2.23	3.482	<.005
Hs	55.55	10.00	52.50	5.03	0.979	N.S.
D	63.85	13.02	57.33	8.16	1.554	N.S.
Hy	55.95	7.10	57.25	5.10	0.552	N.S.
Pd	60.60	10.11	46.00	8.69	4.157	<.001
Mf	62.65	10.51	65.63	8.59	0.825	N.S.
Pa	58.85	11.18	50.50	7.32	2.298	<.05
Pt	60.20	10.94	52.16	5.87	2.338	<.05
Sc	59.50	14.73	52.91	7.95	1.422	N.S.
Ma	63.30	9.47	53.16	8.54	3.034	<.005
Si	54.30	8.17	50.16	6.29	1.501	N.S.

Note: All t-tests are two-tailed.
4 PDs did not complete the MMPI.

TABLE 2.3

Comparison of Hanmer and AA Subjects on the MMPI Scales

Scale	Hanmer subjects' Mean	AA subjects' Mean
N	12	8
K	11.6	13.8
F	8.0	7.2
Hs	57.8	52.1
D	68.4	57.0
Hy	56.6	54.8
Pd	57.7	64.8
Mf	61.6	62.8
Pa	59.4	58.0
Pt	61.2	58.6
Sc	57.4	62.6
Ma	63.4	60.6
Si	56.5	51.0

It is apparent from Table 2.3 that the Hanmer and AA groups cannot be regarded as entirely homogeneous, AA subjects having greater elevations on scales Pd, Mf, and Sc, and being lower on Hs, Hy, D, Pa, Pt, Si, and Ma; they were also elevated on K (defensiveness). It might be expected that subjects just becoming sober would have elevated Depression scores, as the Hanmer patients did, but the elevated Pd and

Sc scores of the AA group, together with a Pa and Ma score only just below that of the Hanmer group, would indicate severe psychopathology in this abstaining group. There is no evidence here that abstinence is associated with reinstatement of a premorbid normal personality.

Table 2.2 indicates that scales F, K, Pd, Pa, Pt, and Ma were those which significantly discriminated between problem drinkers and controls, with drinkers obtaining elevated scores on all scales except K (defensiveness). MMPI scoring patterns for alcoholics in other studies, reported by Button (1956b), Hampton (1953) and Hewitt (1960), indicate many similarities with the N.Z. drinkers, with elevations on Pd, Ma, D, Mf, and Pt. U.S.A. samples show greater elevations on Pd, usually. In no study did the "neurotic triad" form the highest points. Hedberg, Campbell, Weeks and Powell (1975) have commented that elevation on "psychotic triad" scales is a fairly common finding amongst alcoholics, and according to Hathaway and Meehl (1960, p.139), Ma elevation alone is not uncommon in alcoholics, manics, and conduct disorders (the N.Z. group's greatest elevation was on this scale, together with D), while elevated Pd and Ma scales together are characteristically not associated with psychoneurosis but with more serious disorders such as psychopathy, mania, and some forms of schizophrenia.

Comparison of the N.Z. controls with U.S.A. samples (Gough, 1960a; Hampton, 1953; Schmidt, 1960) reveals that they are not dissimilar, despite the group's smallness, with the exception of the Mf scale. That Mf should be elevated in the N.Z. group is not surprising, in view of their artistic and intellectual background. Controls consistently tended to have low points on those scales on which drinkers showed the greatest elevations: Pd and Ma.

MMPI material and BDQ results will be considered under the separate headings derived from the literature survey and in line with the aims of this thesis: (1) Dependence/ independence conflict, (2) Inadequate masculinity, emphasis on hyper-masculinity, (3) Schizoid interpersonal difficulties, superficiality, (4) Augmented aggression and poor control of it, (5) Under-socialization, impulsivity, unconventionality,

(6) Overtly disrupted child-parent relationships.

(1) Dependence/Independence conflict:

Statistical Results:

TABLE 2.4

Means and Standard Deviations for Groups Compared on Navran's MMPI-derived Dependency Scale

	N	Mean	S.D.	t	p
PDs	20	24.20	9.63		
Controls	12	12.50	8.07	3.523	<.005

Note: Hanmer PDs obtained a mean of 26.80, and AA PDs a mean of 20.20.

The writer originally intended using the Navran scale as a measure of possible denial of dependence (high independence scores) while the Object Relations test was to have provided a measure of covert dependency, but the drinkers' futile attempts to construct scorable stories eliminated this latter instrument. Measurement of conflict was thus reduced to admission of dependence. Contrary to contemporary theorizing, elevated dependency scores were produced by the drinkers, rather than denied, as Table 2.4 indicates, though this was much more marked amongst the hospitalized than the AA drinkers. In Navran's (1954) study, neuropsychiatric patients obtained scores in the vicinity of 26.6, while alcoholics tended to score in the range of 20.0 to 22.9 (Button, 1956b; Mozdzierz, Macchitelli, Conway and Krauss, 1973; Rhodes and Yorioka, 1968), the only exception to this being a subgroup of alcoholics studied by Mozdzierz et al (1973) who remained in treatment rather than terminating it against medical advice and who obtained the much higher score of 28.4. Scores tend to range from 15.19 to 19.41 in normal and standardization samples (Navran, 1954; Hathaway and Briggs, 1957), so the N.Z. controls would appear to declare themselves to be more independent than controls in other studies, while the N.Z. drinkers' scores tend to approximate those of drinkers elsewhere.

Not much has been done on construct validity of the Navran scale, but Mattocks and Spencer (1971) confirmed some relationships between scores and the joining of supportive versus competitive clubs in a prison population; Zuckerman, Levitt and Lubin (1961) found correlations between scores and ratings of dependency; and Pruitt and Van de Castle (1962) found greater dependency scores in chronic unemployed employables than in nonchronic unemployed employables, as would be expected if the scale were tapping self-supportive capacity.

If cigarette smoking can be regarded as an expression of need for reliance on external substances for support and reassurance, the drinkers could be regarded as dependent on such a source, as Table 2.5 reveals.

TABLE 2.5

Means and Standard Deviations Comparing Groups on Number of Cigarettes Smoked Daily

	N	Mean	S.D.	t	p
PDs	20	41.0	20.55		
Controls	5	19.0	12.44	2.269	<.05

92% of the drinkers smoked (including pipe smokers) and 50% of controls. Not only were significantly more cigarettes smoked daily by the drinkers who smoked, but significantly more drinkers than controls smoked either cigarettes or pipes (22 drinkers, 6 controls, $df = 1$, $X^2 = 5.80$,* $p<.02$). These findings of very heavy smoking amongst problem drinkers are in agreement with those of Dreher and Fraser (1967; 1968), Holloway (1969), Maletzky and Klotter (1974), and Walton (1972).

With the expectation that exaggerated needs for independence would be associated with early breaking of ties with parents, groups were compared on ages of leaving home.

*All chi-squares are corrected for continuity, and df = 1 in all chi-square tables, including those in the main study.

TABLE 2.6

Means and Standard Deviations for Groups Compared on Age of Leaving Home

	N	Mean	S.D.	t	p
PDs	24	19.77	5.78		
Controls	12	19.75	3.04	0.011	N.S.

Table 2.6 indicates that there were no significant differences between the groups with regard to age of leaving the parental home.

Clinical Material:

There was a difference in what might have been passivity between the two groups, in terms not only of having some ideas about what to do with their lives but actively taking realistic steps toward the goal. 58% of the drinkers and 67% of controls had strong ideas about what they had wanted to do with their lives when they left school, but whereas 42% of the controls succeeded in achieving their goals only 21% of the drinkers had done so.

Several subjects spontaneously made comments about their need for support, from drug supplies or from parents and parent surrogates. No. 24 said that his greatest fear was, and still is, that he might run out of supplies; he has to keep three to four bottles of wine in his room, even when currently not drinking. No. 7 expressed similar feelings: "I wouldn't stay in the house if there were no cigarettes ... the alcoholic's big ego; he always has to feel he has more than anyone else, that he couldn't possibly run out of supplies." This subject went on to add that his mother had always over-protected him and that now he protects himself by "pulling an alcoholic blanket over my head." No. 3 repetitively ran away from Boys' Homes and back to his mother; one of his worst memories was of his mother telling the Welfare Officer, in front of him, that she no longer wanted him. No. 8 said that prayer was important because he had to accept that he was "Someone who couldn't run the universe and who needed constant help." He told the writer about another in her group who used the baby's potty when intoxicated and expected his wife to empty it! No. 14 experienced his religious

conversion on Mother's Day and felt "in contact." No. 15 said, "I gulp everything quickly; tea, etc." One 54-year-old man's eyes watered when he spoke of his mother's death years ago: "It was my first real blow" (No. 19). No. 23 commented, "Mother was the best friend I ever had."

25% of the drinkers (none of the controls), when asked to name two of their earliest memories, produced memories of loss and anxiety over it: "My mother going away to have my brother and me crying at the front door and being comforted by my grandmother" (No. 1). "Mother was going to leave me at a camp with my father. I was terrified and screamed to be taken home" (No. 4). No. 9 recalled being weaned at 14 months of age and bawling for the breast. No. 10 recalled being taken away from his parents by his grandparents when he was 3. "My brother being killed ... when I was 3"(No. 12); this subject also remembered a "girl who used to nurse me." No. 22's memory was "My mother's funeral when I was 4."

(2) Inadequate masculinity, compensatory interest in males and male activities, emphasis on ultra-masculinity:

Here again it was hoped to use the MMPI Mf scale as a measure of overt masculinity and the Object Relations test as a measure of covert masculine inadequacy and passivity, with the latter test possibly indicating greater interest in males than in females, but only the former measure proved scorable.

Statistical Results:

TABLE 2.7

Means and Standard Deviations for Groups Compared on the MMPI Mf Scale

	N	Mean	S.D.	t	p
PDs	20	62.65	10.51		
Controls	12	65.63	8.59	0.825	N.S.

Note: Reference may be made to Table 2.3 for separate scores for Hanmer and AA problem drinkers.

From Table 2.7 it would seem that problem drinkers are admissive of, rather than denying, non-masculine tendencies in themselves; no need to appear intensely masculine was

apparent in these results. T scores above 70 on the scale were obtained by 30% of the drinkers but also by 33% of controls. Only 20% of drinkers had this scale as their highest point on the MMPI. It is, of course, possible to obtain elevated scores on the scale on a variety of different questions and it is possible analysis would reveal a different pattern of item response between drinkers and controls. One would certainly have anticipated a much lower score from the controls, nearer the 45.2 to 54.0 found in the studies by Gough (1960a), Hampton (1953) and Schmidt (1960). Scores for U.S.A. alcoholics given by Button (1956b), Hampton (1953) and Hewitt (1960) range from 55.6 to 63.76, tending to be elevated above controls' means. Scores of the N.Z. drinkers, therefore, tend to be similar to those of drinkers elsewhere, the N.Z. controls being quite dissimilar to those of other studies with respect to this variable, probably because of their intellectual and aesthetic status. Ross (1975) has demonstrated that, contrary to what is usually held, the Mf scale measures sex role rather than sexual orientation. Using the scale on a N.Z. population he found no significant differences in score between normal students and active homosexuals. High scores in direction of non-masculinity may, in the drinkers, indicate just that, whereas in the controls they may indicate embracing of a more aesthetic set of sex role interests. Only three of the drinkers admitted to being actively homosexual (two in the AA group), and only one of these claimed to desire such relationships, the others protesting that homosexual males took advantage of them during intoxication. However, these two obtained very high Mf scores - 80 and 74 respectively - with the former one obtaining the highest score of any subject.

Clinical Material:

The functions of alcohol, of course, suggest that it would lend itself to enhancing sex role identity in the inadequate male, dimming sober realizations and boosting self-esteem. Some drinkers claimed that alcohol made them feel more manly, ten feet tall: "Under drink I see myself as Jack Dempsey, Raffles, and dozens of others all rolled into one; not just myself" (No. 3). "I just drink on and on,

to prove I can outdo all others," said No. 9, "It was my way of identifying myself ... all the 'big guys' drank." "People said one was 'a man' if one drank, and 'somebody' if one could hold it; I wanted to be 'somebody' so much" (No. 5). "I drank initially because I wanted to be a man too quickly" (No. 10). No.7 remarked that he was conscious of wanting to be a man before time, as it were: "I liked older women and always lied about my age because I wanted to be older." Another commented proudly, "Father was a man's man, like me" (No.15). No. 1 enjoyed "Being the biggest drinker," No. 9 drank "To outdo all others," and Nos. 13, 17 and 22 preferred male company when drinking, liked chaps "all drinking together." Altogether, 33% gave as one of their reasons for drinking, liking to be the biggest drinker, a real man, one of the crowd, enjoying the company of drinking men. Parenthetically, two of the six women the writer originally intended including in the results explained the development of their drinking as an attempt to outdrink men, be admired for their "holding" capacities, and so forth, and it is of interest that Wilsnack (1973) found alcoholic women's unconscious identification to be masculine though their conscious identification did not differ from controls'. There can be little doubt that the charismatic value of being "an alcoholic" enabled many of the men in the writer's sample to attain much needed integration and dignity as a real, hard-drinking male.

38% of the drinkers admitted to sexual worries (potency difficulties, masturbation preferred, or conflict over masturbation), compared with 8% of controls, and 13% of drinkers and 8% of controls admitted a problem with homosexuality. 8% of drinkers claimed that being "over-sexed" was a problem (though in the case of one of these his mistress told the writer he was impotent!), and one had been arrested for rape, indecent assault, and intercourse with minors. 29% of drinkers and 8% of controls recalled having sexual worries in childhood. One homosexual subject spontaneously noted that periodic intense yearnings for a homosexual relationship were invariably accompanied by a craving for alcohol.

(3) Schizoid interpersonal difficulties, social isolation, etc:

Statistical Results:

Scales Sc, Pa and Ma are usually regarded as forming the "psychotic triad" of MMPI scales, and there is some evidence that F, when very elevated, is associated with psychosis (e.g. Blumberg, 1967), schizoid personality (Meehl and Hathaway, 1960, p.20), and poorly controlled aggression (Rice, 1968). Results on these scales are presented below.

TABLE 2.8

Means and Standard Deviations for Groups Compared on Scales F, Sc, Pa, and Ma of the MMPI

Scales	PDs	S.D.	Controls	S.D.	t	p
N	20		12			
F	7.75	3.38	3.91	2.23	3.482	<.005
Sc	59.50	14.73	52.91	7.95	1.422	N.S.
Pa	58.85	11.18	50.50	7.32	2.298	<.05
Ma	63.30	9.47	53.16	8.54	3.034	<.005

Note: Separate means for Hanmer and AA PDs may be found in Table 2.3.

It is clear from the table that controls obtained appreciably lower scores on all four scales, significantly so on three. 10% of drinkers gained T scores above 70 on F, 25% on Sc, 30% on Ma, and 15% on Pa, while no controls scored above 70. Inspection of groups' scores on the "neurotic triad" (see Table 2.2) suggests that elevation here was not characteristic of drinkers. Comparing results in Table 2.8 with those of U.S.A. samples (Button, 1956b; Hampton, 1953; Hewitt, 1960), it is apparent that N.Z. drinkers tend to obtain somewhat higher scores on Sc, Pa, and Ma, but as in the N.Z. sample, elevation in the other studies was characteristically not on the "neurotic triad." Scale F appears not to have been frequently compared with problem drinking versus normal populations, but Kristianson (1970) reported similar F scores for two alcoholic groups: 10.2 and 7.3. Kristianson also found high Sc scale scores, relative to control groups.

As a further investigation of the meaning of the "psychotic scales" Peterson's (1954; 1960) six signs of sub-clinical psychosis were calculated for every subject. 40% of

the drinkers evidenced three or more of these signs, compared with none of the controls. However, the signs have not always withstood cross-validation studies (e.g. Rabin and King, 1966).

In the area of interpersonal relationships it became clear that the drinkers experienced marked difficulties in relating, as Tables 2.9, 2.10, and 2.11 make clear.

TABLE 2.9

Comparison of Groups on Self-ratings of Difficulties in Interpersonal Relations (percentages parenthesized) *

	PDs	Controls	X^2	p
N	24	12		
Shy, extremely self-conscious	17 (71)	3 (25)	5.08	<.05
Relationships very difficult	18 (75)	3 (25)	6.30	<.02

*Material for all chi-square tables was extracted from the Biographical Data questionnaire

TABLE 2.10

Comparison of Groups on Stability or Instability of Interpersonal Relations (percentages parenthesized)

	PDs	Controls	X^2	p
N	24	12		
Living with spouse	14 (58)	11 (92)	2.77	<.10>.05
Divorced/separ.	5 (26)	0 (0)	-	-
Single	5 (21)	1 (8)	-	-
Widowed	0	0	-	-
De facto relats.	10 (42)	1 (8)	2.77	<.10>.05

Note: Where blanks appear, chi-square was not calculated, either because cell frequencies were too small or the information was not required.

The above tables indicate that problem drinkers were extremely shy and self-conscious, found interpersonal relationships difficult to establish, readily accepted short-term de facto relationships with no firm emotional ties, and found maintenance of long-term stable marital relationships difficult, though not all these differences reached acceptable levels of significance.

TABLE 2.11

Comparison of Groups on Self-descriptions of Childhood Interpersonal Difficulties (percentages parenthesized)

	PDs	Controls	X^2	p
N	24	12		
Many adolescent friends	1 (4)	5 (42)	5.63	<.02
No adolescent friends	7 (29)	2 (17)	0.17	N.S.
Adolesc. doubt over value as a person	11 (46)	2 (17)	-	-
Inferiority	13 (54)	4 (33)	-	-
Feelings of being "different" from others	5 (21)	1 (8)	-	-

Table 2.11 indicates that interpersonal difficulties did not result from years of excessive imbibition. There seems little doubt that quite early on, drinkers tend to feel different from their peers, to doubt their own value as worthwhile individuals, to feel inferior to others, and to have difficulties in establishing peer group relationships, sequestering themselves from close relationships.

Clinical Material:

Drinkers' conscious reasons for excessive drinking reflect the relationships disturbance, alcohol's assistance in facilitating relationships being the reason most frequently given in answer to three questions about how drinking began, reasons for it, and what was enjoyed most about it. 67% of the drinkers labelled alcohol facilitative: it helped them overcome shyness, gain confidence, make friends, relate to others, etc. Tahka (1966, p.217) also found this the reason most frequently given for initial heavy drinking, in his sample.

In addition to their interpersonal difficulties the drinkers verbalized feelings of futility and alienation from the life process, as well as feelings of unreality. In response to specific questions, 54% said they felt life to be quite pointless (8% controls); 67% said they felt somehow out of life (33% controls); and 58% admitted to feeling as if they were observing themselves rather than just being themselves (8% controls). 42% of drinkers suffered from intense feelings of inferiority (8% controls).

The drinkers appeared to feel alienated and manifested schizoid feelings of being out of the mainstream of life, somewhat inchoate or unreal. Some of their spontaneous remarks reflected their feeling that life went on but that they were not really in it, or that they sensed they were observing themselves rather than just being themselves, expressing well the schizoid isolation from others and from the self felt by these people: "I felt I was an abstraction ... like a dream sequence, it didn't touch me" (No. 15). "I used not to live inside my own skin" (No. 1). "I feel as if I have no kernel, just activity; I'm not capable of real love if I'm not a real person" (No. 10). "It's as if I've left myself on the playing field and gone to the other side to watch my game" (No. 20). "I've got two distinct personalities" (No. 14). "I often watch myself standing back" (No. 19). "I often wonder, 'Who am I? What is the meaning of me? What am I doing in life?'" (No. 12). "I used to feel like different people at different times" (No. 5). None of the controls verbalized such feelings.

Other spontaneous comments from the drinkers revealed their difficulties in relating: "Grog changed me from an introvert to an extravert, but I'm only a make-believe extravert" (No. 10). "Really satisfying relations can come only with God, not with other men" (No. 8). "That guy who said 'No man is an island unto himself' was quite wrong; we are all islands and this is how it should be" (No. 8). "Drink gave me confidence to approach others ... my friends and I were artificial to each other" (No. 1). "I tend to avoid people and withdraw" (No. 2). "I always feel inadequate in meeting people ... it's easier to be affectionate to dogs" (No. 3). "I'm not spontaneous, I close up ... I'm not outgoing" (No. 4). "I always felt a misfit" (No. 5). "I'd no friends ever, and then I got some who drank ... I'd have done anything to keep them" (No. 6). "I know hundreds of people but still feel lonely and different underneath" (No. 7). "I'm not close to others, I'm an isolationist" (No. 9). "I feel different, never close" (No. 10). "I feel different from others, not close" (No. 11). "I can expand after a few drinks, talk to others" (No. 14). "I don't feel close to

others" (No. 16). "Dale Carnegie taught me how to mix" (No.18). "I'm not a good mixer" (No. 21). "I wouldn't have any friends if I didn't drink; it helps me relate" (No. 22). Some 67% made such comments.

Reference to spontaneous comments made by drinkers while completing the BDQ reveals some evidence of the same queer ideation or unconventionality of thought processes apparent in the "Bridge" sample, and magical thinking which, while certainly not schizophrenic, did seem to pass beyond that which one finds in neuropsychiatric patients in general. These remarks made by drinkers are strikingly similar to those reported for their sample of U.S.A. drinkers by Zwerling and Rosenbaum (1959). Several subjects claimed to have extrasensory powers. No. 1 reported a dream in which he saw four obituary notices including his own; within three weeks, the other men were dead, according to him. Another dream was of being in a strange room and unable to see clearly; when he joined the Masons years later he "realized" that their initiation room was the one of his dream, and in the ceremony he had to don a hood and so was unable to see clearly. No. 12 had in childhood been so attracted by magic that he spent hours practising the necessary concentration required to make objects levitate, which, he was convinced, was still only a matter of time. This subject had a laryngeal nodule which might have been cancerous, but he was quite convinced that since his mind was all powerful it could triumph over the physical and cure the nodule. He was studying Zen Buddhism so that he might acquire complete control over the body and retreat into a state of withdrawn self-awareness from which he felt he might gain insight into the meaning of life. No. 8, an AA subject, claimed to have extrasensory powers of sensitivity to people. When the writer contacted this subject by phone, to arrange an interview, the subject said it would be necessary to scrutinize the writer first for some time, to make sure she was "all right." When the writer arrived at the residence the subject opened the door and simply stood there, fixing the writer with a stony stare for several seconds before finally saying, "You can come in now. I can tell you are 'all right'." If the

writer had not been "all right" the door would have been slammed in her face, she was told!

No. 19 claimed to have a friend whose prowess in a top-dressing plane bordered on the supernatural! For instance, the patient claimed that his friend could pick up a handkerchief from the ground with a wing-tip, and that on another occasion he had been asked to assist in the capture of a dog which had killed sheep. The dog had eluded all pursuers - all, that is, except the patient's friend, who neatly decapitated it with his wing-tip! The patient seemed to derive considerable kudos from his relationship with this rather remarkable pilot.

No. 20 believed firmly in the occult and claimed to have spoken with the spirit of his dead daughter on many occasions. This individual had an odd sexual relationship with his wife. She desired him to seek what he termed "extra rations" with other women, so long as he chose "clean" ones. He decided to seek his "extras" with the writer, springing upon her without warning as she showed him out of the hospital door at conclusion of his interview, late at night, and pinning her into a corner; he had to be fought off with considerable vigour. This patient, who is somewhat well known in the literary field, kept a scrapbook of every article or photograph that had ever appeared about him in newspapers, and insisted that the writer read every single article!

No. 6 had hypochondriacal ideas that at times preoccupied him. He worried continually about upper bowel carcinoma (from which his mother had died). Once, when he had to board in a room also occupied by two young children, he claimed that his health and vigour declined so much that he visited a doctor and was told he must never sleep with children because they were "poisoning the air" he breathed.

Other subjects manifested odd behaviour. No. 11 used to claw with fingernails along the sides of the chair while speaking, to such an extent that the chair's wooden arms were badly scarred. No. 10 tore at his fingernails with unpleasant clicking sounds. Several reported actual breakdowns of one kind or another, or episodes of murderous violence or

uncontrollable tension. No. 11 had gone berserk in the street, in his teens, and attacked ten innocent passersby, for which he had been admitted to a psychiatric ward for observation. No. 17 reported a breakdown at age six and another in his teens when he was "full of screaming tensions" and felt he must claw his way out of the room. No. 2 had been hospitalized for a minor ailment when aged ten, but after this began to crave hospitalization to such an extent that he tore open his operation scar to get readmitted. On another occasion he swallowed coins in the hope of requiring an operation. At age twelve "things suddenly looked different." He began to crave lighting fires, and general excitement, and from ages fourteen to seventeen he was hospitalized with (according to him) a diagnosis of schizophrenia after he lit a fire in his parents' home and then retired to bed to a sleep from which he could not be roused. This subject spread a rumour throughout AA about the writer: that her tests involved the drawing of a naked man and woman, complete with genitals, which caused no end of difficulty for her in recruiting subjects!

No. 5, sober some years through AA efforts, had a job on a building site where each day he put himself to a test involving flirting with death by walking unsupported on high scaffolding. He claimed that his faith in God, gained through AA, kept him safe and that were he to stop believing, he would fall to his death, so he constantly tests his faith - and God - this way. His wife, who has watched these performances, is absolutely terrified by them. He said of his job, "I like being on the crane and looking down at tiny people. It makes me feel so clean and far away, up on the rig."

One of the AA subjects (No. 9) told the writer of an incident involving his fiancée, also an alcoholic (one the writer originally tested). She had kept him waiting on the street outside her home, one day, and while waiting for her he was picked up by a police car for loitering with intent, for which he had a criminal record. To extricate himself he had to get the woman to the police station where she finally admitted, with considerable reluctance, that he had indeed been waiting for her. In fact she had found the whole

episode so amusing that she endeavoured to have it repeated by always keeping the poor fellow waiting, while he would try to look inconspicuous in the street. She finally broke off her engagement with him on the grounds that he was "too possessive" - he objected to the idea of her continuing to see her lovers in a part of the house she wanted to keep separate, after their marriage! No. 9 himself, who had been arrested several times for sexual problems, used to hire a car under an assumed name, drive to a distant town, and there find a woman to whom he would pretend that he was a terribly important person, frightfully wealthy and so on, and would convince her he was seriously interested in marrying her. He would lure her to his hotel room and then, if he could successfully drug her with the nembutal and other barbiturates he always carried, he would commit acts which he called "doing terrible dirty things to women" which he would not fully describe but which gave the impression more was involved than what the police had branded as rape or indecent assault. It seemed that he could function only when playing a role - never as a real individual in the real world.

No. 10 used to withdraw, as a child, when feeling rejected by others. In his room he kept an old trunk filled with pieces of broken crockery he had spent years collecting. He would sit for hours, gazing at his crockery, or he would laboriously piece bits of it together until he had made some kind of pattern. "I constructed a world of my own when I was seven," he said. This patient wore a tie-pin bearing a ram's head which, he said, was to characterize his sexual proclivities for which he was nick-named "The Ram." He would not wear a tie without this emblem.

One Hanmer drinker claimed never to have slept in a bed in his life (No. 23), lying on the bedspread instead; he claimed beds were far too hot for use (even in mid-winter). No. 24, when asked by the writer where he would go when he left Hanmer - expecting him to state some definite district or town, if not a particular house - replied with complete seriousness that he had not yet decided whether to go east or west because he had gone north last time and it had not worked out for him!

The only control to report any strange ideation was the latent psychotic (No.11), who had messianic ideas about his profession (architecture) and its relation to housing the world's starving masses. He also betrayed the conviction that the Rorschach cards had for him some ultimate reality, and in this many of the drinking subjects resembled him. It was the writer's impression that they responded to these cards quite differently from the other measures, accepting those as tests proper whereas the cards depicted some absolute reality, were real in themselves, exemplified in the following quotations: (Card 8) - "It looks like a coloured internal organ. Looks crawly. I see two rats coming up here. Like a piece of kidney, horrible. With two horrible animals crawling in causing cancers or something like that. It looks like broken tissue altogether, with all those dots. Those animals are horrible things without ears. They may be quite innocently crawling up a tree but that's not the way I saw it first. That pink hurts me; I don't like it at all. It looks diseased and nasty. It all looks so destructive with those things crawling up, tearing at the top part. Sucking feet they have, a great foot holding onto the lower thing" (patient's voice expressed rising and utter disgust). Another associated to Card 9, "Devil-things with gumboots on. They are pointing a finger at each other - which will win? There's a barrier to stop them attacking each other. What a torment! They're rotten, too, falling apart, and will shrivel up eventually - disintegrating, like evil. The rot has set in in their tummies and they are going bad. Good will overcome evil eventually." Another said of Card 1, "I don't like those drops below; it's sad, like something going out of the thing, like tears dripping." Many of the drinkers produced symbolic associations to Card 9 - "The orange is a beautiful aim to which the poor human is struggling" - or those arbitrary interpretations of reality that Rapaport, Gil and Schafer (1946, pp.322-359) have designated fabulized combinations: "Two flags sheltering under a tree," (Card 8). "An umbrella-tree" Card 8). "An angel with whiskers" (Card 6). "Bears climbing over a rainbow"(Card 8). Mabry-Hall (1967) has reported many such responses in alcoholics.

(4) Poorly controlled aggression:

For investigating this area Foulds's Hostility-Direction of Hostility questionnaire, known as the HDHQ, was used (Foulds, Caine and Creasy, 1960; Foulds et al, 1965), which is shown in the Appendix (p.385), and subjects' criminal records were examined for assault charges, to see to what extent hostility had "spilled over" into the social sphere.

Statistical Results:

TABLE 2.12

Means and Standard Deviations for Groups Compared on the HDHQ

	N	Mean	S.D.	t	p
PDs	20	20.70	7.80		
Controls	12	10.41	4.23	4.193	<.001

Note: Mean for Hanmer drinkers was 22.08, and that for AA drinkers 18.63.

As Table 2.12 indicates, problem drinkers are aware of aggressive feelings to an extent significantly greater than are controls, or have less difficulty in admitting these. Comparison with means for U.K. samples of alcoholics show very similar results: 25.3 (Kraft and Wijesinghe, 1970), 27.65 (Hassall and Foulds, 1968), 18.98 and 20.5 for in-patients and out-patients respectively (Ritson, 1971), and 20.6 (Walton, 1968). Normals in U.K. studies tend to score in the region of 12 to 15 (Foulds, 1965, p.94; Hope, cited by Phillip, 1968; Phillip, 1968; 1973; Vinoda, 1966). Foulds (1968) gives a mean of 19.12 for hospitalized neurotics; a cutting point at this mean would have identified 65% of the drinkers, suggesting that they feel - or more readily admit to - more hostility than do non-problem drinking neurotics in other samples.

25% of drinkers had been arrested for one or more assaults. More subjects had been arrested for assault than for any other single type of crime, unless all forms of appropriation of other people's property are aggregated - theft, breaking and entering, burglary, and embezzlement

(29%). Some of the drinkers' criminal activities seemed to have significance only as symbolic aggressive or grasping acts: for instance, one used to break into his employer's office at night and appropriate the contents of the rubbish bins! Another stole only buttons from shops.

Evidence that intense hostility and direct acting out characterizes a large percentage of the drinking group seems fairly unequivocal.

(5) Under-socialization, impulsivity, unconventionality: Statistical Results:

TABLE 2.13

Means and Standard Deviations for Groups Compared on MMPI Scales Pd and Ma

Scale	PDs Mean	S.D.	Controls Mean	S.D.	t	p
N	20		12			
Pd	60.60	10.11	46.00	8.69	4.157	<.001
Ma	63.30	9.47	53.16	8.54	3.034	<.005

Note: Reference may be made to Table 2.3 for separate Hanmer and AA drinker scores.

Elevated Pd and Ma scale scores are usually taken to indicate that subjects manifest impulsivity and excitability, disregard social controls, and tend to have conduct disorders (Guthrie, 1960; Hathaway and Meehl, 1960; Meehl, 1960). These are two MMPI scales on which pathological drinkers and controls tend to be widely divergent in all samples, normals tending to score in the upper forties or lower fifties and drinkers in the upper fifties, or sixties (Button, 1956b; Gough, 1960a; Hampton, 1953; Hewitt, 1960; Schmidt, 1960). As can be seen from Table 2.13, drinkers' scores exceeded those of controls on both scales. 25% of drinkers (no controls) exceeded T scores of 70 on the Pd scale, 10% having their highest point here. 30% of drinkers (no controls) obtained T scores above 70 on the Ma scale and 30% had their highest point there. More than half the sample therefore, scored above 70 on one or both of these scales, and a little under half had their highest points on these scales.

As Table 2.14 suggests, a very large proportion of the drinking group were under-socialized by socio-legal definition in having offended against the law.

TABLE 2.14

Comparison of Groups on Self-Report of Criminal History (percentages parenthesized)

	PDs	Controls	X^2	p
N	24	12		
Ever arrested	17 (71)	1 (8)	-	-
Inebriety arrests	9 (38)	0 (0)	-	-
Arrests for serious crimes	11 (46)	1 (8)	3.52	<.10 >.05

In contrast to what is usually believed, more drinkers had been arrested for serious than for inebriety-related crimes (casting offensive matter, vagrancy, traffic offences) or for inebriety itself. 13% had been arrested for theft, 8% for burglary, 4% for breaking and entering, 4% for embezzlement, 13% for sexual crimes (homosexuality, indecent assault, rape, intercourse with minors), 4% for non-payment of maintenance, 4% for arson, and 25% for assault. These proportions will not total correctly because most subjects had committed several types of offences. In addition 8% claimed they had been lucky to escape arrest because they had influential friends in the force, etc. One of these had gone bankrupt and commented that he had committed more crimes with money than anyone else he knew. The only control subject arrested had committed a homosexual offence some 20 years ago which had never been repeated.

Because of the difficulty in separating antecedents from sequelae of drinking, the writer extracted responses to MMPI questions 38, 56, 118, and 419, dealing with childhood misbehaviour. From Table 2.15 it can be seen that the drinkers had behavioural difficulties that preceded their drinking by many years.

TABLE 2.15

Numbers of subjects answering affirmatively MMPI questions on Childhood Misbehaviour (percentages parenthesized)

	PDs	Controls	X^2	p
N	20	12		
Childhood thieving	13 (65)	2 (17)	5.23	<.05
Suspended from school	2 (10)	0 (0)	-	-
Sent to Principal often	11 (55)	5 (42)	0.13	N.S.
Truanting	6 (30)	0 (0)	-	-

The earliest memory of one of the drinkers (No.11) was "Pinching sweets off the old man's (father's) counter," and No.3 recalled stealing pennies from the teacher's table at the age of six. He likened his age thirteen and later thefts to "acting in a state of automatism" because he did not actually want the money or the goods stolen. Since 65% of drinkers recalled thefts in childhood, it would seem unlikely that this type of crime committed in adulthood was a sequel to heavy drinking. Of course the actual MMPI question about thievery is, "During one period when I was a youngster I engaged in petty thievery," and it may well be that the kind of thieving indulged in by these drinkers was of no greater consequence than that of filching apples from trees in orchards, etc. One just does not know. Even so, it was clear from the results that they either engaged in this to a greater extent than did controls or felt far less anxiety or shame over confessing it.

Clinical Material:

Some of the remarks made by the drinkers about their impulsivity seemed worth recording, e.g. "I get something in my head and I do it; it's very unwise" (No.16). "My heart rules my head, I'm very impulsive" (No.20). "A drinking man is not in charge of his life, he's just drifting ... after one drink my thinking changes and resolutions simply don't exist any more; I go to bed feeling one way and wake up feeling like my old self in need of a drink" (No. 3). "I rush into things" (No.11). "I had no sense of responsibility" (No.13). "I am inclined to rush in" (No. 24).

"'Impulsive' was the first word my mother ever called me" (No.12). One claimed that there was not only no reason why he drank but no reason why he did anything, all things being "just a habit, I suppose" (No.23). He had never had a home, just wandering aimlessly from place to place, and gave as his adolescent desire, "Just to drift from here to there." No. 24 impulsively boarded a ship one day when a sailor casually asked him if he would like a job. Without returning home even for farewells or a suitcase he boarded the ship and stayed with it for 30 years. Prior to his stroll on the wharf he had never entertained the idea of becoming a sailor. No. 13 gave as an example of his impulsivity that if on a Saturday his wife had put the dinner on the table and he went out to the box to collect the mail and suddenly got the idea of going to the pub, he would set off instantly in that direction, never giving a second thought to the dinner, the mail, or the family waiting for him. No. 7 had owned a dairy; if he got the idea of wandering off for a day, to drink in the country, or if drinking friends called and suggested this, he would simply shut up shop and depart. For days at a time the shop was closed while he and his wife would drink to stupor in some country pub. Looking back on this he reflected that it had never occurred to him there was anything abnormal or irresponsible about that way of life, following any whim, etc., though he now found it reprehensible. Nevertheless, he kept the writer waiting 40 minutes for his interview, not arriving until she had phoned his home to see if he had forgotten the appointment; also, he twice arranged to leave his completed MMPI at the AA rooms and failed to do so, giving the writer a long drive into town for nothing, though he finally managed to post it - some three months after the interview. Altogether, 75% of the drinkers (8% controls) rated themselves as impulsive (18 drinkers, 1 control, $df = 1$, $X^2 = 11.72$, $p<.001$).

The unconventional manner of living associated with problem drinking appeared not to be uncongenial to the drinkers. 72% of them said that even when drinking had reached dangerous proportions (loss of family and finance,

gaol terms, etc.) they still considered nothing to be amiss with the alcoholic way of life. In reply to the question, "When you have a drink, do you usually intend to get drunk?" 43% answered in the affirmative, 7% claimed to sometimes, 17% knew it would happen yet still drank, and only 33% claimed not to want this result. In the affirmative category some spontaneous answers were: "I just drink on and on" (Nos.9 and 11). "I never thought of having just a few" (No.8). "I wouldn't drink unless there was enough to get rotten on" (No.5). "I just had to get drunk" (No. 1). "I wouldn't drink for less than a day" (No.24). "All or nothing, that's my pattern" (No.4). "Always a gutsful or nothing" (No.10). "I wouldn't drink unless I could make a real go of it" (No. 7). "I took to drink as a duck takes to water ... all or nothing ... getting drunk became the whole ambition of my life" (No.2). "I would clear the decks and go on my binge" (No. 4).

"Wanderlust" also characterized the drinking group. They did not like being tied down to one job and chose occupational and geographical changes from preference and not, as is sometimes suggested, to escape sequelae of drinking. 50% claimed to prefer changing jobs frequently (no controls), 58% preferred changing their home town frequently (8% controls), and 25% had been sailors and therefore were constantly on the move (8% controls), while 33% wanted to be sailors but for one reason or another had not managed it (8% controls). The drinkers claimed to dislike settling in any one place, typical remarks being, "I like to roam; never stuck anywhere for long" (No.1). "I like to roam" (No.16). "I've got a wanderlust" (No. 2). "My interest changes when I've learned the work" (No. 6). "I move every three years; I hate to stop in one place" (No.7). "I roam; it's hard to settle after the sea" (No.12). "Hundreds of jobs; I'm a drifter; I've lived everywhere but settled nowhere" (No.24). They preferred, on the whole, not to have a steady and responsible job with a wife and family dependent on them, or to be tied down to one place for the rest of their lives, preferring instead to have a series of jobs that brought in ready cash quickly, and the opportunity to roam. While there is nothing essentially pathological in desiring more than one

occupational or geographical change, it surely is pathological when a man says he has tried every possible job and not found one he likes, or has had ten jobs in four weeks, or "literally hundreds" (as one man claimed), or cannot bear to be tied to one job for longer than a few months, or says he has lived everywhere but can settle nowhere.

A further reflection of the drinkers' unconventional way of life lay in their promiscuity. A majority had opted for short-term de facto relationships (see Table 2.10). 21% (almost one quarter) had illegitimate children, and several others thought it very likely they had several such children but were not certain.

The drinkers seemed unable to organize themselves in terms of conventional opportunities of satisfaction. They had difficulty knowing what to do with their lives. Of some 91% who wanted to change their lives if nothing stood in their way, 22% simply wanted more money, holidays or travel, while only 30% had in mind some definite occupation that might be fulfilling: often, the reason given for that occupation sounded spurious - e.g. "Like to do market gardening; I've never done it" No.10). Mostly answers were vague, e.g; "Provide something for my kids" (No.15). "Just have plenty of money and lay about doing nothing" (No.3). "I just want to be happy" (No.2). "I might go back to Otekaike, to do something for those kids" (No.6). "In service to my fellow men, for God" (No.4). "More holidays, more money" (No.8). "Just go on building up my capital" (No.17). This last subject had earlier said, "My only purpose is to make money; isn't that what everyone does?" Controls, on the other hand, were predominantly happy as they were; the 45% desiring a change in their lives were usually quite specific about its nature. It would seem not only that the group of drinkers were disenchanted with life but that they were vague about what would improve the quality of living and what actual conventional steps could be formulated and acted upon, to improve it. Those conventional social things that give others pleasure, such as occupational self-fulfilment or family life, were not thought of as avenues of self-fulfilment by the drinkers.

(6) Family Background:

The Biographical Data questionnaire was used to provide information on family background. It included questions representing the categories of the Multiproblem Family Index of Bloch et al (1959): parental incompatibility, child-parent separations, the quality of the relationship, and parental drinking habits. Such reporting is, of course, entirely retrospective and possibly not a reflection of the true state of affairs, but it does provide an indication of the manner in which the subject "experienced" his background.

Statistical Results:

TABLE 2.16

Comparison of Groups' Self-report of Parental Problem Drinking and Parental Incompatibility

(percentages parenthesized)

	PDs	Controls	X^2	p
N	24	12		
Incompatibility	12 (50)	3 (25)	1.16	N.S.
Alcoholic parent	15 (63)	3 (25)	3.12	<.10 >.05
Father alcoholic	15 (63)	3 (25)	3.12	<.10 >.05
Mother alcoholic	5 (21)	0 (0)	-	-
Both alcoholic	5 (21)	0 (0)	-	-

Drinkers clearly differed substantially from controls in having parents who were incompatible and tended to be heavy drinkers, though differences were not significant. No controls had problem drinking mothers or both parents problem drinkers. Far more of the controls had parents who drank only moderately or not at all (75% versus 38%) and controls very often qualified even moderate drinking by "very moderately" or "barely at all," while no drinkers did. Drinkers' case histories revealed that the incompatible parents were often physically violent.

TABLE 2.17

Comparison of Groups on Ratings of Mother

(percentages parenthesized)

	PDs	Controls	X^2	p
N	24	12		
Warm & friendly	13 (54)	9 (75)	0.72	N.S.
Severe, harsh, dominant	3 (13)	0	-	-
Indifferent	3 (13)	0	-	-
Inconsistent	2 (8)	1 (8)	-	-
Not applicable	3 (13)	2 (17)	-	-

TABLE 2.18

Comparison of Groups on Ratings of Father
(percentages parenthesized)

	PDs	Controls	X^2	p
N	24	12		
Warm & friendly	7 (29)	10 (83)	7.37	<.01
Severe,harsh,dominant	5 (21)	0	-	-
Indifferent	4 (17)	0	-	-
Inconsistent	5 (21)	0	-	-
Not applicable	3 (13)	2 (17)	-	-

Tables 2.17 and 2.18 suggest that more fathers than mothers had failed the drinkers. 29% rated the father as warm, compared with 54% of mothers (13 mothers, 7 fathers, df = 1, X^2 = 2.14, N.S.). Significantly more controls than drinkers rated their father as warm and friendly (83% and 29% respectively) while the difference for mothers was not significant. More fathers than mothers received negative ratings (14 fathers, 8 mothers, df = 1, X^2 = 2.10, N.S.), and more fathers than mothers were problem drinkers (15 fathers, 5 mothers, df = 1, X^2 = 6.96, p<.01). 63% of drinkers preferred the mother (42% of controls), while only 13% preferred the father; controls tended to like both parents equally, though none preferred the father. No controls reported harshness or indifference in their parents, and there were also marked differences in ratings of both parents as warm and friendly, only 25% of drinkers recalling both parents to be warm whereas 75% of controls did so (6 drinkers, 9 controls, df = 1, X^2 = 6.30, p<.02).

Relative to controls, 50% of drinkers claimed to have frequently experienced harsh physical punishment (no controls), and only 4% recalled being punished by withdrawal of love or privileges (50% controls), though somewhat more drinkers than controls (25% and 17% respectively) recalled no punishment whatever.

TABLE 2.19

Comparison of Groups on Separations from Parents occurring before the age of 16, for longer than 1 year (percentages parenthesized)

	PDs	Controls	X^2	p
N	24	12		
Separated from one or both parents	12 (50)	4 (33)	0.35	N.S.
Never separated	12 (50)	8 (67)		

Controls had clearly experienced a more stable home life with both parents present at least until the age of 16, relative to the drinkers, though the difference was not significant. However, drinkers had experienced many more instances of separation, as shown in Table 2.20 below.

TABLE 2.20

Reasons for, and number of instances of, child-parent separations

	PDs	Controls
N separated	12	4
Father's death	2	2
Mother's death	1	2
Father's divorce	1	0
Father's desertion	3	0
Father's hospitalization	1	0
Father kicked subject out	1	0
F's job kept him away	1	0
Subject ran away	1	0
Sent to boarding school	2	1
On & off with G'parents	2	0
Subject hospitalized	2	0
Subject put in Boys' Home	2	0

Note: Numbers of subjects will not total correctly because most subjects suffered a variety of separations.

It is apparent from the table that problem drinkers had experienced far more separations from parents than had controls, and in the case of the latter the separations tended to arise from parental deaths rather than from parental sociopathic behaviour such as desertion or throwing the subject from the home. There were, in fact, 29 instances of separation amongst the 12 drinkers who had experienced the loss of one or both parents. There were 11 instances of separation from the mother and 18 instances of separation from the father, nearly twice as many, including 10 instances

of separation from both parents; a majority of drinkers, therefore, had experienced not just one separation trauma but a variety of instances of separation ranging from permanent ones (death, divorce) to long-term disruptions (father's job kept him away, boarding school, long hospitalizations). The 4 controls experiencing separation had only 5 instances of separation amongst them: there were 2 instances of separation from the father, 2 from the mother, and one from both. Amongst the drinkers, 5 instances of separation took place after the age of thirteen but 14 happened before this age, the average age for the first instance of separation being 9.3 years.

Of the 12 problem drinkers who were not separated from either parent before the age of 15, only 3 of them (one refused to rate his parents) reported no unfavourable parent-ratings, parental alcoholism, or parental incompatibility. 21 of 24, therefore, had in the background either separation, parental alcoholism, parental incompatibility, or poor child-parent relationships.

It would seem that reasons for home disruption, rather than disruption per se, might be associated with conduct disorders such as problem drinking, as found in other studies (pp.43-44). Controls had lost parents by death, but they had not experienced the disruption caused by father's desertion, divorce or separation, nor had any been ejected from the home or felt the need to run away. Parenthetically, the two abnormal controls - latent psychotic and homosexual - had both been deprived of a parent, the former losing his father at 2 weeks and the latter his mother at 7 years and being raised by an alcoholic father.

Results reported in the tables in this section appear to support contemporary theorizing about father-failure rather than mother-failure being related to problem drinking. More fathers than mothers were alcoholics or very heavy drinkers; fewer fathers than mothers were rated warm and friendly and more were rated as severe or indifferent; and there were many more instances of separation from the father than from the mother.

It is difficult to compare the separations in this N.Z. group with those noted in other studies because in most studies only parental death or divorce has been reported. However, in a U.K. study Hassall (1968) reported figures similar to those obtained in this study: 57.5% of problem drinkers had experienced separations from parents, of which only 12.5% resulted from death, the other 45% of separations including lengthy hospitalizations of either parents or children, and boarding school, etc. 42.5% had no separations. Hassall's controls had experienced separations which again were similar to those of this N.Z. study: 60% had experienced no separations while 12.5% had been separated by death and 27.5% by other causes.

Clinical Material:

Some of the spontaneous comments made by the drinkers about their parents evidenced the kind of background they felt had been theirs. "Father was very strict and frightening; he demanded perfection and would smack if a sock got a hole in it" (No.16). "Father strict, brutal, a businessman, cold ... (he) used a riding whip, even when we were innocent" (No.4). "Mother punished me with a stick, never my sister; she ridiculed me and Father didn't defend me" (No.12). "Father treated us like naval cadets - regimented, speak only when spoken to" (No.11). "Mother couldn't show affection, she never kissed or cuddled us; she was neurotic and cranky" (No.3). "Father ridiculed me and Mother seemed to dislike me" (No.6). "Father used commando tactics on me - got me on the floor and used his knees ... was deluded; tried to make me stand to attention when I spoke to him; we hated each other" (No.5). "Father bashed and was terribly hard ... (he) was brutal; Mother poked her nose into everything" (No.11). "He was terribly violent when drunk" (No.6). "When the hotel doors closed the 'fun' would start; then my parents would stop smiling and start fighting ... he suddenly turned against us when I was eight" (No.1). "He never recognized me as his son, never recognized my existence" (No.13 - father was schizophrenic). "He threw me out when I was thirteen and I went to live with my grandparents; they threw me out because I screamed in my sleep" (No.5). "Mother was the nearest thing to an angel,

Father the nearest thing to a devil; he liked only horses" (No.9). "Mother punched and thrashed for trivial offences" (No.12). "He had the Bible in one hand and a strap in the other" (No.22). One father (No.11's) took his teenage son on a world trip but used to lock the son out of the cabin every night while he drank to stupor inside it, and when the son complained about this he was forcibly flown home when only half the trip was completed. This was the son who was later hospitalized when he went berserk on the street and attacked passersby. In another case (No.5), the father had descended from a long line of men who, according to the son, believed that a parent should not show his child affection, so that if anything happened to the child, the father would feel nothing. The grandfather, who must have been criminally violent, once threatened to shoot his son when this individual protested about being sent away to a seminary, and strung another son up by wires round his thumbs while he beat him as punishment for having over-turned a tractor. Because the writer doubted the veracity of these stories - especially when the subject added that his grandfather had once left his pregnant wife to walk the thirty miles back to their farm because she had kept him waiting in town in the car too long, and she was later found dead from exhaustion and exposure - she checked with a relative and found the stories confirmed.

All in all, a grim picture of parent-child relationships was painted by these drinkers. While controls had experienced loss of parents by death and had suffered other misfortunes, they did not report the violence, physical assaults, cruelty and sadism, and the background of parental antagonism, alcoholism and separation which the drinkers felt had characterized their childhoods. Lest it be thought that the drinkers might have deliberately distorted their backgrounds to provide an excuse for their drinking, perhaps it should be pointed out that no connection between their childhood experiences and their drinking was ever verbalized by them and in fact they were quite antagonistic to the idea of any connection when the writer suggested it. Most of these subjects had had some contact with AA, an organization which

is totally opposed to any theories about the influence of background on pathological drinking and which throws all the emphasis on "alcoholism" as a physical disease.

DISCUSSION:

Problem drinkers did appear to be less independent than controls, and to this extent theory was supported. Because of failure with the Object Relations test, conflict between covert dependence and compensatory overt hyper-independence could not be assessed, but the elevated Navran scale dependency scores make it clear that overt hyper-independence was not being demonstrated anyway.

Theory was supported, also, in the case of inadequate masculinity (assuming that elevated MMPI Mf scores may be so interpreted), problem drinkers scoring in the direction of non-masculinity though relative only to normative U.S.A. samples and not to the N.Z. control subjects, but again, conflict between covert masculine inadequacy and overt hyper-masculinity could not be demonstrated; there was, in any case, no evidence of overt hyper-masculinity on the MMPI Mf scale. Clinical material supported theories about the integrating, masculinizing effects of heavy drinking, its connotations of ability to hold one's liquor and outdrink other men being equated with masculinity.

As in samples elsewhere, schizoid characteristics were pronounced; alcohol was used to sedate feelings of isolation and facilitate interpersonal relationships (though most subjects gave several reasons for its use, not just one). It was also possible to demonstrate (though only, of course, by retrospective recall) the existence of interpersonal difficulties prior to problem drinking's development in a majority of cases.

As was found in the longitudinal studies cited on p. 72, problem drinkers appeared to experience considerable aggressive feeling with rather poor control of it rather than hesitation in its expression. Scores on the HDHQ were higher than those reported for both normal controls and neurotics (see p. 260),

and very similar to those reported for other samples of problem drinkers.

With respect to impulse control in general, the drinkers readily admitted to poor control and impulsiveness, tending to satisfy immediate needs with diminished awareness of consequences and diminished interest in long-term goals. They tended to be under-socialized and unconventional, with extensive criminal histories in many cases. In a majority of cases it seemed likely that this antisociality preceded problem drinking's development (65% recalled phases of petty thievery as children, 10% had been suspended once or more from school, 55% had been sent frequently to the Principal for chastisement, and 30% had been habitual truants. These figures suggest that even at school the drinkers had presented disciplinary problems. In evaluating this antisocial history it should be borne in mind that Hanmer had a policy of excluding drinkers who could be classed as psychopathic personalities, the implication being possibly that a more representative sample of drinkers might be expected to manifest even more sociopathic behaviour than was found in this sample.

So far as family background was concerned, the categories of the Multiproblem Family Index on which the BDQ sub-section was based revealed, as Wagner (1960) has pointed out, those same deficiencies of parental impulse control that he had found to characterize parents of children with conduct disorders. Parents of problem drinkers tended to be physically violent, harsh, and punitive, incompatible, and often problem drinkers themselves, and many had been separated from their offspring either permanently or for long periods of time, though the only differences to achieve significance by chi-square were that more controls than drinkers rated their father as warm and friendly, and more controls than drinkers rated both parents as warm and friendly. Only three drinkers of twenty-four had in their background no parental incompatibility, unfavourable parent-ratings, parental problem drinking, or parent-child separations; twenty-one had at least one of these aspects in their background and most had several. As theory predicted, father-failure was associated with problem drinking

to a greater extent than was mother-failure (at least as assessed by the BDQ items).

If both Pilot Studies are compared, a fair percentage of subjects in both had primary education only (32% in the "Bridge" study and 21% for the second study), though numbers attending college for some years were about equal, as might be expected (64% and 67% respectively), but more of the Hanmer group completed college and went on to University (2% and 13%). 2% of the "Bridge" subjects had no formal education. Mean ages in the two N.Z. studies were similar: 43 years and 45.1 years. In the "Bridge" sample drinking had been a problem for roughly 16½ years and in the Hanmer and AA groups 20 years and 15 years respectively.

In both populations schizoid features were marked: difficulties in relating, shyness, withdrawal, distrust, and social isolation. In the Hanmer/AA group it was possible to indicate that in the subjects' opinions some of these difficulties had preceded problem drinking by many years: feelings of being inferior and somehow "different" from others, shyness and self-consciousness at school, inability to relate easily and acquire many friends in adolescence, and feelings of doubt over personal value. The somewhat queer ideation characterizing both groups, documented in the section on clinical material, may be what contemporary theorists have referred to as "unconventional thought processes."

Both samples had problems with hostility and tended to act out without counter-anxiety, and both tended to be impulsive and under-controlled in general. Only 9% of the "Bridge" sample claimed to have been in trouble with the law, however (presumably excluding arrests for intoxication only), compared with 71% for the Hanmer/AA sample; the former figure might be correct as it stands, but a far more likely explanation is that differences in obtaining the information affected results. The "Bridge" subjects had completed, by themselves an impersonal questionnaire and might have seen either no reason for declaring a criminal history since it might never be referred to again, or might have felt it wiser

not to declare the truth on the grounds that continued residence in the organization might be affected by such an admission; the Hanmer/AA subjects were, of course, personally interviewed by the writer, and not only was the situation one of far greater rapport but subjects were also well aware that their criminal history could in no way affect their stay in Hanmer or in the AA chapter. In their generally under-controlled, "sociopathic" behaviour the subjects of this study were similar to those elsewhere, discussed in the literature review, and some of these characteristics - petty thievery and school disciplinary problems - could be shown to have antedated pathological drinking.

Conclusions can only be very tentative, in view of the severe criticisms that could be made of both studies: the anecdotal nature of the first, with its shifting population, and the educational and socioeconomic differences between drinkers and controls in the second study and the small numbers often precluding statistical analysis. In spite of these limitations it would appear that some leads derived from the literature survey have found support in these two studies, and these seem worthy of investigation in a further study, using superior measures and within a more adequate research design.

CONCLUSIONS FROM PILOT STUDIES

A. General Conclusions:

1. By far the majority of problem drinkers were psychologically abnormal in that they obtained at least one T score above 70 on the MMPI scales. Elevation was characteristically on the "character disorder" or "psychotic triad" and not on the "neurotic triad" scales.

2. Currently non-drinking problem drinkers, even those abstaining for many years, demonstrated similar psychopathology to the currently drinking group, with similar elevations on MMPI scales Pa and Ma and even greater elevations on Pd, Mf, and Sc.

3. In two areas - schizoid interpersonal difficulties and sociopathic behaviour - problem drinkers reported that difficulties had antedated problem drinking.

B. Specific Leads Emerging from Pilot Studies:

1. Problem drinkers appeared to have difficulty with dependency, relative to controls, declaring themselves as more dependent (Navran scale).

2. Problem drinkers appeared to see themselves as less masculine in sex role than normative U.S.A. samples though not when compared with N.Z. controls (MMPI Mf scale).

3. Problem drinkers admitted to having extreme difficulties with interpersonal relationships, and these had preceded problem drinking in a majority of cases; superficial relationships seemed to present fewer problems for them.

4. Problem drinkers appeared to feel considerable aggressiveness and to exert poor control over it (Foulds's HDHQ and BDQ criminal history).

5. Problem drinkers by self-admission were impulsive and generally under-controlled, and their spontaneous comments suggested they experienced a foreshortened future perspective and diminished investment in future goals and consequences.

6. Problem drinkers tended to be under-socialized and unconventional (MMPI Pd and Ma scales and BDQ criminal history). Under-socialized behaviour preceded problem drinking in a majority of cases.

7. Problem drinkers retrospectively recalled disturbed parent-child relationships, especially father-failure (separations, parental incompatibility, rejection, parental alcoholism).

PART TWO

THE MAIN STUDY

AIM

This study is concerned with the issue of possible personality correlates of problem drinking which might be necessary (although perhaps not sufficient in themselves) to explain the adoption of an addictive type of pathology.

Theoretical and clinical models supporting diversity versus some homogeneity of personality characteristics in problem drinkers were discussed in Sections 3-6, and the conclusion was apparent that much further thought and research is needed before extreme positions can be justified in this area.

The study therefore seeks to test the null hypothesis: that specific personality characteristics are not associated with problem drinking. An alternative general hypothesis is suggested: that there may be specific personality characteristics which tend to be associated with problem drinking and which may make for a vulnerability or predisposition toward the adoption of an addictive disorder such as chronic inebriety, rather than a non-addictive pathology.

A possible outcome of the study, therefore, might be the isolation of a set of differential personality correlates of problem drinking, with the practical aim of identifying potential problem drinkers.

Personality characteristics, derived from the literature review and from Pilot Studies, were explored in a controlled objective study using problem drinkers drawn from several sources, non-problem drinking psychiatric patients, non-problem drinking prison inmates, and abstainers from the temperance movement.

Distinction between problem drinkers and psychiatric patients is the crucial issue, in view of theories that differential personality characteristics determine differential expression of maladjustment in these two groups. Inclusion in the study of a group of subjects by socio-legal definition under-socialized was necessitated by those theories and studies which have emphasized disturbances in the area of socialization as possibly the most important aspect of the problem drinker's personality. Areas in which problem drinkers resemble or can be discriminated from under-socialized individuals (the criminals in this study) should illuminate some of the conflicts or ways of dealing with them shared by these groups. A group of abstainers, rather that the usual "normals" employed in studies of problem drinking, was selected because it would appear that these people do have a problem with alcohol (as Chafetz, 1970-1971, and others have pointed out) yet clearly handle it very differently from problem drinkers. This group would appear, also, to epitomize conventionality as usually defined, in contrast to the picture of the pre-problem-drinking personality of the drinker emerging from longitudinal studies.

HYPOTHESES

A. Ho, the null hypothesis, predicts that problem drinking is not associated with any specific personality characteristics; therefore, there should be no differential scoring amongst the experimental groups on the characteristics investigated in this study.

B. H_1, the alternative general hypothesis, predicts that there will be differences amongst the groups and that furthermore the differences will be as follows:-

1. Problem drinkers after a threat to dependency will score in the direction of greater independence (self-sufficiency) and masculinity on the criterion instruments, relative to problem drinkers not threatened and relative to other groups.

2. Problem drinkers will manifest more interest in (i.e. eye-fixate longer upon) male than female stimuli on the criterion instrument, but will defensively verbalize greater interest in females.

3. Problem drinkers will report social isolation, withdrawal from close relationships, difficulties in establishing and maintaining close interpersonal relationships, and preference for short-term superficial relationships, on the criterion instrument.

4. Problem drinkers will perform in a perceptually undifferentiated (i.e. field dependent) manner on the criterion instrument.

5. Problem drinkers will report intense feelings of hostility and will reveal differential sensitivity to aggressive (versus neutral) stimuli, on the criterion instruments.

6. Problem drinkers will demonstrate a tendency to be "present-orientated" by manifesting a shorter future time perspective on the criterion instruments.

7. Problem drinkers will indicate difficulties with the socialization process by scoring in the direction of under-socialization on the criterion instrument.

No hypothesis was included for family background of drinkers and other groups. Findings from the Biographical Data Questionnaire, which explored this and other areas, were used to help interpret results from the hypotheses.

In addition to results from the criterion instruments, responses to various BDQ items and to some questions in the HDHQ/So inventory were assessed to further examine or amplify the findings of the hypotheses.

D E S I G N

(a) Subjects
(b) Constructs and test materials.
(c) Experimental procedure

With the aim of establishing critical evidence for the more common view - that problem drinking is not related to personality characteristics in any specific manner - versus the alternative that specific personality characteristics predispose to the adoption of an addictive pathology, the investigation was designed to differ from previous studies in the area in the following ways: (1) The leads chosen for investigation were supported, in the main, by longitudinal studies, thus being plausible antecedents of problem drinking; (2) Groups of subjects other than "normals" were included, to provide a design capable of eliciting differential predictors; (3) Sampling was extensive, problem drinkers and psychiatric patients being drawn from several sources all over N.Z.; (4) The design provided, albeit in a limited way, for inferences to be drawn about the antecedent or consequent nature of some of the personality traits found; (5) Reliance on inventories as sole providers of information was avoided, thus hopefully attenuating the influence of social desirability; (6) A major portion of the study was replicated.

SUBJECTS:

220 male subjects were used: 100 problem drinkers, 60 non-problem drinking psychiatric patients (mostly neurotics), 30 non-problem drinking prison inmates, and 30 abstainers from the N.Z. Alliance temperance movement (including the Salvation Army whose members as a group are members of the Alliance).

Problem Drinkers:

For the purpose of this study, problem drinkers may be regarded in terms of Plaut's (1967, pp.37-38) definition: "...a repetitive use of beverage alcohol causing physical, psychological or social harm to the drinker or to others." Hospitals from which these subjects were drawn had defined

them as "alcoholics" in terms of two criteria: (1) Subjects considered themselves to be "alcoholics" because they had lost control over their drinking, and had been admitted as voluntary patients for help with their drinking problem; (2) Subjects had been formally charged under the Alcohol and Drug Addiction Act and had been court-committed to hospital for treatment of their "alcoholism". 29% of the total sample of 100 had been committed under the Act, while 71% were voluntary admissions. The voluntary patients had in most cases been referred to the hospitals by their own doctors. In all cases the drinking was hopelessly out of control at time of admission (with the exception of three individuals who were members of Alcoholics Anonymous and had re-entered hospital for help with personal problems related to drinking; two of these had admitted themselves for a week, while the third spent a portion of most days in the hospital organizing the A.A. programme).

Problem drinkers were drawn from the alcoholism wards at Kingseat and Carrington (Oakley) hospitals in Auckland and from Queen Mary hospital, Hanmer Springs. Hanmer currently specializes in the treatment of problem drinking and takes only voluntary patients, whereas 41.4% of the Carrington subjects and 40% of the Kingseat subjects were committed under the Alcoholism and Drug Addiction Act. Carrington and Kingseat hospitals were selected because both have active and extensive therapy programmes for drinkers, therefore having large numbers of these subjects available, and because both admit committed and voluntary subjects, meaning that a fair cross-section of the problem drinking population would be located at these sources.

The writer endeavoured to interview all subjects available within a series of two-week periods who had been hospitalized at least three weeks and for less than six months. This included practically every patient in Kingseat and Carrington (excluding only those hospitalized fewer than three weeks), but because the writer's testing interfered with the therapy programme at Hanmer it was

possible to interview only those patients whom the medical staff considered able to miss three hours from their programme, so whether the group is fully representative of all patients at Hanmer is not known. The writer could not ascertain exactly the size of the population during her Hanmer visit, and was reduced to doing a quick trip through the wards on her last day for a count of unfamiliar faces; under these conditions there appeared to be very few individuals who had not been tested - probably less than one quarter of the patient population, which would be about the number one would expect had been hospitalized for fewer than three weeks anyway.

The criterion of hospitalization for at least three weeks prior to testing was based on studies by Hoffmann, Nelson and Jackson (1974), Libb and Taulbee (1971), and Uecker, Kish and Ball (1969) which found that before three to four weeks after detoxification drinkers tended to score in a more neurotic-like fashion on at least some measures, possibly as an epiphenomenon of withdrawal symptoms, anxiety, depression, and so on, so that testing prior to this might give unreliable results. No patient in this series had been hospitalized for longer than fourteen weeks, the average being 6.5 weeks for the original group (Group 1) and 5.6 weeks for the replication group (Group 2).

Only one problem drinker had to be dropped from the study and replaced, this being through failure to complete inventories. No other drinkers failed to complete all tests and no subjects refused to be interviewed. One subject carried the additional diagnosis of schizophrenia, and one was a borderline psychotic.

Psychiatric Patients:

The non-problem drinking psychiatric patients were drawn from the Buchanan Clinic (attached to Carrington); the neurosis unit at Kingseat; Ward 10 (Cherry Farm admission unit) and Ward 9 of Wakari hospital, Dunedin; Ashburn Hall, Dunedin; the Psychiatry Department of the

Princess Margaret hospital, Christchurch; Calvary Clinic, Christchurch; and Porirua hospital. All patients available were interviewed in these institutions. Although originally it was intended to restrict the sample to neurotics only, they proved so difficult to obtain as in-patients that a small group of patients was retained whose diagnoses included psychotic states (13 patients) but who, with one exception, were not actively psychotic or were disturbed only in circumscribed areas. Of the 60 patients, therefore, there were five cases of manic-depressive psychosis (all in remission), three patients recovering from a short psychotic break with reality (all due for discharge within the next few days), two patients with a psychotic core in an otherwise intact personality, two borderline psychotics (the illness being controlled by medication and the patients reporting only anxiety, tension, depression, and occasional perceptual distortions), and one schizophrenic who was delusional in several areas but otherwise in good contact and quite able to take part in the study. This subject was retained because in age, diagnosis and occupation, he was a perfect match with one of the problem drinkers.

Two Kingseat neurotics refused to participate in the study, but otherwise there were no refusals. However, nine patients were tested who later were dropped from the study and replaced by patients next in line from the same institution. Three from Ashburn Hall were later defined as too young (under twenty) to be adequate controls for the problem drinker group, while the other patients proved to be too disturbed to perform adequately in the testing situation or did not complete all inventories.

Although every endeavour was made to recruit in-patients, it finally proved necessary to include 14 out-patients. Sufficently large samples of in-patient neurotics are simply not available in N.Z. hospitals.

The problem of some heavy drinking amongst psychiatric

patients was encountered in a minority, but in no case had it reached such proportions that treatment had been sought. 19 of the 60 patients claimed that at one stage of their lives they had engaged in heavy drinking, and 7 of these plus an additional 2 claimed that at one time they had used alcohol excessively. These claims were made in answer to two CPI So scale questions on drinking habits; none of these patients had considered their drinking to be such a problem that they had mentioned it during the interview when discussing their symptoms and difficulties.

Subjects were divided into two groups, Group 1 being the original group and Group 2 the replication group. In the case of the problem drinkers, the first two individuals were placed in the original group, the next two in the replication group, the next two in the original group, and so on; this manner of arranging the subjects into groups was the only feasible one as the drinker group was already divided in that every second subject was subjected to dependency threat, so that a totally random allocation into groups was not possible. The psychiatric patients, on the other hand, were divided into the groups on the basis of diagnosis, to ensure adequate representation of various psychopathological conditions in each group.

Criminal Group:

The prison subjects were drawn from two institutions, Wellington Prison and Wi Tako Prison at Trentham. Wi Tako takes mainly first offenders while Wellington Prison takes both these and recidivists. 12 subjects came from the latter institution and 18 from the former. The criteria under which subjects were selected were that they had to be non-Maori (since there were no Maori drinkers), non-problem drinkers, not imprisoned for less than three weeks nor for longer than six months, and matching the problem drinkers as closely as possible in age. Since unfortunately the populations of these two institutions are predominantly Maori, alcoholic or drug addicts, and aged in their early twenties, the writer had to be prepared to accept prisoners who had been imprisoned for longer than six months, and

even so it was possible to obtain only 12 of approximately 180 from Wellington Prison and 18 of approximately 180 from Wi Tako! It was therefore not possible to interview the 60 criminals originally hoped for and the writer had to settle for 30, thus being unable to replicate results in this group.

In type of crime the prisoners ranged from habitual burglars and car converters, through "Mr Big," psychopath and receiver of stolen goods with a full-scale criminal organization under him, to a group of subjects who had offended once against the law and probably never would again: those who had committed theft as a servant and those who, provoked beyond control, had murdered or attempted to murder an unfaithful spouse caught in bed with her lover. Details of crimes committed by these subjects may be found in the Appendix, p.395.

Abstainers:

The 30 abstainers were drawn from the ranks of the N.Z. Alliance temperance movement and one of its member bodies, the Salvation Army. These subjects were matched in age with the problem drinkers. Subjects were interviewed in their own homes or in Alliance or Salvation Army headquarters. 7 of the subjects were from the Alliance movement, 23 were Salvationists, and of the Salvationists 9 were officers in the organization and the remainder were ordinary citizens. No subjects refused to be interviewed, though one Salvation Army citizen did not arrive for his appointment and was dropped from the study and replaced by the next individual on the list supplied to the writer. This list was compiled by an Army officer who selected subjects on the basis of their suitability in terms of age; all subjects chosen who were not Army officers were members of the Army band.

It was originally intended to match the problem drinkers, psychiatric patients, and criminals on age, intelligence, education, and occupation, but hospitalized psychiatric patients were so hard to obtain that this

proved impossible; to interview even 60 the writer had to travel the length of both islands and use seven hospitals! One simply had to take what one could get, and this applied to the criminals as well. Although it has sometimes been suggested (e.g. Mednick and McNeil, 1968) that groups should be matched on every possible variable, Cattell, Komlos and Tatro (1968) consider that matching can be carried out to such an extent that variables relevant to the illness are eliminated. It would have been quite impossible under the conditions of this study to match on all variables, unless much larger numbers of psychiatric patients and criminals had been available and the writer had had unlimited time. Using only out-patients was considered unsuitable, in view of the suggestion (e.g. by Tremper, 1972) that problem drinkers might obtain higher scores on dependency inventories, compared with other subjects, only because they are hospitalized. Accordingly, such variables as intelligence, age, and education were examined statistically rather than being controlled by matching. Although the writer originally intended classifying subjects by occupation and comparing them on socioeconomic status by use of the New Zealand Standard Classification of Occupations manual, inspection of their occupational history suggested that such a comparison would hardly reflect the true state of affairs for the problem drinkers, given the fact that 42% of them frequently changed their occupation from preference and 65% preferred to wander off rather than stay in a fixed abode. Whatever job they were currently employed in often bore no relationship to the work they had been doing the preceding month, or year, or what they had been trained for, and it was felt that to compare such a group with subjects who had remained in one stable category was a fruitless exercise.

In this study anonymity was preserved. Although some investigators (e.g. Holloway, 1969) have requested subjects to identify themselves and have then checked some or all of the information obtained, others - e.g. Kulik, Stein and Sarbin (1968a) with delinquents reporting antisocial

activities, and Flynn (cited by Buss, 1961, p.177) with college students and psychiatric patients reporting aggression - have confirmed that under conditions of anonymity subjects tend to be more open about reporting undesirable feelings and behaviours. This was certainly the writer's experience: it was not infrequent that patients confessed that it was a relief to discuss this or that piece of socially undesirable behaviour that had been kept hidden from their group therapy sessions, because, "In this situation you don't know me, I'm just a number," and others remarked that they would not have discussed their family background, drug-taking, or criminal history had there been any chance of its being reported to hospital or prison authorities. Particularly was this true of the criminal group, where it was very clear that the excellent co-operation the writer obtained would have been minimal under conditions other than those of anonymity.

Numbers of subjects from the various institutions, and in the original and replication groups, are set out below:-

TABLE 3.1

Sources of Subjects, and Numbers from every Institution

Problem drinkers:	29	from Hanmer
	30	from Kingseat
	41	from Carrington
	100	
Neurotics:	8	from Kingseat neurosis unit
	18	from Buchanan Clinic, Carrington
	5	from Ashburn Hall
	2	from Porirua
	3	from Princess Margaret hospital
	6	from Calvary Clinic
	18	from Ward 9 Wakari & Ward 10
	60	Cherry Farm Admission Unit
Abstainers:	7	from N.Z. Alliance
	9	Salvation Army Officers
	14	Salvation Army Band members
	30	
Criminals:	12	from Wellington Prison
	18	from Wi Tako prison, Trentham.
	30	

TABLE 3.2

Numbers of subjects in Original and Replication Groups

Original Study (Group 1)	Replication Study (Group 2)
50 problem drinkers	50 problem drinkers
30 psychiatric patients	30 psychiatric patients
30 abstainers	(same 30 abstainers from Group 1)
30 criminals	(same 30 criminals from Group 1)

Subjects were divided into groups in the following manner:-

TABLE 3.3

Grouping of Subjects by Hospital and By Diagnosis

Problem Drinkers:	Group 1:	Group 2:
Hanmer	15	14
Carrington	21	20
Kingseat	14	16
	50	50
Psychiatric Patients:	**Group 1:**	**Group 2:**
Ashburn Hall	3	2
Calvary Clinic	2	4
Princess Margaret	2	1
Kingseat	3	5
Buchanan Clinic	9	9
Wakari	9	9
Porirua	2	0
	30	30
By Diagnosis:	**Group 1:**	**Group 2:**
Neurotic depressives	7	7
Anxiety states	3	2
Anxiety and depression mixed	3	3
Conversion hysteria	1	2
Obsessive-compulsive neurosis	1	0
Psychosomatic illness	2	2
Personality disorder:		
*Schizoid	4	4
Obsessive-compulsive	1	1
Homosexual	2	1
Paranoid	0	1
Manic-Depressive in remission	3	2
Schizophrenic	1	0
Recovering from psychotic break	1	2
Psychotic core in intact personality	1	1
Borderline psychotic	0	2
	30	30

*Schizoid disorder in no way implied preschizophrenic illness; it referred to predominance of difficulties in relating, inadequacy, withdrawal tendencies, or odd hypochondriacal symptoms, but no psychotic symptomatology.

A number of patients were on medication. In the problem drinker groups this was usually for treatment of epileptic conditions or was simply nocturnal sedation; many more of the psychiatric patients than problem drinkers were taking major or minor tranquilizers or anti-depressants.

TABLE 3.4

Subjects on Medication in Groups 1 & 2

Group 1:
Problem drinkers:
1 on nitrazepam 5 mg. 3 at night
1 on trifluoperazine 15mg. once daily
1 on phenobarbitone 100 mg. 2 b.d.
1 on phenytoin sodium 100 mg. and carbamazepine 200 mg. 2 b.d.
Psychiatric patients:
2 on lithium 1200 mg. once daily
1 on lithium 400 mg. once daily
1 on lithium 1200 mg. and haloperidol 3 mg. once daily
1 on protriptyline 5 mg. 3 t.i.d. (only for one day preceding the interview)
1 on protriptyline 5 mg. 4 q.i.d. and nitrazepam 5 mg. 2 at night
1 on perphenazine 2 mg. 3 t.i.d.
1 on oxazepam 10 mg. 3 t.i.d.
1 on thioridazine 10 mg. 2 b.d.
1 on trifluoperazine 10 mg. once daily
1 on perphenazine 4 mg. and amitriptyline 10 mg. (Mutabon A) 1 tablet 2 b.d.
1 on amitriptyline 10 mg. 3 t.i.d.
1 on diazepam 5 mg., trifluoperazine 5 mg., and imipramine 25 mg. all 2 b.d.
1 on diazepam 5 mg. 3 t.i.d. and amitriptyline 25 mg. once daily
1 on diazepam 5 mg. and amitriptyline 10 mg. 2 b.d.
1 on diazepam 5 mg. 4 q.i.d.

Group 2:
Problem drinkers:
1 on phenobarbitone 30 mg. 3 t.i.d.
1 on diazepam 5 mg. 4 q.i.d. and phenobarbitone 100 mg. 2 b.d.
1 on cyproterone acetate 100 mg. once daily
1 on lithium 400 mg. once daily
1 on sulthiame 50 mg. 3 t.i.d.
Psychiatric patients:
1 on thioridazine 10 mg. 3 t.i.d.
1 on lithium 1200 mg. once daily
1 on reserpine 1 mg. once daily
2 on trifluoperazine 15 mg. once daily
1 on chlorpromazine 25 mg. 3 t.i.d. nitrazepam 5 mg. 2 at night, lithium 400 mg. 2 b.d., haloperidol 5 mg. once daily
1 on lithium 250 mg. 4 q.i.d., amitriptyline 25 mg. once daily and thioridazine 10 mg. 3 t.i.d.
1 on phenelzine 15 mg. once daily, amitriptyline 25 mg. once daily, diazepam 5 mg. 2 b.d. and nitrazepam 5 mg. 2 at night
1 on thioridazine (Melleril Retard) 100 mg. once daily
1 on doxepin 10 mg. 3 t.i.d. and nitrazepam 5 mg. 2 at night
1 on amitriptyline 10 mg. 3 t.i.d.
1 on nitrazepam 5 mg. 2 at night
1 on fluphenazine 1 mg. once daily
1 on trimipramine 50 mg. 1 at night

Patients who had claimed to have once been heavy drinkers or to have used alcohol excessively, in answer to the two CPI So scale questions on drinking habits, were found in Groups 1 and 2 as follows:-

Group 1:
10 subjects claimed to have at one time of their lives engaged in heavy drinking.
3 of these subjects claimed to have used alcohol excessively.
2 additional subjects claimed to have used alcohol excessively.

12 subjects = 40%

Group 2:
9 subjects claimed to have at one time of their lives engaged in heavy drinking.
4 of these claimed to have used alcohol excessively.

9 subjects = 30%

A number of the criminals claimed to have once been heavy drinkers or to have used alcohol excessively. Members of this group were not divided into Groups 1 and 2, of course; the same 30 subjects were compared with all other subjects on Groups 1 and 2.

18 subjects claimed to have at one time of their lives engaged in heavy drinking.
6 of these claimed to have used alcohol excessively.

18 subjects = 60%

None of the criminals who answered the So scale questions on drinking affirmatively, considered themselves to be problem drinkers, nor were they considered to be so by prison staff, but they did consider that at times they drank not wisely but too well and three of them were serving prison sentences for crimes involving alcohol. Of the three, two had been convicted for driving while disqualified, while the third had driven with excess blood alcohol and had killed a driver who had without warning opened her car door and stepped out onto the road just at the moment when a third car was passing at the same spot, making evasive action impossible.

CONSTRUCTS AND MATERIALS:

Hypothesis 1: Dependence/independence conflict (Bernreuter Self-sufficiency scale, Gough's Fe scale, and "threat" apparatus).

Bernardin and Jessor (1957), Cattell, Saunders, and Stice (1957), Comrey and Schlesinger (1962), Renner, Maher, and Campbell (1962), and Rotter (1971, p.60) all refer to dependency as lack of self-sufficiency, a need for the help of others for security, attainment of goals, etc. Fenichel (1945, p.377, pp.491-492) similarly links it with psychological need for external support. In this thesis dependency is defined as non-self-sufficiency, but no rigid conceptual line is drawn between feelings of independence and masculine adequacy, problem drinkers' anxieties over dependency being seen as related to both compensatory independence and hypermasculinity. Interest, in this study, lies in possible increases in behavioural self-sufficiency and masculinity when anxieties over putative dependency are aroused, rather than in basic scores on inventories under non-threat conditions.

The Bernreuter Self-sufficiency scale (Bernreuter, 1933) was selected for this study largely because its items seem to best fit the above definitions of dependence/independence, an operational definition of independence thus being self-sufficiency on the criterion instrument. The scale appears not to be subtle, therefore lending itself to subjects' distortions, their possible need to present themselves as ultra-self-sufficient. The scale was used by Holloway (1969) in her doctoral study of Australian alcoholics, but without experimental manipulation of dependency, scores being regarded as valid indicators of subjects' actual dependence or independence. Use of the same measure under different experimental conditions, enabling comparison of scores, might therefore illuminate the problem of dependency as a conflict area for drinkers, permitting inferences about the wisdom of using inventory measures alone to explore this area.

The Bernreuter scale consists of 60 Yes/No/? items taken from other personality inventories and original sources, and was developed from a longer scale by selection of the most

discriminating items (Bernreuter, 1933). In three studies the scale showed satisfactory reliability. Validity was established by ratings on need for sympathy, appreciation and encouragement; desire to be alone; frequency of asking advice; and ability to handle responsibility. Coefficients of scores and ratings were adequate. Students with high self-sufficiency scores tended to be males, to be living away from home, and not to belong to any college fraternity; these expected findings served as evidence for validity of the concept of self-sufficiency. Super (1942) has reviewed research on the scale, finding self-sufficiency to be associated with students who supported themselves, leaders, those who were intellectually independent, undergraduate radicals, divorced women, persistent and punctual people, and withdrawing people. Low scores were made by persons cheating in exams, fraternity men, and nurses.

The Fe scale of the California Psychological Inventory (Gough, 1952; 1957; 1968) was selected as the measure of masculinity for several reasons. The scale is based on an operational definition of masculinity (differential item endorsement by males and females) and was developed from peer-group ratings and on the differentiation of heterosexual from homosexual men (Gough, 1968); it has enjoyed extensive use elsewhere, with an abundance of studies for comparison (Gough, 1957, pp.24 and 34; 1966a) including psychiatric patients; its cross-cultural validity has been demonstrated (Gough, 1966a), and it would appear to be measuring precisely those aspects of masculinity in which the writer was interested: extraverted, aggressive, self-assertive behaviour with little interest in aesthetic pursuits, i.e. "sociocultural" rather than specifically sexual masculinity, the "tough, aggressive ascendance" referred to by contemporary theorists. The scale has also been used to support theorized relationships between heavy drinking and intensified masculinity in pre-problem drinking populations (Blane and Chafetz, 1971; Zucker, 1968), and there are comparison scores for other problem drinking populations available (Canter, 1963; Corotto, 1963). The scale has also shown itself fakeable in the direction of intensified masculinity or femininity (Bieliauskas, Miranda, and Lansky, 1968). Blane and Chafetz (1971) and Zucker (1968)

used the Fe scale alone, without the other CPI scales, though the former included some items from the original Fe scale of Gough (1952).

In this study interest lay less in actual scores on the criterion instruments than in possible increases in self-sufficiency and masculinity after experimental manipulation to arouse anxieties over dependence and masculine inadequacy. An attempt was made to arouse these putative anxieties by use of a mechanical device that subjects were told measured their anxieties about dependency and inadequacy, following which they completed the Bernreuter and Fe inventories. The expectation was that those subjects who were threatened in this manner would react defensively by producing elevated scores on both variables compared with those subjects not threatened. Every second subject was placed into the threatened group.

Bramel (1962) used a somewhat similar technique successfully to study paranoid reactions in subjects who had been told their "homosexuality" was being measured by a machine.

It was hypothesized that if dependency and masculine inadequacy are conflict areas for problem drinkers and are dealt with by compensatory independence and hyper-masculinity, any threat to this ought to produce elevated scores on inventories measuring these variables, relative to other subjects not threatened, and relative to subjects presumably lacking such anxieties.

In further consideration of the hypothesis, two additional sets of data were investigated: age at which subjects left the parental home, and dependence on cigarettes. McAndrew (1967) found that age of leaving home was a factor which discriminated between problem drinkers and psychiatric patients, drinkers having tended to move away as soon as was practicable, and he expressed the hope that other work would follow up this and other leads in his hypothesis-generating study. With regard to heavy smoking, the work of Jacobs and colleagues (1965; 1966; 1970; 1971) has suggested a link

between orality, impulsivity, and cigarette smoking in men - the same constellation of toughness, maleness, and impulsive self-assertiveness reported for problem drinkers, which they uncovered in heavy smokers. It would be assumed, therefore, that individuals needing to deny dependency strivings and assert themselves would reflect this by leaving home at an early age, while excessive use of cigarettes would be predicted in dependent individuals because this is not so readily identifiable as a manifestation of dependency and, in Western cultures, usually has just the opposite connotation. Of course, it is apparent that drinkers might leave home early for a variety of reasons: unhappy home life, financial demands made on them by parents, and so on; leaving home early may indicate the operation of factors other than, or as well as, denial of dependency needs.

Hypothesis 2: Interest in males, diminished heterosexual role investment (Zamansky picture technique).

Contemporary theorists have argued that the problem drinker has failed to make a firm identification with the male and that as a result he feels threatened and inadequate and driven to seek out relationships with men, rather than with women, to enhance feelings of masculine identity, with consequent impoverishment of heterosexual roles and a turning to culturally stereotyped ways of becoming "one of the boys."

Several methods for exploring sexual identification presented themselves, e.g. adjective checklists, or Semantic Differential methods, but careful reading of the literature suggested that while the latter instrument appeared to have considerable potential, results over several studies were inconsistent, and whether it can be reliably used as a measure of sex-role identity is as yet unsettled (Beitner, 1961; Dignan, 1965; Endler, 1969; Lazowick, 1955; Shell, O'Mally, and Johnsgard, 1964; Thompson, Schwartz, McCandless, and Edwards, 1973). Adjective checklists tend to be unwieldy and time-consuming (e.g. the Gough and Heilbrun, 1965, list, which has 300 adjectives to be checked four times), though the writer did experiment with the shorter Leary (1957, pp.456-463) checklist, extracting 80 from 129 adjectives, but found it to

totally lack interest for subjects, to be too time-consuming, and to easily become confusing. It was felt that, rather than studying "feminine identification" or "inadequate masculine identification" with parent figures, emphasis in this study should be on interest in males and male activities (rather than in females), since theorizing has emphasized this behavioural aspect rather than its genesis. Male preference for men instead of women is taken as the definition of diminished heterosexual investment in this study.

Zamansky (1955-6) developed a simple technique for studying sex preferences, involving use of pictures of males, females and neutral scenes taken from popular magazines and placed in opposite-sex pairs in a viewing apparatus. His subjects' ostensible task was to estimate which picture was the larger of the two (they were identical) but in fact Zamansky, who viewed subjects' eye movements through the rear of the apparatus, was able to confirm his prediction that homosexual men would spend more time looking at male than at female pictures. Zamansky (1958) extended and confirmed the usefulness of this approach with paranoid patients based on theorizing that their putative homosexual needs would lead to greater interest in men, compared with non-paranoid patients. This method would appear to bear some resemblance to that of Gibbins and Walters (1960) who tested the phallic preferences of homosexuals and alcoholics with pictures of phallic and vaginal symbols. Their results, and Zamansky's (1955-6; 1958), together with a study by Sternlof (cited by Parsons, 1970), who predicted and confirmed that male paranoids would report seeing more males than females in a telebinocular apparatus, relative to depressives, indicate that sexual orientation does exert selective influences on viewing and perception.

The criterion instrument for this hypothesis was a modification of Zamansky's apparatus: instead of the experimenter's viewing subjects' eye movements, the front of the apparatus consisted of a sliding door exposing only one picture of the pair at a time; subjects moved the door to

expose the other picture and were timed for the duration of fixation on either picture with two Leonidas Trackmaster stopwatches.

70 pictures were cut from popular and nudist magazines, carefully chosen in terms of the similar posture and attractiveness of each member of the pair and the absence in any picture of any features that might influence fixation other than sex differences. 4 judges rated these to ensure selection of the best 30 pictures, i.e. those pairs that were most alike other than in gender. The final pictures comprised 6 pairs of naked male/female cards, 2 pairs of naked male/male cards, 2 pairs of naked female/female cards, 1 pair of male/female faces cards, 1 pair of male/neutral scenes, 1 pair of female/neutral scenes, and 2 pairs of neutral/neutral scenes - 15 pairs in all. The neutral pictures were both of similar scenery, and in the male/neutral and female/neutral pairs an attempt was made to have the neutral picture almost identical for both sexes. Only the 7 pairs of male/female pictures were used in calculation of the results, however.

At completion of the series, subjects were asked to state which member of each pair of pictures they preferred. It was anticipated that all subjects would select more female than male pictures, but if the problem drinkers eye-fixated longer upon males than on females and were the only group to do so, then verbalized preference for females in their case would indicate discrepancy between covert and overt orientation.

The prediction for this hypothesis was that if male problem drinkers need to feel identified with men to enhance their own feelings of maleness, there would probably be diminished heterosexual interest which would be reflected in their spending more time fixating on male than on female pictures, but a verbalizing of preference for female pictures would be expected because on a more conscious level such a preference would be taken to indicate maleness.

Hypothesis 3: Schizoid alienation and isolation (Biographical Data Questionnaire).

Because of difficulties in investigating mild rather than gross thought disorders and other schizoid phenomena, this hypothesis was restricted to disturbances in interpersonal relationships - the withdrawn, distrustful, superficial, isolated aspects of schizoid ways of relating as described by Machover and Puzzo (1959a) and Zwerling and Rosenbaum (1959) rather than the cognitive disorders often associated with it.

There seemed no really satisfactory short way of obtaining information relative to this area other than by asking subjects about the quality and nature of their interpersonal relationships. Inventories in this area tend to be unsatisfactory in that while they may tap anxieties over interpersonal relationships - shyness, lack of ease in mixing, etc. - this is not usually done in a manner that might aid in discriminating between subjects on the basis of the way in which they deal with these anxieties. It was felt that while both drinkers and psychiatric patients might experience difficulties in mixing, and might suffer intensely from self-consciousness and anxiety socially, drinkers might react by avoidance, withdrawal, and superficiality, as the work of Machover and Puzzo (1959a) and Zwerling and Rosenbaum (1959) suggests, while patients might maintain or endeavour to maintain stable marital and other relationships. Drinkers might be particularly prone to opt for short-term relationships where deep emotional committment was not vital.

The criterion instrument for this hypothesis was a subsection of the BDQ, specifically questions 6-9 and 18-22, developed from the Pilot Study. These questions enquired into whether the subject had many, few, or no close friends, habitually lived alone, and preferred casual to close friends; the stability of his relationships - whether he had ever been divorced or separated, been unfaithful to his wife, or had de facto relationships; and whether he suffered from extreme shyness and self-consciousness in relationships and found relationships difficult to establish. While it would have been simpler, statistically, if all these items could have

been combined into one short scale, this could have obscured the aspects of interpersonal relations in which subjects might differ amongst themselves.

Questions 23 and 24 of the BDQ enquired into shyness and difficulties in mixing with others in childhood, and the number of adolescent friends the subject recalled having, to ascertain the extent to which subjects considered their interpersonal difficulties had preceded onset of problem drinking.

The prediction for this hypothesis was that problem drinkers would report being shy and self-conscious, finding relationships difficult to establish and maintain, expressing a preference for casual rather than close relationships, and leading lives of comparative social isolation punctuated by short-term relating to others.

Hypothesis 4: Psychological Differentiation (Witkin's Embedded Figures test).

Of several methods available for investigating superordinate constructs such as ego-differentiation (Witkin and colleagues, 1954; 1962), psychological construct systems (Kelly, 1955), or conceptual complexity/simplicity (Harvey, Hunt, and Shroder, 1961), held to intervene between stress and coping and influence the form coping might take, hence being possibly related to differential symptomatology, it was borne in mind that Kelly grids or sentence-completion methods (Harvey et al, 1961) might prove too exacting for a not too imaginative or very verbal problem drinking population. Witkin's field dependence dimension (ego differentiation) was selected because although it has been used extensively with problem drinking samples the control groups have usually been normals only, its relationship to number of years of alcohol abuse and possible cognitive impairment have not been adequately investigated (a review by Tarter, cited by Tarter, Sheldon, and Sugarman, 1975, is at present in press), and there has been inconsistency in results over several studies. The Embedded Figures test (EFT) was the only practicable measure of psychological differentiation for this study. Only figures 1-12 were used, as recommended in Witkin's Manual, results having been shown to correlate satisfactorily with the

full test of 24 figures. Jackson (1956) also found a shortened version entirely satisfactory.

Witkin and colleagues (1954, pp.86-87; 1959; 1962,pp.43-58) define EFT field dependence as a manner of perceiving that is passive, undifferentiated, reflecting difficulty in articulating or separating parts of the field, experiencing items as not discrete but embedded with their context. This manner of perceiving has been related to general immaturity (Witkin et al, 1954, pp.120-152; 1960, pp.339-341; 1962, p.374). As Witkin (1960, p.341) put it, "The finding that with growth objects are better differentiated from their surroundings effectively illustrates, in perception, at least part of Werner's cardinal regulative principle of development - namely, that it proceeds from a state of relative globality and lack of differentiation to one of increasing differentiation, articulation, and hierarchic integration."

Whatever the basic underlying construct of field dependence may be (Wiggins, 1968, has discussed this at length) it has been linked experimentally with conformity (Linton, 1955), and social compliance (Solar, Davenport, and Bruehl, 1969); emotions unduly influencing perception (Witkin, 1965); an undifferentiated body-image (Karp et al, 1963); impulse control difficulties (Witkin, 1960; Witkin et al, 1962, p.159 and pp.209-212); impulsivity and non-self-acceptance (Gordon, Brayer, and Tikofsky, 1961); passivity, a feeble self, and low level of awareness (Witkin et al, 1954, p.340); being carried along by environmental forces rather than active coping (Witkin et al, 1954, pp.471-474); an undeveloped sense of separate identity (Witkin et al, 1962, p.209); ego weakness and dependency (Crutchfield, Woodworth, and Albrecht, cited by Gardner, Holzman, Klein, Linton, and Spence, 1959); a dependent orientation and general immaturity (Gardner et al, 1959); perception of people in terms of external attributes rather than inner psychological qualities (Bieri, Bradburn, and Galinsky, 1958); undifferentiated perception of people (Rhodes, Carr, and Jurji, 1968) and of colour nuances (Fine, 1973); and more primitive global defence mechanisms (Donovan, Hague, and O'Leary, 1975). Field independence has been found to correlate with achievement motivation (Wertheim and Mednick, 1958), with obsessive-

compulsive tendencies (Witkin, 1960, p.350; Zuckmann, cited by Silverstone and Kissin, 1968), with perseverance in psychotherapy (Kissin, Rosenblatt, and Machover, 1968), and with more improvement in psychotherapy compared with less differentiated (field dependent) patients (Kissin, Platz, and Su, cited by Tarter et al, 1975).

The prediction for this hypothesis was that if limited psychological differentiation characterizes problem drinkers, they would perform in a field dependent manner on the EFT.

Hypothesis 5: Strong feelings of aggression with poor control of it (Foulds's Hostility scale and Stereoscope).

An overtly aggressive orientation, implying inadequate control, is here defined as (a) A tendency to score as very aggressive on inventories calling for self-report of such feelings and behaviours (because presumably little anxiety over aggression is felt in those who act out and hence there is no need to inhibit admission of aggressiveness), and (b) Differential sensitivity to aggressive versus non-aggressive stimuli.

It is usually considered that subjects who are sensitive to, or over-ready to perceive, slight cues relating to aggression are those who are not effectively controlling it (Holzberg, Bursten, and Santiccioli, 1955). A number of studies have indicated that overt aggressiveness in individuals is associated with increased aggressive content in such phantasy material as TAT or ORT stories (Haskell, 1961; Jensen, 1957; Lesser, 1957; Purcell, 1956; Stone, 1956). Gofstein (cited by Buss, 1961, p.110) found patients with putative anxieties over expressing aggression (catatonics) to recall fewer hostile and more neutral themes in stories told to them, compared with patients acting out hostility without reservation (brain-damaged). Buss (1961, pp.130-134, pp.160-181) concluded that scores on hostility scales were probably valid indicators of aggression and tended to be related to actual behaviour, assaultive patients scoring higher on a variety of measures of aggression, and Kulik, Stein, and Sarbin (1968b) confirmed that self-report of antisocial

behaviour was significantly related to legal records of delinquency.

In this study two measures of aggressiveness were used: admission of hostility on Foulds's Hostility scale (Foulds et al, 1960; 1965), and over-reporting of aggressive relative to non-aggressive stereograms in a binocular rivalry situation.

Foulds's 52-item True/False inventory was developed from the MMPI and was selected for several reasons; in the Pilot Study the problem drinkers had obtained mean scores very similar to those reported by Ritson (1971) and Walton (1968) for U.K. alcoholic samples, so that it was felt the scale might have value for problem drinkers compared with one untried under N.Z. conditions; and the scale has been used extensively with reasonably consistent results for normals and various psychiatric groups (Foulds et al, 1965; Foulds, 1966; Hassall and Foulds, 1968; Hope, cited by Phillip, 1968; Kraft and Wijesinghe, 1970; Phillip, 1968; 1973; Vinoda, 1966), so that there are available quite a number of comparison studies. More importantly, the scale was used by Foulds and Hassall (1969) when relating age of onset to various aspects of problem drinking behaviour, and the writer wished to attempt a replication of some of the Foulds and Hassall results with a N.Z. population.

It was considered unwise to rely solely on an inventory for measurement of aggression. The Pilot Study had suggested limited usefulness of TAT or ORT methods with a problem drinking population; a search of the literature suggested that stereoscopic methods might prove more suitable. This method made no verbal demands, was easily administered, was not time-consuming, was likely to hold subjects' interest, and had given useful results with aggressive and sociopathic individuals in a number of studies.

A modified Engel-type stereoscope was constructed, for use with a set of 20 aggressive/non-aggressive stereograms. Engel (1961) has given a general introduction to the mechanics of this method. Under conditions of binocular rivalry, differential sensitivity to the paired stimuli is evoked, the

individual resolving the ambiguity by emphasizing the stimulus to which experience has "sensitized" him or which he is over-ready to report. Thus, upright faces dominate over inverted ones (Engel, 1956); familiar countryside over foreign (Bagby, 1957); familiar postage stamps over unfamiliar (Hastorf and Myro, 1959); words in frequent usage over those less frequently used (Davis, 1959); male over female stereograms in homosexual paranoids (Sternlof, cited by Parsons, 1970); "blatant" over "socialized" versions of the same scene in impulsive versus neurotic prison inmates (Berg and Toch, 1964); and composite photographs of the self and a stranger over two strangers (Beloff and Beloff, 1959). The influence of affect on differential perception was demonstrated by Reitz and Jackson (1964), and Purcell and Clifford (1966) were able to demonstrate relations between selective perception of mother- and father-stereograms, by asthmatic and non-asthmatic boys, and parental power and punitiveness.

So far as aggression is concerned, Van de Castle (1960) was able to produce increased report of aggressive stereograms by admonishing subjects for "not doing your best." Petzel and Michaels (1973) found differential sensitivity to aggressive stereograms to be associated with elevated scores on the Buss-Durkee aggression inventory. Antisocial sociopaths reported more violent than neutral stereograms, compared with less antisocial prisoners (Shelley and Toch, 1962), high scorers also scoring high on a Rorschach measure of assaultiveness (also noted by Van de Castle, 1960), and Toch and Schulte (1961) found policemen undergoing a special training course dealing with violence to report more violent stereograms than did novice policemen or students. Sarbin and Wenk (1969) failed to replicate some of the above results but felt that prison inmates' defensiveness (failure to report the aggressive card in case prison release was influenced) might have been a distorting factor; they suggest that if the stereoscope method is to be used, enough cards should be shown (rather than the same set twice) to control for eye dominance, and that the most suitable speed is 0.5 of a second. They developed an additional set of cards to be used with the original Toch and Schulte set, and Wenk forwarded both sets to the writer for

use in this study.

The prediction for this hypothesis was that if problem drinkers tend to be overtly aggressive, i.e. have augmented aggressive feelings inadequately controlled, elevated hostility scores should be found on Foulds's inventory, and more aggressive than neutral stereograms should be reported. In further consideration of the hypothesis, BDQ material relating to arrests for crimes of violence was examined.

Hypothesis 6: Future Time Perspective (Personal Events method).

In the literature review a variety of studies revealed such characteristics as emotional under-control and instability, short-circuiting of drives into immediate discharge with little persistence of activity directed towards planning, and so on, suggesting that problem drinkers tend to live in an "expanded present" rather than extending phantasy life into a more distant future. A large body of theory and experimentation has endeavoured to link the construct of future time perspective with the change in ego development from anchoring of personal phantasy orientation in the present to ability to postpone and extend it into the future as a product of the maturational sequence - developmentally earlier behaviour being regarded as impulsive and direct whereas higher levels would be ideational and symbolic, reflected in a shift from motor action to ideational activity (Freud, 1949, pp.101-102; Klein, 1958; Murray and Kluckhohn, 1953, p.24; Phillips and Zigler, 1961; Piaget, 1951; Rapaport, 1950; 1951; 1953; Singer, 1955). Murray (cited by Emrick, 1970) postulated phantasy and imagination as a mediating dynamic for the ability to delay impulses. Maturation is linked with ability to delay, and ego-strength (Renner, 1967), with consequent greater ability to conceptualize and extend the self into a more distant personal future, a major function of the ego being held to be that of integrating events from past and present into present behaviour in terms of its future relevance or more remote consequences (Allport, 1943, p.474; Davids, 1969; Mowrer, 1950, pp.206-207).

Other authors have linked time span with anxiety,

producing some evidence that the high anxious individual might lower his anxiety level by perceiving time relatively less in terms of future and present and more in terms of the past (Krauss and Ruiz, 1967a,b). However, in this present study interest lies not in whether problem drinkers tend to live in the past but whether they experience difficulty extending themselves, in phantasy, into a more distant future, and for this reason the method of future time perspective chosen for this investigation seemed preferable to use of an inventory which included retrospective as well as prospective time span items.

Supporting an interpretation of future perspective with psychological maturation are studies and reviews linking increased future span with chronological maturity (Klineberg, 1967; Lewin, 1935; Wallace and Rabin, 1960); it has been linked with predominance of delay and consideration rather than action, and diminution of impulsivity (Davids, 1969; Singer, 1955), also. Webb and Mayers (1974) found younger age groups to be more future-orientated, contrary to expectation, as did Lessing (1968), but Lessing concluded that inclusion of stereotyped milestones such as age at which marriage, or career-satisfaction, might occur might be responsible for this apparent contradiction; when such milestones are not included, maturity is associated with longer future-orientation.

In view of the postulated link between normal personality development and time span, an association of reduced future span with psychopathology might be expected. According to Schneider (cited by Wallace and Rabin, 1960, p.224), " ... the manner in which a person handles time ... is very closely linked to the structure of his character and to the nature of his neurosis." Israeli (cited by Wallace and Rabin, 1960, p. 229) noted that psychopathological groups were characterized by limited time perspective scarcely extending beyond the present. Future time span has been found to be shorter in some schizophrenics than in normals (Braley and Freed, 1971; Wallace, 1956), and short span has been associated with more severe psychopathology (Shybut, 1968), while normals obtained longest future spans compared with depressives and schizophrenics (Dilling and Rabin, 1967; Foulks and Webb, 1970).

Future time span has also been found to be much shorter in individuals by socio-legal definition under-socialized (delinquents) than in those whose behaviour is not asocial (Barndt and Johnson, 1955; Craik, cited by Stein et al, 1968; Davids, Kidder and Reich, 1962; Ricks, Umbarger, and Mack, 1964; Siegman, 1961; Stein, Sarbin, and Kulik, 1968). Stein et al (1968) obtained similar results in a replication study. Brock and Del Giudice (1963) found that children who stole money in an experimental situation completed stories covering a significantly shorter future span than those who did not steal. Time span was noted to lengthen in psychotherapeutically treated delinquent boys but not in untreated controls (Ricks, Umbarger, and Mack, 1964). Longer future span has also been associated with ideational rather than motoric (action-orientated) interest patterns (Stein and Craik, 1965); with good motor inhibition on a slow-tracing task in delinquents (Siegman, 1961); with delay of an immediate small reward for a later larger one, and with superior social and personality adjustment and responsibility (Lessing, 1968).

Whether there is an important association between future time span and intelligence remains problematical. Lessing (1968) found some evidence that longer span was associated with intelligence when this was very high, and Levine, Spivack, Fuschillo, and Tavernier (1959) also reported a relationship, but in most studies only very low correlations have been reported (e.g. Barndt and Johnson, 1955; Brock and Del Giudice, 1963; Foulks and Webb, 1970; Krauss and Ruiz, 1967a,b; Sattler and Pflugrath, 1970, who found a relationship only in late-stage alcoholics; Siegman, 1961; and Stein, Sarbin, and Kulik, 1968). Brock and Del Giudice (1963), Foulks and Webb (1970), and Stein and Craik (1965) found no relationship between future span and education. Possibly it is related more to psychopathology and to the ego disturbances therein implied than to such variables as intelligence and education.

Methods of measuring future span include story-stem completions (Barndt and Johnson, 1955; Davids and Parenti, 1958; Dilling and Rabin, 1967; Sattler and Pflugrath, 1970); personal events, in which the subject spontaneously lists 10 or so events that might happen in the future and estimates

the age he might be when these happen, span being discrepancy between chronological age and estimated age (Lessing, 1968; Siegman, 1961; Smart, 1968b); personal events in which the subject chooses 10 or so that might happen to him from an extensive list supplied, or is given 10 events and asked to estimate his age when each occurs (Dilling and Rabin, 1967; Stein and Craik, 1965; Stein et al, 1968; Wallace, 1956); and time reference inventories (Cappon and Tyndel, 1967; Emrick, 1970; Roos and Albers, 1965; Sattler and Pflugrath, 1970). The Personal Events method was finally selected for this study as being that most suited to a problem drinking population, since results could be compared with other studies using such populations (e.g. Imber, Miller, Faillace, and Liberman, 1971; Smart, 1968b), since it was expected that story-completion methods would be too difficult for them, and since extension of personal phantasy into a near rather than distant future seemed particularly relevant to drinkers' problems in handling themselves and their needs in time. Lessing (1968), in a critique of various methods, concluded that personal events methods gave the most consistent results; she preferred to define time span as the length of future time over which one can conceptualize a personalized future, as did Smart (1968b, p.81). This is the definition accepted for this present study.

Criterion instruments for this hypothesis included two Personal Events measures: (a) The subject was asked to list spontaneously 10 events that might happen to him during the rest of his life, and state the age he might be when these happened, and (b) He selected 10 events from the list used by Stein and Craik (1965) combined with that of Wallace (1956), again stating age estimates. Wallace's list was included because it appeared to have more items with a pull for distant future events than did the Stein and Craik list.

Short future time span was defined as placement of possible events close to chronological age, the prediction being that if problem drinkers are relatively anchored in the present and find it difficult to envisage present delay of satisfaction for future advantages, this would be reflected in short future perspective.

Hypothesis 7: Under-socialization (Gough's CPI So scale).

For the purposes of this study, socialization was thought probably best measured by comparing subjects' scores with those of individuals by sociolegal definition under-socialized, on an inventory satisfactorily distinguishing such groups. Gough's CPI So scale (1957; 1960b; 1968) was selected because extensive research has demonstrated its considerable power to distinguish between groups of varying degrees of socialization. The scale has been used extensively, means being available for many general adult samples as well as for psychiatric groups (Gough, 1957, pp.22 and 34), and a few studies have included alcoholics (Allen, 1969; Canter, 1963; Corotto, 1963; Stein, Rozynko, and Pugh, 1971). In a review of personality research, Adelson (1969) described the scale as possibly the best measure available for determining anti-social tendencies.

Gough (1957, p.10; 1965a; 1968) has described his scale as indicating the degree of social maturity, integrity and rectitude attained, and peer-group ratings of high and low scorers support this contention, low scorers being seen as given to rash and precipitate behaviour, deceitfulness, rebelliousness and undependability (Gough, 1957, p.10; 1965a). As impulsive behaviour and diminished social maturity have been postulated as especially characteristic of problem drinkers, and as the scale has shown itself capable of differentiating sociopathic and unconventional from socialized and conforming individuals, it seemed a useful instrument for investigations into this aspect of problem drinking.

The 54-item True/False scale was developed by differential item endorsement within groups and by peer-group ratings (Gough, 1957). High So scores have been found to relate to student achievement (Holland, 1959); to graduation from high school (Gough, 1966b); to unselfish behaviour (Turner, cited by Gough, 1968); to non-cheating in course examinations (Hetherington and Feldman, 1964); to accurate perceptions of others' reactions to oneself (Reed and Cuadra, cited by Gough, 1965a); and the scale distinguishes

delinquents from non-delinquents (Gough, 1957, pp.22 and 34; 1960b; 1965b; Stein, Gough and Sarbin, 1966). The scale has predicted non-antisocial behaviour in "good" children from delinquency-prone areas (Scarpitti, Murray, Dinitz, and Reckless, 1960), and has been valid for incidence of delinquency among military personnel (Datel, cited by Gough, 1965b; Knapp, 1963) and severity of antisocial behaviour (Gough, 1960b). Non-antisocial individuals tend to obtain significantly higher scores than do people with a variety of disciplinary problems (Gough, 1957, pp.22 and 34; 1960b). Some studies have revealed fine group distinctions: higher So scale scores were found in reformatory inmates with only one crime and first in trouble beyond age 15, compared with those with two or more crimes and in trouble before age 15 (Donald, cited by Gough, 1960b); in first offenders compared with delinquency recidivists (Peterson, Quay, and Anderson 1959); in unmarried mothers with only one illegitimate pregnancy compared with those with two or more such pregnancies (Vincent, cited by Gough, 1960b); in parole non-violators compared with violators and in a cross-validation study (Gough, Wenk, and Rozynko, 1965); and in subjects never using marihuana or using it only occasionally, compared with frequent users (Hogan, Mankin, Conway, and Fox, 1970). Low scores have also been associated with low scores on the Marlowe-Crowne scale of need for social approval (Lichtenstein and Bryan, 1966), and Pumroy (1962) found that social desirability affected the CPI in general far less than other similar instruments. Gough (1965a) found it uninfluenced by socioeconomic status, age, intelligence, or social desirability. The scale has good cross-cultural validity also, significantly distinguishing delinquents from non-delinquents (Donald, cited by Gough, 1968, p.66; Gough, 1965b; Gough and Sandhu, 1964; Peterson, Quay and Anderson, 1959).

The prediction for this hypothesis was that problem drinkers would obtain low scores, nearer the under-socialized end of the continuum, on the criterion instrument.

In further consideration of the hypothesis, material relating to the indices of sociopathy used by Guze et al (1969) and Schuckit (1973) was studied: occupational instability,

wanderlust, impulsiveness, promiscuity, non-traffic arrests, and antisocial-disciplinary problems during school years. These indices were covered by questions 2,13-16, and 27-30 of the Biographical Data Questionnaire while promiscuity, already discussed in Hypothesis 3, was assessed by questions 8-10 of the BDQ. Antisocial/disciplinary difficulties during school years were extracted from answers to questions 1,10,72,103, and 107 of the So/HDHQ inventory, dealing with being sent to the Principal frequently for chastisement, being suspended once or more from school, habitual truanting, periods of thieving, and giving teachers lots of trouble, while impulsivity was taken from question 27 of the So/HDHQ inventory. All but question 107, on giving teachers lots of trouble, appear in the MMPI as well, and were used in the Pilot Study, so that results of that study can be compared with this one. Of course, one is dealing to some extent with socially undesirable behaviour and honesty of self-report could not be checked; however, Sobell, Sobell, and Samuels (1974) surveyed several studies and concluded from these and their own study that, at least in the matter of criminal history and court records, self-reports of alcoholics are sufficiently valid to warrant use as a primary source of life history data.

In addition to the measures discussed in this section, the Massey test of Verbal Ability was used as a measure of verbal intelligence. This test was selected because the time-consuming nature of the other measures meant that only a very short intelligence test could be included; the Massey test takes only 5 minutes. Although to date no results from this test have been published, correlation studies using 1000 subjects look promising. Correlations between test results and Otis intelligence test scores ranged from .74 to .84 over three schools and six comparisons, with an average of .78. Three studies providing means are available: (1) 91 engineering apprentices, mean 22.6, S.D. 4.3, (2) 102 school leavers (all males), mean 22.4 S.D. 4.5, and (3) TAB betting operators, mean 28.5.

Material on drinking habits and history, educational, occupational and marital background, and family background

was incorporated in sub-sections of the Biographical Data Questionnaire. The family background material (Questions 37-50) was based on the Multiproblem Family Index of Bloch et al (1959), which has been used by Wagner (1960) to investigate the backgrounds of children with conduct disorders, and was used to help interpret results from the hypotheses investigated in this thesis.

EXPERIMENTAL PROCEDURE AND SCORING:

Subjects completed tests during a 2-3 hour interview. These were administered in the following order: Biographical Data Questionnaire, Time perspective measures (FTP1 and FTP2), Massey Verbal Abilities test, Stereoscope, Embedded Figures Test, and Zamansky pictures test. At this point, those subjects whose putative dependency anxiety was to be threatened were subjected to the experimental manipulation described below and then, depending on which group they belonged to, they completed the Bernreuter/Fe inventory in the writer's presence or took this and the So/HDHQ inventory off to their rooms to complete within 1-2 days. The Fe and So scales were extracted from the rest of the California Psychological Inventory but a few subjects (problem drinkers) also completed the whole of the CPI. Correlations between So scale and Fe scale scores obtained from the whole CPI and from the two scales minus the rest of the test were .61 and .77 respectively, indicating that the validity of these two scales is unlikely to be much affected by their administration separately from the other CPI scales. Blane and Chafetz (1971) and Zucker (1968) also used the Fe scale without the rest of the CPI items, in their study of adolescent drinkers.

Hypothesis 1: (Bernreuter scale, Fe scale, "threat" apparatus)

Subjects in the non-threatened groups were given the Bernreuter and Fe scales on completion of all other measures, to finish within 1-2 days, while the other subjects were given these inventories after experimental threat to their hypothesized dependency as follows: Group 1 - the threatened subjects (i.e. every second subject) in this group were engaged in a brief discussion about possible dependency needs. Specifically, they were asked:-

> "I wonder if you have ever heard of the theory that alcoholics are anxious about whether they are really self-sufficient people? One theory is that alcoholics drink heavily because it makes them feel much more self-sufficient and manly than they really are."

These remarks were altered somewhat for the other three groups, of course. Subjects were then attached by wrist electrodes to a battery-powered apparatus purporting to measure their "self-sufficiency" and were informed that any

anxieties aroused by the discussion would be revealed by an emotional response the machine would measure. After five seconds the machine was switched on, immediately registering a bogus charge which was interpreted to the subject as indicating that he probably did have anxieties in the area of non-self-sufficiency and inadequate masculinity. Following this threat, the subject was then handed the Bernreuter and Fe scales combined into one inventory conspicuously headed "Bernreuter Self-Sufficiency Scale" and completed this in the examiner's presence. For Group 2 subjects the same procedure was followed with the threatened subjects (every second subject), with discussion of the theory of manliness and self-sufficiency as above, but the threat apparatus was not used, the subjects merely being told that the inventory was to assess their performance in these areas. The real purpose of the experiment was not divulged, in case subjects discussed it amongst themselves on the wards, but each threatened subject in Group 1 was later assured not to be too concerned about the dependency because the apparatus seemed to produce a charge with everyone and therefore was probably measuring only general nervousness, though there might be something in the theory of dependence compensated for by manliness.

The above procedure was followed for Groups 1 and 2 of the drinkers and Groups 1 and 2 of the patients. Because the criminal and abstainer groups were the same group of subjects in the original group (Group 1) and the replication group (Group 2) it was obviously not possible to use an identical procedure. These subjects were therefore treated as if they belonged to Group 2: every second subject was subjected to threat but the battery apparatus was not used, only discussion of the theory of non-self-sufficiency and masculine inadequacy as related to abstaining or criminal habits.

Use of two procedures for threat derived from the expectation that, if problem drinkers are particularly disturbed by dependency anxieties, the presence of a machine purportedly measuring these unequivocally would be more threatening than would a discussion of such anxieties, and

therefore Group 1 drinkers might be expected to obtain higher scores on compensatory self-sufficiency and masculinity than would Group 2 drinkers. Therefore, not only should the threatened subjects in each group produce elevated scores on the criterion variables, but the group subjected to the greater threat (Group 1) should produce scores elevated over those of Group 2.

The BSS scale is scored in terms of Yes/No/? answers and the Fe scale in terms of True/False answers. The scales were, of course, scored separately, and t-tests were used to compute significance levels for the threatened versus non-threatened subjects in every subject group. The threatened and non-threatened subjects were also combined later into their whole groups so that total group performance on the BSS and Fe scales could be compared.

Hypothesis 2: (Zamansky pictures)

To disguise the purpose of the test, subjects were informed that this was a study of ability to concentrate on fine differences under difficult conditions, that their job would be to decide which of two pictures was the larger (covered the greater area), and that distracting pictures of naked males and females had been chosen to make the task both more difficult and more interesting. They were assured that the examiner's timing of them was simply to establish how long it took people to do this sort of thing, and that speed was not in the least important. To avoid subjects' laboriously concentrating on what was, in fact, an impossible task (the pictures were identical in size), to reduce suspiciousness over the purpose of the test, and to induce a set of relaxed interest, it was suggested that this test was a completely unimportant one, introduced by the examiner merely to please her Professor, who had a "thing" about concentration and its relationship to emotional disturbances, and that therefore it was unnecessary to take the test seriously, though a score could be given if desired. All subjects did in fact ask for their score* and 12 of the 15 responses were arbitrarily scored as correct for each subject. At completion of the series, subjects were asked to state which of each pair of

*Any scores provided for any tests were reported to subjects at the conclusion of the interview, not during it.

pictures they preferred, being told that this was to see if preference for a picture had influenced their judgement of which picture was the larger.

So far as could be ascertained, no subject realized the purpose of the test. Only a few skipped rather irritably through the test, complaining that the pictures all seemed to be identical in size; by far the majority contended that they had found minor differences in size! However, it was clear from spontaneous remarks made about the various bodies on display that size differences had not been the only aspect of the pictures concentrated upon!

The final score for every subject was the number of seconds spent fixating on male pictures, minus the number of seconds spent fixating on female pictures, calculated as follows: for each pair of cards the seconds spent fixating on the female picture were deducted from those spent fixating on the male picture, which provided two scores for every subject - a summed total score for number of seconds fixating on females and a summed total score for number of seconds fixating on males. The score for fixation on females was then deducted from the score for male fixation and the resulting number was divided by seven to produce an average fixation time score (there were seven male/female pictures). This produced either a positive figure (the subject had fixated longer upon males) or a negative figure (the subject had fixated longer upon females). This scoring system was derived from Zamansky (1955-6).

Hypothesis 3: (Biographical Data Questionnaire)

The BDQ was used to gain information on subjects and the material relevant to this hypothesis was extracted subsequently. It proved impossible to adhere to a strictly standard procedure for all subjects, with the BDQ, because in a number of cases they began the interview by narrating their difficulties rather than waiting to be asked, and in so doing answered many of the BDQ questions. Where this did not occur, questions were read to subjects. Subjects were reassured about the examiner's not knowing their identity but were told that in spite of this they might find some

questions offensive and that a reluctance to answer would be preferable to dishonesty. However, no subject refused to answer any question (with the exception that the criminal group was so obviously suspicious over the question dealing with offences committed which had gone undetected by law enforcement agencies - an item which would have been used in hypothesis 7 - that this question was omitted after interviews with the first three subjects).

Hypothesis 4: (Embedded Figures test)

The EFT was administered in accordance with Witkin's instructions in the Manual issued with the test material. Only Cards 1-12 were used, as Witkin advises.

Hypothesis 5: (Foulds's HDHQ and the Stereoscope)

The HDHQ was combined with the CPI So scale, with the questions jumbled together but following the same order as in the original scales. Also included were 6 buffer questions from the Manson Evaluation (Manson, 1948) dealing with interpersonal relationships - questions 14, 17, 28, 47, 48, and 50, which the writer had intended using in hypothesis 3 but did not in fact use - and one MMPI question (No. 107) on antisocial school behaviour which was used in hypothesis 7. Subjects took this combined inventory to their rooms and completed it within 1-2 days after their interview.

For the Stereoscope, the stereograms of Toch and Schulte (1961) and Sarbin and Wenk (1969) were combined in random order and presented to subjects with the following instructions:-

> "I'm going to show you a series of pictures. When you look inside the machine you will see a light flash on very quickly and a picture will appear. Your job is simply to tell me what you see when the light flashes on. Some of these pictures are pretty odd, so don't hesitate to tell me whatever you see, even if you think it looks really peculiar. There are no right or wrong answers; everybody sees different things."

It was found necessary to add the last two sentences because preliminary testing indicated that subjects needed much encouragement to report violence seen. Quite a number verbalized fears that they must be "mad to see such a thing" or "due for the bug-house." Subjects were also instructed to remember to keep both eyes open, not to look into the

machine before being told to (because of dark-adaptation), and to look away from the machine immediately after the light had flashed. They were also told they would be given their score and that the purpose of the test would be explained at conclusion of the interview.

One practice stereogram was presented, followed by the 20 used in the study. Subjects unable to describe any stereogram were allowed one second chance, following the procedure of Moore (1966) and Petzel and Michaels (1973). This occurred only in a minority of subjects.

There were 10 aggressive stereograms presented to the left eye (paired with 10 neutral stereograms for the right eye) and 10 aggressive ones presented to the right eye, to control for eye-dominance. The number of aggressive stereograms seen could range from 0-20, though the scoring permitted scores of from 0-40. The scoring system of Moore (1966) was adopted, as follows:

"2" for the violent card reported - "Man with a knife in his back."
"1" for the fusion of both cards if violence was referred to (cannot be scored as "2" because the subject has in fact clearly described both cards) - "Postman with a knife in his back."
"1" for the violent card seen but described in non-violent terms - "Man with a stick in his back."
"0" for the non-violent card reported - "A postman."
"0" for the fusion of both cards if the violence was not referred to - "Men going in all directions at once, arms and legs flying everywhere."
The writer also gave a score of "1" for a violent percept even if it did not correspond to what was actually on the card - "A man shooting himself in the head" when the card actually depicted a man being hanged.

Only the writer scored the responses. After a number of subjects had been tested, the writer and a faculty member reached agreement on the scoring system and were able to resolve difficulties with the scoring of any particular response. Once this was worked out, there were no difficulties with classifying any subsequently tested subjects' responses.

Hypothesis 6: (Future Time perspective, FTP1 and FTP2)

FTP1, the spontaneous supplying of future events, was

investigated with the following instructions:

> "I want you to see if you can tell me 10 things that might happen to you at some time in the future."

After each event was noted, the subject was asked how old he thought he might be when that event occurred. Most subjects had to be pressured into making an estimation of age, and all found this a difficult task, most managing to supply only a few events.

FTP2, selecting 10 events from a list supplied, was administered with the following instructions:

> "This is similar to what you have just been doing, except that here the events are supplied and your job is to choose 10 that might happen to you. Read through the whole list and then choose the most important 10 that might happen to you at some time in the future, and then tell me what age you think you might be when these things happen."

The score for both FTP1 and FTP2 was based on the discrepancy between the subject's chronological age and the age at which he estimated he would be when each event happened in his future. Responses were then summed and averaged, to provide one score, in years, for every subject on each measure.

Hypothesis 7: (CPI So scale)

Subjects were given this scale, combined with the HDHQ, and completed it in their rooms within one or two days after their interview.

Additional material for this hypothesis, discussed under "Constructs and Materials," was gathered from the BDQ, together with questions extracted from the HDHQ/So inventory dealing with disciplinary-antisocial problems during school years.

All scales and measures used, together with a description of the Stereoscope and stereograms, have been shown in the Appendix, pp. 385-392.

R E S U L T S

Problem drinking subjects were drawn from the three hospitals of Hanmer, Carrington, and Kingseat, with the expectation that this extensive sampling would make the group more representative of hospitalized problem drinkers as a whole. Hanmer is reputedly the hospital for the "upper class" drinkers, businessmen and professionals, while Carrington and Kingseat are much less selective, accepting not only voluntary admissions but drinkers court-committed under the Alcoholism and Drug Addiction Act. Comparisons of subjects from these three institutions are shown below, where it is apparent that there was only one significant difference: fewer Hanmer than Carrington and Kingseat drinkers had been arrested for inebriety (see Table 3.13).

TABLE 3.5

Analysis of Variance for Age, Kingseat, Carrington, and Hanmer hospitals

Source:	df	ss	ms	F	p
Between groups	2	74.87	37.43	.31	N.S.
Within Groups	97	11430.12	117.83		
Total	99	11504.99			

TABLE 3.6

Analysis of Variance for Education Kingseat, Carrington, Hanmer

Source:	df	ss	ms	F	p
Between groups	2	11.52	5.76	.62	N.S.
Within groups	97	897.48	9.25		
Total	99	909.00			

TABLE 3.7

Analysis of Variance on the Massey test of Verbal Ability, Kingseat, Carrington, Hanmer

Source:	df	ss	ms	F	p
Between groups	2	95.80	47.90	.63	N.S.
Within Groups	97	7280.73	75.05		
Total	99	7376.53			

TABLE 3.8

Means and Standard Deviations for Population Distribution by Age, Number of Years of Education, and Verbal Ability

	Hanmer	Carrington	Kingseat
N	29	41	30
Age	44.68	45.85	43.80
S.D.	10.50	11.57	10.13
Education, in years	10.24	10.82	10.06
S.D.	2.81	3.64	2.22
Massey Verbal test	25.96	26.58	24.26
S.D.	7.77	9.06	8.90

TABLE 3.9

Analysis of Variance for Number of Weeks Hospitalized, Kingseat, Carrington, Hanmer

Source:	df	ss	ms	F	p
Between groups	2	40.71	20.35	1.93	N.S.
Within groups	97	1020.03	10.51		
Total	99	1060.74			

TABLE 3.10

Means and Standard Deviations for Number of Weeks Hospitalized at Time of Testing

	Hanmer	Carrington	Kingseat
N	29	41	30
Mean	6.86	5.34	6.23
S.D.	3.26	3.10	3.40

TABLE 3.11

Analysis of Variance for Number of Years of Alcohol Abuse, Kingseat, Carrington, Hanmer

Source:	df	ss	ms	F	p
Between groups	2	40.67	20.33	.20	N.S.
Within groups	97	9661.10	99.59		
Total	99	9701.77			

TABLE 3.12

Means and Standard Deviations for Number of Years of Alcohol Abuse

	Hanmer	Carrington	Kingseat
N	29	41	30
Mean	12.72	12.18	13.71
S.D.	10.93	7.78	11.58

TABLE 3.13

Number of Subjects Arrested for Inebriety & Serious Offences (percentages parenthesized)

	Hanmer	Carrington	Kingseat
N	29	41	30
Inebriety arrests	10 (34)	29 (71)*	23 (77)*
Serious offences	11 (38)	20 (49)	12 (40)

*Carrington and Kingseat both significantly different from Hanmer, $p<.01$.

It would seem, from Tables 3.8, 3.10, 3.12, and 3.13 (whose chi-square computations may be found in the Appendix, Table 4.1), that this group of hospitalized problem drinkers is probably a representative sample of such drinkers in New Zealand. It is also clear that, as was hoped, the sampling procedure incorporated subjects whose drinking, compared with the Hanmer sample, had caused them more difficulties with the law, significantly so in relation to arrests for inebriety and non-significantly so in relation to serious offences.

Comparisons amongst the four groups constituting the experimental population - the 100 problem drinkers, 60 psychiatric patients, 30 criminals, and 30 abstainers - revealed that there were unavoidably some areas in which groups differed significantly from one another. Difficulties in obtaining in-patient psychiatric samples and suitable prison inmates rendered careful matching of these subjects with the drinkers quite impossible. Groups differed in marital status, significantly fewer drinkers than abstainers and patients being currently married, though they did not differ in single status (see Appendix, Tables 4.2 & 4.3). Every endeavour was made to equate groups on age, but nevertheless this did not prove wholly successful.

Subjects were divided into Group 1 (the original group), Group 2 (the replication group), and were then examined as a Combined Groups comparison. In the sections which follow, analyses of variance for the Combined Groups comparison only are shown, since acceptance or rejection of the null hypotheses was based on this comparison only, while those for Groups 1 and 2 are shown in the Appendix, though means and standard deviations for all three comparisons are presented in one table following the Combined Groups analysis of variance. Analyses of variance for Groups 1 and 2 for age, education, scores on the Massey test of Verbal Ability, and number of weeks hospitalized at time of testing are shown in the Appendix, Tables 4.6-4.13, while those for the variables under consideration in the hypotheses are given their appropriate reference in the sections dealing with every hypothesis.

The abbreviations used in the tables which follow are: PDs - problem drinkers; PTs - psychiatric patients; ABs - abstainers; CRs - criminals.

TABLE 3.14

Analysis of Variance for Age, Combined Groups Comparison

Source:	df	ss	ms	F	p
Between groups	3	2018.19	672.73	5.70	<.01
Within groups	216	25474.55	117.93		
Total	219	27492.74			

The significant F in Table 3.14 indicated that the groups differed with respect to age. Table 3.15 indicated that the problem drinkers, while well matched for age with the abstainers, were significantly older than the psychiatric patients and criminals, though the actual discrepancy in years was not large. This difficulty in equating drinkers and other psychiatric subjects on age has been found by other workers (e.g. Holloway, 1969), drinkers tending to appear in a clinic or hospital setting at an age exceeding that of psychiatric patients in general.

TABLE 3.15

Means, Standard Deviations, and t-tests for Age, Groups 1, 2, and Combined Groups

Group 1:	N	Mean	S.D.	t	p
PDs	50	44.98	9.16	PD/AB 0.561	N.S.
PTs	30	38.83	12.29	PD/CR 2.508	<.02
ABs	30	43.73	10.33	PD/PT 2.549	<.02
CRs	30	39.50	9.93		
Group 2:					
PDs	50	44.82	12.28	PD/AB 0.405	N.S.
PTs	30	37.40	11.13	PD/CR 2.009	<.05
ABs	30	43.73	10.33	PD/PT 2.707	<.01
CRs	30	39.50	9.93		
Combined Groups:					
PDs	100	44.90	10.78	PD/AB 0.524	N.S.
PTs	60	38.11	11.65	PD/CR 2.448	<.02
ABs	30	43.73	10.33	PD/PT 3.737	<.001
CRs	30	39.50	9.93		

TABLE 3.16

Analysis of Variance for the Massey test of Verbal Ability, Combined Groups Comparison

Source:	df	ss	ms	F	p
Between groups	3	1014.43	338.14	5.54	<.01
Within Groups	216	13177.10	61.00		
Total	219	14191.53			

TABLE 3.17

Means, Standard Deviations, and t-tests for the Massey Test of Verbal Ability, Groups 1, 2, and Combined Groups

Group 1:	N	Mean	S.D.	t	p
PDs	50	27.32	7.44	PD/AB 3.144	<.01
PTs	30	28.03	7.46	PD/CR 0.912	N.S.
ABs	30	32.10	4.77	PD/PT 0.414	N.S.
CRs	30	25.63	8.87		
Group 2:					
PDs	50	24.10	9.47	PD/AB 4.301	<.001
PTs	30	26.86	6.48	PD/CR 0.717	N.S.
ABs	30	32.10	4.77	PD/PT 1.411	N.S.
CRs	30	25.63	8.87		
Combined Groups:					
PDs	100	25.71	8.63	PD/AB 3.873	<.001
PTs	60	27.45	6.95	PD/CR 0.042	N.S.
ABs	30	32.10	4.77	PD/PT 1.323	N.S.
CRs	30	25.63	8.87		

The significant F-test in Table 3.16 indicated that groups differed with respect to performance on this test. Table 3.17 showed that problem drinkers differed significantly from abstainers in obtaining inferior scores on the Massey test, but did not differ significantly from either patients or criminals.

TABLE 3.18

Analysis of Variance for Education, Combined Groups Comparison

Source:	df	ss	ms	F	p
Between groups	3	189.65	63.21	5.94	<.001
Within groups	216	2295.03	10.62		
Total	219	2484.68			

TABLE 3.19

Means, Standard Deviations, and t-tests for Number of Years of Education, Groups 1,2, & Combined

Group 1:	N	Mean	S.D.	t	p
PDs	50	10.54	2.33	PD/AB 3.297	<.01
PTs	30	12.36	3.12	PD/CR 0.241	N.S.
ABs	30	12.81	3.85	PD/PT 2.979	<.01
CRs	30	10.68	2.91		
Group 2:					
PDs	50	10.32	3.61	PD/AB 2.917	<.01
PTs	30	11.75	3.80	PD/CR 0.466	N.S.
ABs	30	12.81	3.85	PD/PT 1.678	<.10 p>.05
CRs	30	10.68	2.91		
Combined Groups:					
PDs	100	10.43	3.03	PD/AB 3.544	< .001
PTs	60	12.05	3.46	PD/CR 0.404	N.S.
ABs	30	12.81	3.85	PD/PT 3.115	<.01
CRs	30	10.68	2.91		

Table 3.18 indicated that the groups differed significantly with regard to number of years of education. Table 3.19 showed that problem drinkers differed significantly from abstainers, and in two comparisons from patients (though not from criminals) in having had fewer years of education. It is of interest that, while not differing significantly from patients in basic intellectual capacity (at least as

assessed by the Massey test), drinkers had avoided completing educational attainments compared with the patients. As expected, the Massey test was significantly correlated with education for all but abstainers, where the correlation just failed to reach significance at the 5% level (see Appendix, Table 4.5).

Separate t-tests were also carried out between abstainers and criminals, abstainers and patients, and criminals and patients on age, verbal intelligence, and years of education (see Appendix, Table 4.14). The abstainers were significantly older than the patients, but not the criminals, nor did the other groups differ significantly from each other. Abstainers were significantly better educated than criminals but the difference failed to reach significance at the 5% level between criminals and patients, while patients and abstainers did not differ significantly. Abstainers obtained significantly higher scores on the Massey test compared with patients and criminals, while patients and criminals did not differ significantly from each other.

In age and number of years of education the problem drinkers in this study barely differed from those of the Pilot Study, whose mean age was 45.28 years and number of years of education 10.64 years.

Every effort was made to control for possible effects of institutionalization by selecting only subjects who had been hospitalized or imprisoned longer than three weeks and for less than six months but, while it is clear from Table 3.21 that this was successful in the case of drinkers and patients, a number of prison inmates had been incarcerated for longer than six months (10 subjects) and one had been incarcerated for one year while two had been for longer than one year.

TABLE 3.20

Analysis of Variance for Weeks Hospitalized at Time of Testing, Combined Groups

Source:	df	ss	ms	F	p
Between groups	2	6280.60	3140.30	38.02	<.001
Within groups	187	15445.47	82.59		
Total	189	21726.07			

TABLE 3.21

Means, Standard Deviations, and t-tests for length of Institutionalization, shown in Weeks, Groups 1, 2, and Combined Groups

Group 1:	N	Mean	S.D.	t	p
PDs	50	6.51	3.37	PD/PT 0.914	N.S.
PTs	30	5.68	4.68	PD/CR 4.946	<.001
CRs	30	21.55	21.14	PT/CR 4.013	<.001
Group 2:					
PDs	50	5.99	3.13	PD/PT 0.527	N.S.
PTs	30	5.10	5.18	PD/CR 5.264	<.001
CRs	30	21.55	21.14	PT/CR 4.138	<.001
Combined Groups:					
PDs	100	6.05	3.27	PD/PT 1.016	N.S.
PTs	60	5.39	4.91	PD/CR 7.114	<.001
CRs	30	21.55	21.14	PT/CR 5.651	<.001

Of the three subjects who had been imprisoned for one year or slightly longer, all were working during the day, living in the gaol only at nights and weekends, and all those gaoled for longer than six months were from Wi Tako which is a much freer institution than Wellington Prison; one could hardly refer to institutionalization, other than that freedom to permanently leave the institution was curtailed. As a safeguard against the possible effects of lengthy imprisonment on the variables under consideration in this thesis, correlations between length of imprisonment and all scores were run for the criminal group; these will be referred to under the appropriate hypotheses.

As a check on the "normality" of the abstaining group, the Eysenck Personality Inventory was administered. The neuroticism mean of 6.53 (S.D.3.64) and the extraversion mean of 8.70 (S.D.4.61) were below means reported for a normative

U.K. sample by Eysenck and Eysenck (1964), and also below those reported for an Australian general population sample on the EPI (Koller and Castanos, 1969).

In the problem drinking group the average age of onset of chronic inebriety was 31.59 and the average number of years that drinking had been a problem was 12.80. 31% preferred beer as their intoxicant, 30% preferred spirits, 9% wine, and 30% combinations of all three. Surprisingly, only 13% admitted having experimented with non-beverage alcohols (methylated spirits, ether, brasso strained through bread, brake fluid and petrol in milk, and shaving lotion). 20% had experimented with other drugs such as cocaine, morphine, LSD, marihuana, barbiturates, and amphetamines. Of the psychiatric patients some 23% had experimented with drugs, marihuana being the one most frequently used, and 30% of criminals had experimented with drugs. No subject considered that he had ever been dependent on any drug (other than the problem drinkers on alcohol).

There were no significant differences between Group 1 versus Group 2 drinkers in age, verbal intelligence, years of education, length of time hospitalized, number of subjects arrested for serious offences, number of years that drinking was felt to have been a problem, and age of onset of problem drinking, and no significant differences between Group 1 versus Group 2 patients in age, verbal intelligence, years of education, number of weeks hospitalized, or number of subjects who had been arrested for serious offences (see Appendix, Tables 4.15 - 4.25). The only difference emerging in these comparisons was that Group 1 problem drinkers obtained almost significantly superior scores on the intelligence test than did their Group 2 counterparts, the difference falling just short of significance at the 5% level.

To facilitate investigation into the effects of age, and years of alcohol abuse, on the variables being studied, the problem drinking group was divided into the following categories: (1) Three groups: Early onset (alcohol abuse began before age 30), Middle onset (alcohol abuse began

between the ages of 31-39), and Late onset (alcohol abuse began after the age of 40); (2) Three groups: Young Early starters (aged 30 or less at time of study, with abuse commencing before age 30), Old Early starters (aged 45 or more at time of study, with abuse commencing before age 30), and Old Late starters (aged 45 or more at time of study, with abuse commencing after age 39);(3) Two groups, divided at the upper and lower age quartiles, with the youngest and oldest compared on every variable. This division was also made for every subject group, except that quartile division was not the basis of division for the criminal and abstaining group as it would have produced far too few subjects in each group. Thus, the problem drinking groups and psychiatric patient groups comprised the 25 oldest and 25 youngest and the 15 oldest and 15 youngest subjects respectively, while the abstainer and criminal groups comprised the 15 oldest and 15 youngest subjects but in their case this meant including the whole group as there were only 30 subjects in each group. These four oldest subject groups were then compared on every variable, as were the four youngest groups, and in addition comparisons were carried out between youngest/oldest subjects within every subject group.

In (1), the writer was interested in further exploring some of the findings of Foulds and Hassall (1969) about relationships of personality structure to early versus late onset of problem drinking, as in (2) above, with the addition that by use of category (2) the writer hoped to replicate some of the findings in a N.Z. sample of Foulds and Hassall (1969) on a U.K. sample, the relevance of which will become apparent when Hypotheses 5 and 7 are written up and the findings discussed. Categories (1) and (2) illuminate the area of sociopathy versus neuroticism in problem drinking. The age of 30 is generally considered to be the upper boundary for early onset of abuse (Foulds and Hassall, 1969; Hassall, 1968; Hassall and Foulds, 1968; Rosenberg, 1969a), while onset after age 40 is considered late (Foulds and Hassall, 1969), these age divisions being applied to the N.Z. group in (1) above while the age ranges in category (2) are taken from Foulds and Hassall (1969). Category (3) was regarded as both an extension of findings from the other categories (youngest/oldest drinkers compared) and also as another

means of investigating the antecedents versus consequences problem dogging problem drinking research; if it could be shown that in every comparison made, young problem drinkers differed in the same direction on variables under consideration from their young counterparts in other subject groups - e.g. if young drinkers were still more field dependent relative to young patients, etc. - as in the whole groups comparisons, the case for antecedence of those variables would be strengthened. Of course, category (2) provides the most useful information with regard to antecedents versus consequences of years of inebriety. If it could be demonstrated that Young Early starters were, for example, more hostile or under-socialized than Old Early starters who would have had many years of pathological drinking behind them, it is plausible to assume that such characteristics existed before these individuals became inebriates, and the case for antecedence is again strengthened.

Findings from the Early/Middle/Late onset group would be expected to resemble those from the Young Early/Old Early/Old Late Group, at least in their extreme forms - Early versus Late, and Young Early versus Old Late. The intention originally was to use only the Young Early/Old Early/Old Late comparison, but there were only 12 drinkers in the Young Early group and the whole sub-division involved only 57% of the problem drinker group whereas the Early/Middle/Late onset sub-divisions included the whole group of 100 drinkers. Moreover, although findings from the Early group could be contaminated by their long exposure to the effects of habitual inebriety, these three groups had the advantage of not differing significantly in intelligence or years of education from one another whereas the Young Early starters were significantly less intelligent than the Old Early and Old Late starters (see Appendix, Tables 4.36, 4.38, & 4.45). The decision was therefore made to retain both categories (1) and (2), even though to some extent the information provided may seem redundant.

While these various subdivisions involved an enormous amount of calculation this proved to be well worth while in

terms of interpreting findings. Of course, some of the effects of age and years of alcohol abuse could have been controlled statistically rather than by group subdivisions, but by that process much valuable information could have been lost and the relation of some of the findings to other studies (e.g. the Foulds and Hassall study, 1969, on age of onset in relation to personality disorder) could not have been explored. Statistical computations for age, education, intelligence, age of onset, and years of alcohol abuse are presented in the Appendix, Tables 4.26 - 4.62, while those for the experimental variables are also presented in the Appendix and the appropriate reference is given for them in the "Discussion" section under each hypothesis.

Statistical calculations were by analysis of variance, t-test comparisons, chi-square, and correlations. All chi-squares were corrected for continuity, as recommended by Siegel (1956, p.109) for contingency tables with only one degree of freedom. The F-test of the over-all null hypotheses was used to apply a test of significance simultaneously to the four experimental groups (Lindquist, 1953, pp.90-95). If the F-test was significant at the 5% point, t-tests were used to compare problem drinkers with the other groups on the a priori hypotheses, with the t-table entered in the usual way following the direction of Bruning and Kintz (1968, p.112), since comparison of specific mean differences had been planned from the start of the design phase, so that they could be regarded as independent pairs. One-tailed t-tests were used only in comparing group means on the specific hypotheses; all other t-tests were two-tailed. The decision to accept or reject the null hypothesis was always based on the F-test for the Combined Groups comparison, which constituted a true random sample, whereas it was not known whether the process by which subjects were allocated to Groups 1 and 2 might have introduced errors. Similarly, the importance of any directional findings was assessed from the Combined Groups comparison - but firm conclusions were drawn only when findings in Group 1 and 2 paralleled those of the Combined Groups comparison but

simply failed, in one group or the other, to reach acceptable significance levels. Through dividing groups this way it was possible to make five comparisons between drinkers and psychiatric patients: in Groups 1, 2, and Combined, and also Group 1 drinkers versus Group 2 patients, and Group 2 drinkers versus Group 1 patients.

In the following section, results from the seven hypotheses (and the section on family background) will be considered, with every hypothesis discussed separately, followed by a general discussion of the findings as a whole, and final conclusions.

DEPENDENCE-INDEPENDENCE CONFLICT

(Hypothesis 1)

The null hypothesis predicted no differential scoring amongst the groups on the criterion instruments, Bernreuter Self-sufficiency scale and Fe scale, between subjects whose putative anxieties over dependency and masculine inadequacy were threatened versus those not subjected to threat.

RESULTS:

TABLE 3.22

Means, Standard Deviations, and t-tests for the BSS scale under Threat versus Non-threat Conditions

Group 1:	N	Threat	S.D.	Non-Threat	S.D.	t	p
PDs	25+25	36.12	7.36	33.92	7.27	1.062	N.S.
PTs	15+15	26.93	5.98	27.66	9.61	0.250	"
Group 2:							
PDs	25+25	32.52	8.03	33.20	8.70	0.287	"
PTs	15+15	27.66	6.45	26.26	7.14	0.563	"
Combined Groups:							
PDs	50+50	34.32	7.84	33.56	7.94	0.481	"
PTs	30+30	27.30	6.12	26.96	8.35	0.176	"
ABs	15+15	36.86	6.13	33.53	6.72	1.417	$< .10$ $p > .05$
CRs	15+15	35.06	6.36	35.80	6.47	0.312	N.S.

Note: Higher BSS scale scores are in direction of greater self-sufficiency.

It can be seen from Table 3.22 that there was no significant effect deriving from threat to anxieties over dependency in any of the threatened subject groups, relative to their non-threatened counterparts, other than in the abstainer group where the difference almost reached the 5% level by one-tailed test in terms of threatened subjects obtaining elevated self-sufficiency scores.

Table 3.23 examines the reaction of threatened versus non-threatened groups in terms of intensified masculinity on the Fe scale.

TABLE 3.23

Means, Standard Deviations, and t-tests for the Fe scale under Threat versus Non-threat conditions

Group 1:	N	Threat	S.D.	Non-Threat	S.D.	t	p
PDs	25+25	17.72	4.55	17.72	3.19	0.000	N.S.
PTs	15+15	20.46	3.83	20.73	3.67	0.194	"
Group 2:							
PDs	25+25	18.56	3.54	17.28	4.89	1.058	"
PTs	15+15	20.13	4.05	19.93	4.55	0.127	"
Combined Groups:							
PDs	50+50	18.14	4.06	17.50	4.09	0.784	"
PTs	30+30	20.30	3.87	20.33	4.08	0.032	"
ABs	15+15	18.66	3.96	17.93	2.71	0.590	"
CRs	15+15	15.93	4.58	17.20	4.17	0.790	"

Note: Lower Fe scale scores are in direction of masculinity.

There appears to be no significant effect deriving from the threat to masculine adequacy in any of the threatened groups relative to their non-threatened counterparts. In view of the failure to demonstrate any effects of threat on either self-sufficiency or masculinity, the null hypothesis could not be rejected.

However, when groups' means were inspected there did appear the possibility that threat might have been having some small effect in the problem drinker group and not in the patient group. Tables 3.24 and 3.25 compare the effects of two different kinds of threat on drinkers and on patients.

TABLE 3.24

Means, Standard Deviations, and t-tests for Group 1 PDs (severe threat) versus Group 2 PDs (lesser threat)

	Group 1 PDs	Group 2 PDs	t	p
N	25	25		
BSS scale Mean	36.12	32.52		
S.D.	7.36	8.03	1.651	<.10 p>.05
Fe scale Mean	17.72	18.56		
S.D.	4.55	3.54	0.727	N.S.

TABLE 3.25

Means, Standard Deviations, and t-tests for Group 1 PTs (severe threat) versus Group 2 PTs (lesser threat)

	Group 1 PTs	Group 2 PTs	t	p
N	15	15		
BSS scale Mean	26.93	27.66		
S.D.	5.98	6.45	0.322	N.S.
Fe scale Mean	20.46	20.13		
S.D.	3.83	4.05	0.231	N.S.

There would appear to be a possibility that threat might have had some effect. Problem drinkers and patients in Group 1 were subjected to a more severely threatening experience that were those in Group 2 (they were under the impression that their anxieties over dependency and inadequacy had been measured by the battery-powered apparatus, whereas Group 2 subjects were simply engaged in conversation about such anxieties), and when Group 1 drinkers were compared with Group 2 drinkers under threat conditions it can be seen that the former's mean was elevated considerably over the latter's and was only fractionally short of significance at the 5% level by one-tailed test. This possible effect of the more severe threat was not apparent in the patient group and it applied only to the self-sufficiency scale, little effect on increased masculinity being apparent. Tables 3.26 and 3.27 also suggest that in a comparison of severely threatened Group 1 drinkers with Group 1 patients, mean discrepancies were greater than in a comparison of less threatened Group 2 drinkers with Group 2 patients, again suggesting the possibility of some small effect of the more severe threat.

TABLE 3.26

Means, Standard Deviations, and t-tests for Group 1 PDs versus Group 1 PTs under Severe Threat on the BSS and Fe Scales

	PDs	S.D.	PTs	S.D.	t	p
N	25		15			
BSS scale	36.12	7.36	26.93	5.98	4.085	< .001
Fe scale	17.72	4.55	20.46	3.83	1.955	< .05

TABLE 3.27

Means, Standard Deviations, and t-tests for Group 2 PDs versus Group 2 PTs under Lesser Threat on the BSS and Fe Scales

	PDs	S.D.	PTs	S.D.	t	p
N	25		15			
BSS scale	32.52	8.03	27.66	6.45	1.983	< .05
Fe scale	18.56	3.54	20.13	4.05	1.287	N.S.

It would appear from Tables 3.26 and 3.27 that some effect of threat was noticeable. However, it must be conceded that the same result would have been obtained if by chance errors in the allocation of subjects to groups the drinkers of Group 1 were more self-sufficient from the start than those of Group 2. The fact that the mean of threatened Group 1 drinkers remains non-significantly elevated over that of non-threatened Group 1 drinkers possibly supports this suggestion, though on the other hand the difference between Group 2 threatened and non-threatened drinkers is much less and is in fact in the opposite direction on both scales (see Tables 3.22 and 3.23).

The abstainer group seemed to react much as did the drinkers in obtaining non-significantly greater self-sufficiency scores under conditions of threat. This whole group, of course, received only the non-severe threat. It would seem a definite possibility that of all the groups the abstainers were those who were intensely reactive or defensive about self-sufficiency. Some of the clinical material gathered from them, which is discussed later in this section, confirmed this impression.

Neither patients nor criminals showed a differential response to threat, other than that the threatened criminals produced the lowest Fe scale score of any group, but this was not significantly different from the score of their non-threatened counterparts.

In further examination of the results, threatened and non- threatened subjects within every group were combined

and scores of the total groups on self-sufficiency and masculinity were compared since it appeared, as expected, that psychiatric patients as a group would more readily admit to lack of self-sufficiency, compared with drinkers.

TABLE 3.28

Analysis of Variance on the BSS scale, Combined Groups Comparison

Source:	df	ss	ms	F	p
Between groups	3	2411.89	803.96	14.92	<.001
Within groups	216	11636.74	53.87		
Total	219	14048.63			

TABLE 3.29

Means, Standard Deviations, and t-tests for BSS scale scores with Threatened and Non-threatened Groups Combined

Group 1:	N	Mean	S.D.	t	p
PDs	50	35.02	7.32	PD/AB 0.110	N.S.
PTs	30	27.30	7.87	PD/CR 0.256	N.S.
ABs	30	35.20	6.55	PD/PT 4.436	<.001
CRs	30	35.43	6.31		
Group 2:					
PDs	50	32.86	8.29	PD/AB 1.316	N.S.
PTs	30	26.96	6.72	PD/CR 1.461	<.10 p>.05
ABs	30	35.20	6.55	PD/PT 3.292	<.001
CRs	30	35.43	6.31		
Combined Groups:					
PDs	100	33.94	7.86	PD/AB 0.797	N.S.
PTs	60	27.13	7.26	PD/CR 0.951	N.S.
ABs	30	35.20	6.55	PD/PT 5.452	<.001
CRs	30	35.43	6.31		

Table 3.28 confirmed that there were significant differences amongst the groups. From Table 3.29 it was apparent that problem drinkers differed significantly only from patients in declaring themselves to be highly self-sufficient, this finding obtaining in the original group, replication group, and combined groups. If the BSS scale provides a valid assessment of self-sufficiency, psychiatric patients were evidently not bothered by admitting inadequacy in that area.

TABLE 3.30

Analysis of Variance on the Fe scale, Combined Groups Comparison

Source:	df	ss	ms	F	p
Between groups	3	355.18	118.39	7.43	<.001
Within groups	216	3441.41	15.93		
Total	219	3796.59			

TABLE 3.31

Means, Standard Deviations, and t-tests for Fe scale scores, with Threatened and Non-Threatened Groups Combined

Group 1:	N	Mean	S.D.		t	p
PDs	50	17.72	3.89	PD/AB	0.677	N.S.
PTs	30	20.60	3.69	PD/CR	1.226	N.S.
ABs	30	18.30	3.36	PD/PT	3.265	<.001
CRs	30	16.56	4.36			
Group 2:						
PDs	50	17.92	4.28	PD/AB	0.415	N.S.
PTs	30	20.03	4.23	PD/CR	1.359	<.10 p>.05
ABs	30	18.30	3.36	PD/PT	2.145	<.025
CRs	30	16.56	4.36			
Combined Groups:						
PDs	100	17.82	4.07	PD/AB	0.587	N.S.
PTs	60	20.31	3.95	PD/CR	1.454	<.10 p>.05
ABs	30	18.30	3.36	PD/PT	3.796	<.001
CRs	30	16.56	4.36			

The results with the Fe scale in Tables 3.30 and 3.31 paralleled those with the BSS scale, drinkers being significantly distinguished only from patients in all three comparisons in obtaining greater masculinity scores, though in two comparisons differences between drinkers and criminals in favour of the latter's obtaining greater masculinity scores just failed to reach the 5% significance level.

There were no significant differences on either BSS or Fe scales between Group 1 versus Group 2 drinkers (when threatened and non-threatened subjects were combined) or Group 1 versus Group 2 patients, but Group 1 drinkers obtained significantly greater self-sufficiency and masculinity scores compared with Group 2 patients, as did

Group 2 drinkers compared with Group 1 patients, so that in five of five comparisons (Group 1, Group 2, Combined Groups, Group 1 drinkers versus Group 2 patients, and Group 2 drinkers versus Group 1 patients) drinkers declared themselves to be significantly more self-sufficient and significantly more masculine than did patients (see Appendix, Tables 4.67 - 4.70).

DISCUSSION:

Bernreuter (1933) reported a mean of 33.51 for 392 college males, and one of 27.2 for 137 male students living at home versus 37.5 for 44 students living away from home, regarding the latter result as justifying belief that the BSS scale measures self-sufficiency. There have apparently been very few studies utilizing this scale but in a study of Australian alcoholics Holloway (1969) reported means of 29.72 for alcoholics, 31.30 for matched normal controls, and 29.18 for drug addicts, these differences being non-significant. Thus her alcoholics performed similarly to the N.Z. psychiatric patients while the other N.Z. subjects declared themselves to be more self-sufficient than her other groups. Of course, Holloway did not involve her subjects in any experimental manipulations before administering the BSS scale.

Gough (1957, p.34) reported a mean of 19.7 for psychiatric patients on the Fe scale, similar to that of patients in this study, and a mean of 16.4 for prison inmates, again similar to the N.Z. criminals' mean. Canter (1963) reported a mean of 16.3 for alcoholics, lower than that found here, though Corotto (1963) with two alcoholic groups reported means nearer the N.Z. ones: 18.38 and 18.22. Possibly N.Z. males tend to obtain higher means than U.S.A. males on this scale; Ross (1975) reported means of 19.7 and 20.7 for groups of homosexuals and matched non-homosexual students respectively. Heavy drinking very young males have produced extremely masculine scores in some U.S.A. studies - 13.2 was reported by Blane and Chafetz (1971) and 14.14 by Zucker (1968), this latter score being almost identical to

that produced by the Young Early starters in this present study (see Appendix, Table 4.83)

Early/Middle/Late onset comparisons (see Appendix, Tables 4.71 - 4.73). Analysis of variance indicated that there was no significant variation amongst these three groups on either the BSS scale or Fe scale, though on the latter measure the mean of the Late starters was higher than that of problem drinkers in any group divisions and nearer to that of the psychiatric patients in Table 3.31, suggesting that no tough, ultramasculine pose is adopted by them.

Youngest/Oldest subject comparisons (see Appendix, Tables 4.74 - 4.80). Young drinkers declared themselves to be significantly more self-sufficent and more masculine than young patients, and older drinkers declared themselves to be significantly more self-sufficient than older patients, with no significant group variations on the Fe scale for older subjects. There were no significant differences between older and younger subjects within each group, although young drinkers' Fe scale scores just failed to reach the 5% level of significance in direction of greater masculinity when compared with older drinkers, and a similar trend was becoming apparent in the criminal group.

Young Early/Old Early/Old Late starters (see Appendix, Tables 4.81 - 4.83). There was no significant variation amongst the groups on the BSS scale, but on the Fe scale the Young Early starters obtained significantly higher masculinity scores relative to the Old Late starters while differences in the same direction between Young Early versus Old Early, and Old Early versus Old Late starters just failed to reach the 5% level of significance. The Young Early starters' score was the most masculine one obtained by any of the drinkers in any subdivision and is reminiscent of that obtained by Zucker (1968) with hard-drinking adolescents. If the theory of reactive intensified masculinity has any validity it would seem more readily demonstrable in very young drinkers than in those older

ones whose excessive alcohol intake began later in life. That personality factors rather than age per se influence this scoring pattern is suggested by the almost significant difference between the Fe scale means of Old Early and Old Late starters, who were not too dissimilar in age, and by the findings in the youngest/oldest comparison above that older patients and abstainers did not obtain less masculine scores than their younger counterparts. As becomes apparent when Hypothesis 2 is discussed, this group of Old Late drinkers manifested a diminished heterosexual interest to a greater extent than did the Old Early and Young Early groups and in addition were less defensive about it, which might lend support to the "reactive masculinity" theory in young drinkers.

Correlations (see Appendix, Tables 4.88 and 4.89) indicated that only length of education was significantly related to BSS scale scores, and only in the drinkers, more years of education being associated with greater self-sufficiency. The correlation of BSS scale with Fe scale just bordered on significance in drinkers and suggested a moderate tendency for inflated self-sufficiency scores to accompany inflated masculinity scores. Inferior scores on the intelligence test were significantly associated with more masculine scores on the Fe scale in drinkers and criminals, and in drinkers youth was significantly associated with greater masculinity, but not in the other subjects, though tending this way for the criminals as well. Both BSS scale and Fe scale scores were unrelated to number of years of alcohol abuse.

Because of the possibility that the long periods of incarceration in some prison subjects might have affected self-sufficiency scores, correlations were computed; that between self-sufficiency and length of imprisonment was not significant, but higher masculinity scores were significantly correlated with shorter imprisonment. Correlation between BSS scale scores and length of hospitalization in drinkers and patients was very low, suggesting that Tremper's (1972)

view of drinkers' obtaining inflated dependency scores because they are hospitalized (which purportedly would encourage a dependent relationship) is without foundation. Similar findings were reported by Rhodes and Yorioka (1968) with the Navran dependency scale: only non-alcholics showed increasing dependency scores with longer hospitalization.

If anxiety over dependency and masculine inadequacy with defensive compensation in a façade of masculinity is importantly related to problem drinking, it seems likely that much larger effects for threat would have been obtained than were found. However, alternative explanations suggest themselves. It may well be that many subjects were not deceived or bothered by the threat design, that it was not sufficiently severe or convincing; this might be suggested by the considerably higher self-sufficiency means obtained on the BSS scale by Group 1 drinkers, who experienced the more severe threat with the battery apparatus, compared with almost no reaction at all to the very minor verbal threat in Group 2 drinkers. Groups of 25 and 15 subjects are very small, of course, and it is likely that chance variations arising through the arbitrary division of the groups could obscure effects of threat. Again, since the writer was not usually viewed by subjects as a threatening interviewer, it is quite possible that on being presented with "evidence" of dependency some subjects decided to opt for "honesty" and not for defensive hyper-self-sufficient façades. The division of the groups (every second subject receiving threat) might, in fact, have obscured two extreme reactions: those drinkers who responded with inflated self-sufficiency scores to threat, and those who opted for "acceptance" of non-self-sufficiency. A superior design might have employed some form of group humiliation, perhaps related directly to a drinking outcome, which might be far more effective in inducing the hypothesized hyper-independent and ultra-masculine responses theory predicted; instead of an arbitrary division of subjects by threatening every second one, the group could possibly be subdivided by some prior method

which would have subjects likely to be reactively independent in one group and those likely to be more admissive of dependency in the other group. Some aspects of the present results (less avoidance of admission of dependence and "softness" in the psychiatric patients) suggest the supposition that the more neurotic-like the drinker, the more acceptant he might be of dependency and masculine inadequacy. The finding that age of onset of pathological drinking was related to Fe scale scores suggests that as the division of drinkers into those threatened versus non-threatened involved mixing Young Early with Old Late starters, differential responses to threat in those groups could have cancelled out an over-all response to threat in the drinker group.

One other feature that might account for the somewhat equivocal results lies in the BSS scale itself. Inspection of the questions suggests that it might be measuring an isolation tendency as well as a tendency toward self-sufficiency. Indeed, in Super's (1942) review he commented that high scores characterized "withdrawing" people, amongst other groups. Bernreuter (1933) himself reported a correlation of .37 between his scale and introversion on the Neymann-Kohlstedt test, and mentioned that one aspect of the BSS scale that correlated the most highly with self-ratings of low self-sufficiency was Need for Companionship. The writer originally selected the scale for this study because the obviousness of many of its items would have lent themselves to faking by subjects who felt threatened, whereas a more sophisticated scale might have had its real purpose too well concealed to encourage faking. However, healthy self-sufficiency is not synonymous with social isolation, and some aspects of the scale may be tapping this rather than the former. Thus in drinkers fear of closeness might determine the self-sufficient response whereas in the criminal and abstainer groups higher scores might be obtained because these individuals were in fact more healthily self-sufficient. Whatever may be the explanation it is clear that the psychiatric patients as a group had far less anxiety over expressing their need for company and support of others,

signified by lower self-sufficiency scores in all comparisons. Biographical Data Questionnaire evidence suggests that patients were more gregarious altogether, and did not retreat into sequestering the self from close relationships, compared with the drinkers (see Hypothesis 3).

The only unequivocal conclusion that can be drawn from the results is that problem drinkers declare themselves to be much more self-sufficient and more masculine than do psychiatric patients. The problem this hypothesis set out to probe - whether drinkers are actually more self-sufficient, or inflate their image of themselves to ward off anxieties over underlying unacceptable dependency strivings or masculine inadequacy - remains essentially unsolved. While defensive façades appear to be implied by some aspects of the results in Group 1 versus Group 2 comparisons, findings are too ambiguous to be useful. The Fe scale seemed completely unaffected by manipulation, a failure which possibly derived in part from the format of the BSS/Fe inventory. Threatened subjects received an inventory headed "Bernreuter Self-sufficiency scale" but the Fe scale was placed at the end of this and it would have been quite apparent that these were different scales since one called for "Yes/No" and the other "True/False" answers. Perhaps, if the Fe scale had also been labelled - "CPI Masculinity scale" or something like this - subjects would have been more on their guard against revealing "softness".

Far from illuminating the problem, comparison of results from the Pilot Study compounds the difficulty, for in that study the drinkers scored well into the area of dependency compared with controls, who in their turn were much more independent than their U.S.A. counterparts. The Pilot Study employed a different measure of dependency, the Navran (1954) scale, inspection of whose items suggests it is tapping what could be called "helpless dependency" and inability to cope rather than the preference for company and dislike of solitariness tapped by the BSS scale. Since higher scores on the Navran scale were obtained by the hospitalized drinkers

compared with the subjects from the AA chapter, it may be that the high score could be in part accounted for as a sequel to hospitalization, withdrawal symptoms, and so on. At the time the Pilot Study was carried out, the writer was unaware of studies indicating that at least three weeks should elapse after detoxification before drinkers are tested, since some variables have been shown to change markedly within that three-week period; a number of the Hanmer drinkers were tested within one week after admittance to hospital, and might well have obtained inflated dependency scores as a result.

As was apparent in the literature review (pp. 51-57), research in this whole area has been inconclusive and conflicting. Drinkers studied in the terminal phases of chronic drunkennesss have possibly tended to be more "oral" or passive or dependent on various measures, relative to normal controls, while younger drinkers in some studies have tended to claim (on inventories) to be more independent than controls. Generalization is unwise; there is as much evidence that drinkers present themselves as avoiding autonomy, leadership and self-reliance as that they present themselves as leaders, successes, masculine and independent. No research designs have provided a means of stimulating covert dependence and measuring resultant change, if any, toward an independent façade, though some designs have studied dependence/independence conflict (overt independence versus covert dependence) in a static situation in mostly young drinkers. So far as hypothesized intense masculinity is concerned, it appears demonstrable only in very young drinkers but one unfortunate aspect of some research here is that some investigators have assumed that covert masculine inadequacy or anxiety over it is equivalent to covert femininity (e.g. Zucker, 1968) and having failed to demonstrate covert femininity, have implied that theories of masculine inadequacy may be erroneous! It would seem that in this whole area a totally new approach is needed and that self-descriptive data will have to be eschewed in favour of more objective and precisely measurable reactions

to a much more realistic experimental dependency threat.

In this present study two additional sets of findings were examined: age of leaving the parental home, and dependence on cigarette smoking. In the Pilot Study it was expected that exaggerated needs for independence would be associated with leaving home very early, but this did not prove to be the case, drinkers not differing at all from controls; both left home at about 19 years. In the present study, drinkers had left home at a significantly younger age than had patients and abstainers, while the difference between drinkers and criminals was not significant (see Appendix, Tables 4.84 - 4.85). Drinkers had left at about the age of 18 years, patients and abstainers at about 21 years, and criminals at about 17 years. It would seem, therefore, that the two groups reputed to be most similar with respect to exaggerated self-assertiveness, toughness, and "masculinity" were those which had left home early, relative to the patients, the latter seeming to be quite as comfortable in a potential dependency situation as they were when asked to describe themselves as dependent or self-sufficient on the BSS scale. Of course, other factors, such as an unhappy home life, might have led to drinkers and criminals leaving home earlier than had patients and abstainers. There are no reasons for assuming that exaggerated needs for independence constitute the sole determinant of early flight from the parental home.

In the Pilot Study, it was expected that heavy smoking might be one form of expression of reliance on external support for comfort and reassurance and that drinkers would be particularly prone to accept this kind of support. In that study, significantly more drinkers than controls smoked pipes or cigarettes (92% and 42% respectively), and drinkers who smoked used significantly more cigarettes per day than did controls who smoked. In the present study, significantly more drinkers than patients and criminals were smokers (88%, 68% and 60% respectively), and drinkers who smoked used significantly more cigarettes per day than did patients

who smoked, though not more than did criminals (see Appendix, Tables 4.86 - 4.87). In Holloway's (1969) Australian study, 66% of drinkers were very heavy smokers and none were non-smokers, whereas only 18% of matched controls were very heavy smokers and 26% were non-smokers.

The above results confirm that N.Z. problem drinkers tend to be heavy smokers, like their counterparts elsewhere (Dreher and Fraser, 1967; 1968; Maletzky and Klotter, 1974; Walton, 1972), and there can be little doubt that heavy cigarette smoking is conceptualized as a sign of masculinity; the work of Jacobs and colleagues (1965; 1966; 1970; 1971) has established a link between toughness, maleness, impulsive self-assertiveness, and heavy smoking, as well as with underlying "oral" traits, though this link cannot be used to support a view that heavy smoking invariably relates to intense underlying dependency needs. However, it is of interest to note that in the present study, while certainly giving the impression of being as "tough" or "masculine" as the drinkers, significantly fewer criminals were smokers. If heavy smoking, like heavy drinking, can be regarded as simultaneously symbolizing both gratification of dependency needs and a defence against these (because of its connotation of masculinity), the differences found between drinkers, patients, and criminals make good sense and would be in line with prediction from theory.

The only conclusion that can be drawn from the findings within this hypothesis is that some of the results may be interpretable as a defensive reaction to inadequate self-sufficiency and masculinity but really sound evidence is lacking. One can only suggest further investigations in this whole area, for certainly, clinically, drinkers give the impression of considerable dependency coupled with defensive façades. Many had become problem drinkers, or their heavy drinking had become out of control, when their wives died, divorced them, or left them for other men, and others recounted episodes which made it clear how sensitive to loss they were and how likely they were to respond to

loss with the external support of increased alcohol intake. Others documented a refusal or inability to maintain normal working relationships, excusing their total passivity on the grounds of ill health and so on, managing to obtain welfare aid or spending years on invalid benefits. Some permitted passivity in themselves but insisted their children be very masculine and independent.

Nos.16, 18, 33, 35, 36, 41, 50, 65, 70, and 73 became problem drinkers or their drinking worsened into "loss of control" after their wives or parents had been lost, for whatever reason. No. 80 went on a binge, after years of sobriety, when his divorced wife was killed in an accident, and had originally become a problem drinker when she had left him. No. 63's recent heavy drinking arose when his wife had decided to work three nights per week and he would sit at home in front of the television, drinking; he openly commented that drink was a substitute for her. No. 46 drank heavily whenever one of his four children permanently left home; he referred to his wife as "my mother" several times during the interview. No. 36, referring to his twelve arrests in three weeks, after his wife left home and he began drinking to stupor in pubs, said "If they want me they can feed me and give me a bed," and admitted he felt he "wanted to be kept inside." No. 28 had been reared in a Boys' Home and had become accustomed to "liking institutionalization," saying he felt he was a dependent person who needed to be kept inside institutions. No. 55 broke down and wept at the thought that two teenage daughters would soon be marrying and leaving home; he also had been reared in an orphanage and later in a farm foster-home, commenting that "In the farm and orphanage it's the same, you're looked after and fed." No. 58 was going to be kept permanently in Carrington as he seemed unable to survive emotionally outside the hospital but apparently felt no need for alcohol while being looked after. No. 43 linked drinking with memories of his mother's loss; he had been the son of the working girl on his wealthy father's estate in Jugoslavia, and saw his real mother only once - when he was taken to say goodbye to her when she was dismissed from the estate. He

vividly remembers this scene and relives it while drinking. He loved especially to drink while travelling and remarked, "One goes for miles and then finds an inn in the wilderness." No. 62 said of the future time perspective test (Hypothesis 6), "I'm not going to put when my mother dies; I hope never." No. 27 had married a nurse but complained that she was always out with others instead of looking after him, while No. 83 complained that his wife, 22 years older than he, "Treats me as if I were one of her sons."

Some drinkers were remarkably passive. No. 78's teenage drug addict son set fire to the fence the day his father finished building it, threw rocks in the father's swimming pool, stole money, truanted from school, and got his bikie friends to throw stones at the father or knock on his windows (father took refuge in a flat underneath the house). The father reacted to all this by simply becoming more passive about the attacks, took no steps whatever to cope, and finally retreated into drunken stupor. Others expressed their passivity by finding one reason or another for not working. Nos. 1 and 59 claimed that they could not work because this would mean working for private enterprise and they were socialists; No. 1 said he could not work in the public service (where he would so enjoy the work that he would never drink heavily, he claimed) because they had him branded in their files as an alcoholic, and he could not work for private enterprise because then "they" would be making a profit out of him - so the only alternative was not to work at all. No. 59's wife supported him. No. 75 had also refused to work on the grounds that he had once had tuberculosis, now had an ulcer, and anyway had broken too many limbs during his lifetime! No. 97 had never worked, remaining instead on invalid's benefit after a colostomy in his adolescence. No. 60 at age 49 was upset when his father refused to pay the subject's debts!

Other drinkers expressed somewhat more of a reaction to passivity and dependency. No. 68 wanted to send his son to boarding school because he was "getting too dependent on his

mother and needed a man's world to grow up in." He recalled yearning for his mother's infrequent visits when he was a war evacuee. No. 66 drank tea all night and claimed to be addicted to it like his father. He commented that alcoholics who wanted to stay in hospital for a "cure" were just bludgers - they cannot "stand on their own feet" but bludge off the state. He, of course, wanted to leave as soon as possible.

Chafetz (1970-71, p.332) considers that abstaining from alcohol must be regarded as indicating existence of a problem with alcohol. It would seem that the abstaining group in this study had a problem with dependency in many instances. They seemed to be roughly divisible into two groups, militant and tolerant, with the former group being markedly reactively independent. These people were intensely resentful of the way in which the welfare state assists individuals (including problem drinkers) who have trouble supporting themselves. No. 2 wanted the welfare state abolished because the Bible says man must live by the sweat of his brow. He would close all philanthropic institutions, including homes for problem drinkers, because these encourage such people not to work but to take from and live off others like parasites. He intended voting for the National party purely because of its policy of private enterprise and distaste for social welfare development, and No. 1 was in full agreement with this policy as well. No.4, relatively wealthy with money in property, said that God helps only those who help themselves. No. 9 felt that the N.Z. public should tighten its belt because "We have too much freedom and goodies." He thought that all drinkers and criminals got what they deserved, commenting, "People shouldn't be a burden to others." Similar comments came from No. 19 - "I don't like carrying drones - can't stand a bloke who lets others do it all for him" (speaking of his work). No. 21 emphasized that sparing the rod spoils the child and that punishment should fit the crime; drinkers had been spoilt. It seems clear that these people could not tolerate the open dependency they sensed in the problem drinkers.

A very common fear amongst the abstainers, particularly the less militant ones, was that they could easily become dependent on alcohol if they ever drank it. While common misconceptions of the seriously addictive nature of alcohol would in part determine this fear, it also seems likely that these people sensed their own dependency potential and feared alcohol for that reason. No. 21 said that once, many years ago, he had taken a sip of alcohol just to see what happened but that "I was just lucky not to become an alcoholic and will never touch it again." He believed that after one drink one could become addicted. No. 10 was also afraid of all drugs in case he became dependent on them, and No. 2 expressed a similar fear. No. 29 said that he would never touch alcohol because he was sure he was a potential alcoholic judging from the amount of coke he consumed after football matches!

Abstainers were outstandingly different from the problem drinkers in their attitude toward entering a pub and not drinking. Whereas the drinkers felt acute embarrassment and shame if unable to drink anything other than lemonade or ginger ale when with their friends in pubs, and often complained that if they gave up alcohol they would lose all their friends, the abstainers were perfectly at ease in bars. No. 25 said he frequently shouted his friends to beer, in the pub, for some celebration but was quite happy with his lemonade - and felt his friends were quite acceptant of his attitude to alcohol - while No. 27 commented that "There is nothing sissy about lemonade in a pub." No. 22, an Englishman, commented that though prior to joining the Salvation Army he had been a regular drinker, he would never have thought of going to the pub without his wife, but in N.Z. one just doesn't take one's wife. This attitude was conspicuously different from the drinkers' pronounced feeling that the real man drinks with men, never with his wife.

On the whole, the militant abstainers were individual members of the N.Z. Alliance while the tolerant abstainers tended to be Salvation Army members, i.e. they were

abstainers because the Salvation Army, as a member of the Alliance, is opposed to alcohol (as well as in some cases being abstainers from personal conviction). It could be argued that the whole relationship of Salvation Army organizations is a dependent one. Not only is there an emphasis on being part of a group enjoying the protection of an Almighty Father, but the Army in fact provides cars, homes, etc., at very reduced rates, thereby looking after its members and reducing the stresses of personal achievement; the Army could also be regarded as an extended family in which there is always companionship and protection and a large supply of ready-made friendships, and personal assistance. It would be very surprising if such an organization did not attract a large number of individuals with problems of personal insufficiency, as well as attracting mature individuals whose greatest enjoyment lies in nurturing others.

AUGMENTED INTEREST IN MALES

(Hypothesis 2)

The null hypothesis predicted no differential scoring amongst the groups with respect to interest in males and diminished investment in the heterosexual object, on the criterion instrument, the Zamansky pictures technique.

RESULTS:

TABLE 3.32

Analysis of Variance for Eye-fixation on Male Pictures, Combined Groups Comparison

Source:	df	ss	ms	F	p
Between groups	2	19.53	9.76	6.83	<.01
Within Groups	187	267.13	1.42		
Total	189	286.66			

TABLE 3.33

Means, Standard Deviations, and t-tests for Eye-fixation score for Pictures of Males, shown in Seconds

Group 1:	N	Mean	S.D.	t	p
PDs	50	0.94	1.05	PD/PT 3.786	<.001
PTs	30	0.15	0.57	PD/CR 2.544	<.01
CRs	30	0.39	0.73		
Group 2:					
PDs	50	0.93	1.88	PD/PT 1.594	< .10 p>.05
PTs	30	0.36	0.65	PD/CR 1.492	< .10 p>.05
CRs	30	0.39	0.73		
Combined Groups:					
PDs	100	0.94	1.52	PD/PT 3.303	<.001
PTs	60	0.25	0.61	PD/CR 1.902	<.05
CRs	30	0.39	0.73		

Table 3.32 indicated that there were significant differences amongst the groups on eye-fixation to males; accordingly, the null hypothesis was rejected.

Table 3.33 revealed that problem drinkers fixated significantly longer on males than did psychiatric patients and criminals in Group 1 and Combined Groups, with the difference just failing to reach the 5% level in Group 2 by one-tailed tests.

TABLE 3.34

Means, Standard Deviations and t-tests for Eye-fixation Scores for Male versus Female Pictures, shown in Seconds

Group 1:	N	Males	S.D.	Females	S.D.	t	p
PDs	50	0.94	1.05	0.26	0.69	3.845	<.001
PTs	30	0.15	0.57	0.96	0.95	3.968	<.001
CRs	30	0.39	0.73	0.43	0.63	0.210	N.S.
Group 2:							
PDs	50	0.93	1.88	0.42	0.77	1.757	<.05
PTs	30	0.36	0.65	0.50	0.70	0.840	N.S.
CRs	30	0.39	0.73	0.43	0.63	0.210	N.S.
Combined Groups:							
PDs	100	0.94	1.52	0.34	0.73	3.532	<.001
PTs	60	0.25	0.61	0.73	0.86	3.480	<.001
CRs	30	0.39	0.73	0.43	0.63	0.210	N.S.

TABLE 3.35

Numbers of Subjects Fixating longer upon Male than Female Pictures (percentages parenthesized)

Group 1:	PDs	PTs	CRs
N	50	30	30
Male fixators	34 (68)	5 (17)	15 (50)

X^2 PD/PT = 17.77, df = 1, p<.001
PD/CR = 1.85, N.S.

Group 2:			
N	50	30	30
Male fixators	25 (50)	14 (47)	15 (50)

X^2 PD/PT = 0.000, N.S.
PD/CR = 0.05, N.S.

Combined Groups:			
N	100	60	30
Male fixators	59 (59)	19 (32)	15 (50)

X^2 PD/PT = 10.14, df = 1, p<.01
PD/CR = 0.43, N.S.

Table 3.34 indicated that problem drinkers eye-fixated significantly longer on males than on females in all three comparisons by one-tailed test. In contrast, patients fixated significantly longer on females in Group 1 and Combined Groups. Criminals fixated non-significantly longer on females. These findings are in the direction predicted

by the experimental hypothesis. Table 3.35 indicated that significantly more drinkers than patients, but not criminals, had longer fixation times for male than female pictures in Group 1 and Combined Groups.

TABLE 3.36

Analysis of Variance for Verbal Preference for Male Pictures, Combined Groups Comparison

Source:	df	ss	ms	F	p
Between groups	2	9.89	4.94	3.08	<.05
Within groups	187	299.55	1.60		
Total	189	309.44			

TABLE 3.37

Means, Standard Deviations, and t-tests for Number of Male Pictures selected as Preferred Pictures

Group 1:	N	Mean	S.D.	t	p
PDs	50	1.20	1.14		
PTs	30	1.66	1.34	(N.S. by F-test)	
CRs	30	1.16	0.74		
Group 2:					
PDs	50	1.58	1.24		
PTs	30	1.93	1.72	(N.S. by F-test)	
CRs	30	1.16	0.74		
Combined Groups:					
PDs	100	1.39	1.20	PD/PT 1.874	<.05
PTs	60	1.80	1.53	PD/CR 0.959	N.S.
CRs	30	1.16	0.74		

TABLE 3.38

Means, Standard Deviations and t-tests for Number of Male versus Female Pictures preferred

Group 1:	N	Males	S.D.	Females	S.D.	t	p
PDs	50	1.20	1.14	5.68	1.18	19.236	<.001
PTs	30	1.66	1.34	5.26	1.46	9.921	<.001
CRs	30	1.16	0.74	5.80	0.76	23.802	<.001
Group 2:							
PDs	50	1.58	1.24	5.30	1.35	14.262	<.001
PTs	30	1.93	1.72	5.06	1.72	7.052	<.001
CRs	30	1.16	0.74	5.80	0.76	23.802	<.001
Combined Groups:							
PDs	100	1.39	1.20	5.49	1.28	23.290	<.001
PTs	60	1.80	1.53	5.16	1.58	11.804	<.001
CRs	30	1.16	0.74	5.80	0.76	23.802	<.001

When the groups were compared for verbalized preferences for the male or female picture of each pair, Tables 3.36 and 3.37 indicated that only in the Combined Groups comparison did significant differences emerge but they were in the expected direction: psychiatric patients selected significantly more male pictures as preferred pictures than did problem drinkers, while drinkers and criminals did not differ significantly. Thus, while drinkers eye-fixated for significantly longer on males than females (Table 3.34), and fixated significantly longer on males than did patients (Table 3.33), they verbalized just the opposite - a preference for females rather than males (Table 3.38) and also by verbal preference chose fewer males than did patients (Table 3.37). In Table 3.34 patients fixated for significantly longer on females than males, from which it seems a reasonable inference that they were heterosexually orientated, and in addition although they chose, like the other subjects, significantly more female than male pictures by verbal preference they were not defensive about choosing some male pictures when it suited them (Table 3.37), choosing more of these than did drinkers or criminals. The findings in Table 3.38 indicated that in the case of the patients there was less discrepancy between the number of male versus female pictures preferred than was the case for drinkers and criminals. Criminals demonstrated a non-significant eye-fixation preference for females (Table 3.34) but of all groups they chose the fewest male pictures and seemed to perform nearer the drinkers than the patients in terms of verbalized preferences.

Problem drinkers, therefore, demonstrated a conflict between eye-fixation preferences and verbal preferences, while patients did not, and it would appear that a discrepancy between overt heterosexual declaration and covert orientation to males was being reflected in these findings. Results would appear to substantiate, in the main, the theory that problem drinkers compared with non-problem drinking subjects experience a greater attraction for males, with diminished investment in the heterosexual role, while at the same time defensively expressing on the overt level a greater interest

in females. The abstainers could not be compared with other subjects by inclusion in this hypothesis. The first abstainer interviewed refused flatly to take part in such a "vulgar" test and made it clear that if this test was included he would ensure that no Alliance people would be available as subjects! The test therefore had to be excluded when the abstaining group was interviewed.

Difficulties in replicating results in Group 2 appeared to derive mainly from the psychiatric patients. When Group 1 and 2 drinkers were compared their eye-fixation time for males was virtually identical, whereas Group 2 patients had a much longer fixation time to males than had their Group 1 counterparts (see Appendix, Tables 4.94 and 4.95); this difference appeared also in the chi-square computation (Table 3.35), only 17% of Group 1 patients fixating longer on males than on females whereas 47% of Group 2 patients did, significant at the 5% level (see Appendix, Table 4.98). When Group 1 drinkers were compared with Group 2 patients on fixation time to males, and Group 2 drinkers were similarly compared with Group 1 patients, drinkers in both cases fixated significantly longer on males, and by chi-square significantly more Group 2 drinkers than Group 1 patients fixated longer on males than on females with significance just failing to reach the 5% level for the Group 1 drinker versus Group 2 patient comparison (see Appendix, Tables 4.96, 4.97, and 4.98). Thus, in four of five comparisons between drinkers and patients (Group 1, Combined Groups, Group 1 drinkers versus Group 2 patients, and Group 2 drinkers versus Group 1 patients), drinkers fixated significantly longer on males.

DISCUSSION:

It is difficult to compare the findings here with those of other studies as this method has been used only twice, both times by Zamansky (1955-6; 1958), using somewhat different picture stimuli. His homosexual subjects in the earlier study, and paranoid subjects in the later study, fixated longer on males (than on females) for 3.55 seconds and 1.49 seconds respectively, with controls fixating on females

for 2.37 seconds and 0.70 seconds respectively (i.e. -2.37 and -0.70 seconds on males). Of course, in this present study it was not expected that drinkers would perform similarly to homosexuals but merely that they would demonstrate relatively greater interest in male than in female stimuli and the results appear to support this contention by being in the same direction as Zamansky's but of lesser magnitude. Indeed, these results are reminiscent of those of Gibbins and Walters (1960), whose problem drinkers fell midway between homosexuals and normals in endorsement of phallic rather than vaginal symbol pictures, significantly differing from normals but not from homosexuals in preference for phallic symbol pictures.

Early/Middle/Late onset comparisons (see Appendix, Tables 4.100 - 4.105): Analysis of variance indicated that these three groups did not differ significantly in time spent on eye-fixation to males. When the groups were compared for fixation time to males versus females, both Early and Late starters fixated significantly longer on males than on females (Table 4.103). It would seem that older drinkers might be those who were most undermined in heterosexual orientation. This was supported by the chi-square computation where, although differences were not significant, more Late than Early or Middle starters fixated longer on males than on females (64% versus 60% and 52% respectively). These Late starters also expressed a verbal preference for significantly more male pictures than did Early or Middle starters, so it would appear that not only were they more attracted to males but also they were less defensive about it.

Youngest/Oldest subjects comparisons (see Appendix, Tables 4.106 - 4.118): Analysis of variance indicated that there were no significant differences amongst either the younger or older groups on time spent on eye-fixation to males (Tables 4.106 and 4.111). However, in all tables drinkers, whether young or old, fixated longer on males than on females, significantly or not, while patients always fixated longer on females than on males, regardless of age. In the comparison of fixation time on males versus females, young drinkers fixated non-significantly longer on males than females, while

young patients fixated significantly longer on females than males (Table 4.108) but by verbal preference young patients chose significantly more male pictures than did drinkers, young drinkers verbally preferring fewer males than did the other groups (Table 4.110). Old drinkers, however, fixated significantly longer on males than females and old patients significantly longer on females than on males (Table 4.113) and old criminals almost significantly longer on females, just failing to reach the 5% level of significance. In terms of verbal preferences, old drinkers chose significantly more males than did young drinkers, while the score of young versus old patients was identical; old criminals chose fractionally more male pictures than did young ones (Table 4.117). Only in drinkers was the (non-significant) tendency for older compared with younger subjects to fixate longer upon males demonstrated; in the criminal group the trend was reversed, older subjects fixating less on males than did younger ones, and in the patients the longer fixation on males in the older group relative to the younger group was only fractional (Table 4.116), and with verbalized preferences, only in the drinkers were younger/older differences significant, older drinkers choosing significantly more male pictures (4.117). In fact, although patients were generally much less inhibited about selecting a considerable number of male pictures in the choice situation, the older drinkers selected even more than did the whole patient group. It would seem, therefore, that the older drinkers were both more attracted to males and much less defensive about it. The chi-square computation, while revealing no significant group differences, indicated that more older than younger drinkers fixated longer on males than females while the trend was reversed in the other groups, fewer older than younger subjects fixating longer on males (Table 4.118).

Young Early/Old Early/Old Late starter comparisons (see Appendix, Tables 4.119 - 4.124): Analysis of variance indicated that the three groups did not differ significantly in length of fixation time to males, though Old Late starters fixated longer on males compared with the other groups (Table 4.120). Comparison of fixation times to males versus females revealed that only the Old Late starters fixated significantly longer on males, though the difference almost reached the 5%

level for Old Early starters, while Young Early starters fixated non-significantly longer on males (Table 4.123). Analysis of variance (Table 4.121) indicated significant differences amongst the groups on verbalized preferences for males; Table 4.122 indicated that the Old Late starters verbalized a preference for significantly more males than did Young Early starters, which group in its turn selected significantly fewer male pictures than did the Old Early group. It could be argued that years of exposure to alcohol and the company of drinking men might bias responses toward increased interest in males, but in that case the Old Late men with only 5.84 years of chronic inebriety should have differed from the Old Early men with their 26.78 years of chronic inebriety in favour of longer fixation time to males in the latter group, but instead this appeared in the former group (Tables 4.120 and 4.123). Nor is sexual decline with advancing years a likely contributor to scoring patterns since the Old Early and Old Late men did not differ so very much in age yet performed differently on the measure, and since the older psychiatric patient and criminal groups did not demonstrate a greater fixation time on males than on females (Table 4.113). The average age of the Young Early starters was 25.25 years, and of the Old lates 54.11 years. Although these Young Early drinkers were considerably older than the very young hard-drinking adolescents of Blane and Chafetz (1971) and Zucker (1968), their performance would seem consonant with the image of masculinity expressed in low scores on the Fe scale reported by these authors, and in this present study the Young Early starters gained significantly more masculine Fe scores than did any other group, drinker or non-drinker, while the older drinkers tended to gain less masculine scores. It therefore seems safe to conclude that older drinkers whose drinking began later in life were those who were undermined in the heterosexual role and that this reflects very real differences in personality structure in them rather than the effects of age on sexuality or years of exposure to alcohol. While all drinkers were covertly orientated to males rather than females, the theory of reactive hyper-masculinity, if applicable at all, was certainly

more readily demonstrable in younger drinkers. Old Late starters did not appear to be defensive about their interest in males.

Correlations (see Appendix, Table 4.99) indicated that factors other than those deriving from personality orientation appeared not to influence performance on this measure. However, age of onset was bordering on significance for fixation time to males, in drinkers, early onset being associated with shorter fixation time in males.

In general, the results appear to support theories that drinkers are undermined in the heterosexual role and tend, for whatever reason, to be more attracted to males. Drinkers were very often defensive about expressing a preference for male pictures in the choice situation. Quite typical responses to the request that they select one of the two pictures of each pair were, "Are you seriously asking me, a man, to choose between a man and a woman?" It was implied that no normal male could possibly prefer a male, not even as a picture! The writer had to make it quite explicit that they were being asked to choose not whether they preferred males or females but which picture as such they preferred. When males were chosen, drinkers often seemed to feel constrained to explain such a choice, e.g. "I like him because she's too fat and looks unfriendly," or, "I'll choose him because he's a reminder to me never to get a paunch like that." In contrast, patients very infrequently apologized for choosing males, often expressing a degree of affectionate feeling for some of the males, e.g. "Look at that old codger; just like my Dad," or, "Gee! I wish my body looked like that." They were very clearly much less defensive about liking males, on the whole, than were the drinkers, who clearly felt that a real man should be intensely interested in women. This hesitation in choosing men seems in paradoxical contrast to their verbalized statements about the pleasures of drinking in all-male company and so on, but of course what has happened is that the labelling or stereotyping of men drinking together as an indication of masculinity enables any other underlying motives or meanings to be disguised and remain obscured while at the

same time being gratified. The real man was seen by the drinkers as not enjoying being with mere women but as living for the ego-inflating and integrating experience of being a man amongst men, while women had their uses later in the bedroom. One had sex with women, but companionship with men.

In answer to a question about what was liked most about heavy drinking, many of the drinkers - while giving several reasons for it - particularly emphasized the pleasure of drinking with men and the feeling of masculinity it gave them. No. 13 said, "I love to drink with the boys ... can't take responsibility." He used to imitate two uncles who drank heavily, saying, "They were the image I used to look up to." No. 20 commented, "In the army, if you were the biggest boozer you really could booze - and I was the best ... could out-drink anybody." After drinking, No. 52 felt "Ten feet tall, could have the whole world on," and No. 9, whose choice of words seemed most apt for epitomizing the meaning of drinking in this context, felt "Cock of the walk, own half the world." He used to love going fishing with his father, "being men together." With drink in the house he felt "a big man, like Dad." No. 10 said of his father, "We drank together and were chums later." No. 32 was "Always playing the big shot in drink" and in all affairs; "I wanted to get big too fast .... I never walked, I ran ... I was drinking with men when my friends were just boys." This adopted subject yearns to know what his real father was like. No. 34 commented that at 16 he "worked with men," No. 35 drank heavily in the Marines where he "liked the social life of drinking your mates under the table," while No. 43 said about drinking that he enjoyed "Being all men together ... in the Navy. I could out-drink them all." He explained how in Jugoslavia a man used to be admired by all if wearing a Navy uniform but that in N.Z. nobody is impressed at all. No. 54 always felt inadequate and inferior because of a somewhat girlish Christian name and commented, "I always was with men, never boys." Men used to give him booze, to see if he could hold it: he could - "I'm a man." No. 55, after breaking down and weeping over the potential loss of his adult daughters by

marriage, said, "A man who cries isn't a real man at all." No. 5 remarked, while looking at the Zamansky pictures, that at adolescence he had had the choice of studying art or going into the Navy; pictures of nude girls had "put him off art" and so he entered the Navy "with all the he-men." No. 46 said that he "Always congregated with the heavy drinking blokes in the war - I was one of the youngest." "I like the company of the pub," said No. 67. "It feels good to be around men. I feel I'm living an exciting life, laughs, etc., ten feet tall, a man among men." He recalled hankering for visits from his father after the latter deserted, and yearns for male company in pubs, not wanting to return home to the waiting wife, and saying he would rather go without tea than miss the pub. He was impotent, and wondered if this was to spite his wife. No. 69 said that in the Navy he was called "queer" and "not a man" if he didn't drink heavily, and No. 76, speaking of his sea-faring life, said, "Get drunk and get a woman - that's what a sailor does when he gets ashore; they're a different breed of men; I'd rather drink than have a woman," similar to sentiments expressed by No. 64 who remarked, "I'd rather have a glass than a woman." No. 95, also a sailor, said, "When ashore one got a woman and one drank to stupor; it was the masculine ethic." No. 78 liked "Getting stoned with the guys," and No. 77 said, "Where else can you talk to people but in a pub? Men like to get together ... Father and I went everywhere together." Nos. 70 and 71 liked meeting men while drinking, "Going out with blokes." No. 85, whose heavy drinking had begun at 14, said, "All the older fellows drank." No. 87 commented that "Alcohol makes me feel equal to other men." He was illegitimate, his "sister" actually being his mother, and had never met his father. He said that he could not meet other men, such as his bank manager, without taking alcohol first. The thought of giving up drinking worried No. 98 because he would miss most "The jokers I've drunk with over the years."

Two of the drinkers were quite obsessed with penis sizes and equipment. No. 81, while looking at the Zamansky pictures, actually took a ruler and measured the penis in one of the pictures, to see if it really was erect because to him

it seemed to be on an angle! No. 61 went into considerable detail about the sizes of men he had known; he said he was puzzled that some men had a blunt penis, others a rounded one, while some were twisted to one side or otherwise kinked, and added that he often watched other men in lavatories to see if they were sharp, blunt, or kinked! Several drinkers expressed anxiety about the size of their own penile equipment. No. 23 said that in bars he felt "more manly" after a few drinks and less worried about his very small penis. He leaves town abruptly and frequently, forever changing his abode, when he feels that people have heard about his penis. He commented later, "Father was bigger than myself, a man's man." Nos.26 and 29 both complained of almost delusional anxiety over penis size; neither would undress in front of other men, and both used the expression, "I'm only half a man." No.25, very conscious of his small body size, said that he felt better drinking "in all male company." Nos. 67 and 64 were impotent, and it is possible others were but subjects were not directly asked any questions about sexual difficulties; any who commented on this did so purely spontaneously. Subjects who were worried about their sexuality stood in sharp contrast to No. 21, who claimed to have had 41 affairs and invited the writer to be next on his list. He claimed that at the age of 52, intercourse 8 or 9 times per week wasn't sufficient for him and that his penis, when erect, was jammed against his umbilicus. Although he regarded himself as sexually extraordinary, he added that any normal man's penis should be against the umbilicus, when erect - a statement all the more surprising as this subject was a specialist physician!

It was quite outstanding how the drinkers, in general, felt that one was not a real man if one did not drink - and heavily. Abstainers took just the opposite view - that slavish dependence on alcohol was about as unmanly as they could imagine. The drinkers felt that everyone would be secretly laughing at them if they were reduced to drinking ginger ale at parties or in pubs, whereas this aspect did not impress the abstainers at all, who seemed somewhat contemptuous of men who <u>needed</u> to drink and to conform to some masculine ethic while they, in contrast, were quite comfortable ordering

lemonade and being different from their fellows who drank beer in the pub. Although the psychiatric patients and criminals were not asked what they liked most about drinking, since they did not answer the drinking history questions on the Biographical Data questionnaire, none of them referred to feelings about masculinity either in itself or in relation to imbibition. Presumably it simply was not part of their image.

SCHIZOID INTERPERSONAL DIFFICULTIES

(Hypothesis 3)

Nine BDQ items were covered in this hypothesis and they were categorized into two groups: isolation and withdrawal from close relationships, superficiality, and instability; and feelings of discomfort in interpersonal relationships with difficulty in forming these. Two null hypotheses were formulated: That there would be no differential group responses (1) in terms of social isolation/instability of relationships, and (2) in terms of interpersonal discomfort/difficulty in forming relationships. As usual, only the Combined Groups comparison was utilized for acceptance or rejection of the null hypotheses.

RESULTS:

TABLE 3.39

Subjects' Self-descriptions of Isolation, Superficiality, and Instability

Group 1:	PDs %	PTs %	ABs %	CRs %
N	50	30	30	30
Living alone	40*	13	3	13
Prefers casual friends	50*	20	3	30
Divorced/Separated	56	26	0	52
Unfaithful to wife	54**	32	11	48
De facto relationships	50*	23	0	50
Group 2:				
N	50	30	30	30
Living alone	42*	13	3	13
Prefers casual friends	62*	3	3	30
Divorced/Separated	53**	14	0	52
Unfaithful to wife	61**	19	11	48
De facto relationships	52**	10	0	50
Combined Groups:				
N	100	60	30	30
Living alone	41**	13	3	13
Prefers casual friends	56*	12	3	30
Divorced/Separated	55**	20	0	52
Unfaithful to wife	57**	25	11	48
De facto relationships	51**	17	0	50

*p<.05 ** p<.01

The asterisks denote the minimum level of significance at which problem drinkers differed from any one of the other

groups. Full details of chi-square computations and significance levels for every comparison can be found in the Appendix, Tables 4.125 - 4.134.

TABLE 3.40

Subjects' Self-descriptions of Interpersonal Discomfort and Difficulties in Establishing Relationships

Group 1:	PDs %	PTs %	ABs %	CRs %
N	50	30	30	30
Shy, self-conscious	62	57	50	43
Hard to establish relationships	52	60	30	47
Many close friends	8**	20	67	23
No close friends	36	27	0	17
Group 2:				
N	50	30	30	30
Shy, self-conscious	74*	50	50	43
Hard to establish relationships	62*	53	30	47
Many close friends	8**	27	67	23
No close friends	50**	30	0	17
Combined Groups:				
N	100	60	30	30
Shy, self-conscious	68*	53	50	43
Hard to establish relationships	57*	57	30	47
Many close friends	8*	23	67	23
No close friends	43*	28	0	17

* $p<.05$ ** $p<.01$

Since there was significant differential responding amongst the groups on all items in the Combined Groups comparison for both Tables 3.39 and 3.40, the null hypotheses were rejected.

In the Combined Groups comparison in Table 3.39, significantly more drinkers than patients, abstainers and criminals lived alone and preferred casual to close friends; significantly more drinkers than patients were divorced or separated, though not differing from criminals on this item; significantly more drinkers than patients and abstainers had been unfaithful to their wives, again not differing from criminals; and significantly more drinkers than patients had sought de facto relationships, again not differing from criminals. Differentiation between problem drinkers and the other groups was always in the same direction in Groups 1 and

2 as in the Combined Groups comparison. Significantly more drinkers than patients lived alone, preferred casual to close friends, and sought de facto relationships in all three comparisons. Significantly more drinkers than criminals lived alone in all three comparisons, and preferred casual to close friends in two comparisons. Significantly more drinkers than abstainers lived alone, preferred casual friends, and had been unfaithful to wives in all three comparisons; no abstainers had been divorced or admitted to having de facto relationships.

There were no significant differences between Group 1 versus 2 drinkers, or Group 1 versus 2 patients on any items. Significantly, more Group 1 drinkers than Group 2 patients, and Group 2 drinkers than Group 1 patients, lived alone, preferred casual friends, and had sought de facto relationships, while significantly more Group 1 drinkers than Group 2 patients had been unfaithful and were divorced or separated, with the difference in the same direction falling just short of the 5% level of significance between Group 2 drinkers versus Group 1 patients (see Appendix, Tables 4.127 - 4.128). On the items "Living alone," "Prefers casual friends," and "Sought de factos" drinkers differed significantly from patients in five of five comparisons, therefore.

In the Combined Groups comparison in Table 3.40, significantly more problem drinkers than criminals were shy and self-conscious, and the difference just failed to reach the 5% level of significance in favour of more drinkers than patients being shy, while drinkers were not discriminated from abstainers. Significantly more drinkers than abstainers found relationships hard to establish, but did not differ from patients and criminals in this. Significantly fewer drinkers than patients, abstainers, and criminals had many close friends. Significantly more drinkers than criminals had no close friends, and the difference in the same direction just failed to reach the 5% level of significance between drinkers and patients. Differentiation between drinkers and the other groups was generally in the same direction in Groups 1 and 2 as in the Combined Groups

comparison, though drinkers and patients really differed very little in admitting difficulty in establishing close relationships. Almost significantly more drinkers than patients were shy in two comparisons, the difference just failing to reach the 5% level of significance in both, and almost significantly more drinkers than patients had no close friends in one comparison, while significantly fewer drinkers than patients had many close friends in one comparison with the difference just falling short of significance at the 5% level in another comparison. Drinkers differed significantly from abstainers in all three comparisons in that fewer had many close friends, and significantly more drinkers than abstainers found relationships difficult in two comparisons while the third just failed to reach the 5% level of significance. Drinkers differed significantly from criminals in that more of them were shy and had no close friends, in two comparisons, while significantly fewer drinkers than criminals had many close friends in one comparison.

There were no significant differences between Group 1 versus 2 drinkers, and Group 1 versus 2 patients on the items of Table 3.40 nor between Group 1 drinkers versus Group 2 patients or Group 2 drinkers versus Group 1 patients, though almost significantly fewer Group 1 drinkers than Group 2 patients had many close friends and almost significantly more Group 2 drinkers than Group 1 patients had no close friends, both differences just failing to reach the 5% level of significance (see Appendix, Table 4.128).

With regard to the first hypothesis, problem drinkers differed significantly from patients and abstainers in the direction predicted by the experimental hypothesis, though not always differing from criminals, while on the second hypothesis the predicted direction of group differences was supported only in comparisons between drinkers and abstainers. In terms of feeling discomfort and anxiety in interpersonal relationships, drinkers and patients did not differ significantly; where they did differ was in the drinkers' reaction of avoidance, withdrawal, and opting for short-term superficial relating (living alone, being divorced or

separated, preferring casual to close friends, not having many close friends, being unfaithful to wives, and seeking de facto relationships). In the area of short-term relating they resembled criminals (de factos, unfaithfulness, divorce) but the latter were not nearly so avoidant of relationships (did not prefer casual friends, did not live alone). Rather than struggling to maintain difficult marriages and persist with anxiety-provoking relationships, drinkers opted for short-term, superficial, unstable interpersonal dealings in which they were not tied down to one woman or to close friends who might make demands, but where they could be promiscuous or have casual encounters only. In long-term stable relationships they were failures, and were certainly the most socially isolated of all groups.

DISCUSSION:

Results of this section are in many respects not quantitatively comparable with studies elsewhere because of differing methods used to investigate interpersonal relationships. Compared with results from the Hanmer Pilot Study there were few major discrepancies, though that study involved only a very small number of subjects. 51% of drinkers in the present study had sought de facto relationships (42% in the Pilot Study), 55% were divorced/separated (26%), 57% found the establishing of close relationships very difficult (75%), and 68% admitted to extreme shyness and self-consciousness (71%).

Unstable relationships in problem drinkers were reported by Freed (1968), Rosenberg (1969a,b), and Wolf (1958), drinkers exceeding psychiatric patients in being divorced or separated, as was found in the N.Z. study. Wittman's (1939) drinkers reported many love affairs and 21% were married more than once (16% in the present study and 13% in the Pilot Study, compared with 7% for patients). Goodwin et al (1971) reported a preference for multiple sex partners in alcoholic compared with non-alcoholic felons, and in the N.Z. study slightly fewer criminals than drinkers had been unfaithful to their wives (i.e. had not opted to the same extent for multiple partners), but differences were not significant and almost the same proportion of criminals as drinkers had sought de facto

relationships (51% of drinkers had 111 de facto relationships between them, 50% of criminals 27 such relationships, and 17% of patients 14 such relationships). Wallerstein et al (1957) reported that half of the drinkers in their sample had been unfaithful to their wives (57% in the N.Z. study, compared with 25% of patients). In the section on p.64 dealing with divorce/separation rates, about 0-7% of the normals were divorced or separated, compared with about 20% of neurotics and about 45% of pathological drinkers (55% in the N.Z.study, compared with 20% for patients, 52% for criminals, and 0% for abstainers).

The social isolation found in this sample of drinkers parallels that in two Australian studies. Koller and Castanos (1969) reported that 60% of their drinkers lived alone, significantly more than a comparable group of psychiatric patients, and Rosenberg (1969b) reported figures of 52% and 2% for drinkers and neurotics respectively. In the present study 41% of drinkers lived alone, compared with only 13% of patients.

In this study there was no support for the view that drinkers are out-going and self-confident, whereas studies suggesting them to be shy, diffident, and withdrawing were supported (see p.66). It is true that superficially, they impress as being sociable and friendly, and they are certainly cooperative subjects to interview, but Kalin's (1972b) description of this as narcissistic sociability - short-term exhibitionistic relating - seems most apt.

Often the suggestion is made that years of excessive imbibition lead to solitariness and disaffiliation. To explore this possibility, subjects were asked if in childhood they had been troubled by extreme shyness and had found interpersonal relationships difficult, and whether in adolescence they considered they had many close friends, few close friends, or no close friends. Detailed results of these chi-squares are shown in the Appendix, Table 4.129. More drinkers than others were shy and self-conscious but differences were not significant; significantly fewer drinkers

than all other subjects had many close friends during adolescence; and almost significantly more drinkers than criminals and abstainers had no close adolescent friends, the difference just failing to reach the 5% level of significance, and the same trend was apparent when drinkers were compared with patients. Only 12% of the drinkers recalled having many close adolescent friends, compared with 4% in the Pilot Study, and 39% recalled no close friends in adolescence (29% in the Pilot Study).

There is certainly no evidence for the view that problem drinkers were without difficulties in relating until problem drinking had become established. In fact, more drinkers reported interpersonal difficulties in childhood and adolescence than in adulthood (71% and 57% respectively), and although one other proportion changed in direction this change was negligible (12% reported having many close adolescent friends versus 8% having many in adulthood, and 39% reported having no close adolescent friends versus 43% reporting none in adulthood). Relative to the other groups the drinkers were more disaffiliated (significantly fewer had many close adolescent friends) during the teenage years. These findings are consonant with those of Hassall (1968) and Rosenberg (1969a,b) with young problem drinkers.

Early/Middle/Late comparisons (see Appendix, Tables 4.130 - 4.131 The expectation here was that more Early than Late starters would be interpersonally disturbed, though influence of years of chronic inebriety could not be ruled out in this particular group division. Significantly more of the Early than Middle onset drinkers found interpersonal relationships hard to establish, and significantly more Early than Late onset drinkers had sought de facto relationships. No other significant findings emerged, but in terms of proportions more Early than Late starters were divorced or separated, had been unfaithful, were shy and self-conscious, and preferred casual to close friends, some of these findings being similar to Bahr's (1969), who found early-onset Skid Row drinkers (not incarcerated) to be less affiliated with their families than were late-onset Skid Row drinkers, and to have less membership in voluntary organizations.

Youngest/Oldest comparisons (see Appendix, Table 4.132): Comparisons here supported the view that years of drinking (only half as long in the younger drinkers) play a not very important role. Significantly more of the younger drinkers had sought de facto relationships but, while this was the only significant comparison, proportions indicated that more younger drinkers had been divorced or separated and had been unfaithful to their wives, while the older drinkers tended to be more stable in these areas, though more of them had no close friends. These older drinkers seemed to be more isolated, in some ways, than the younger ones in that twice as many were living alone even though fewer were divorced. Both groups were identical in recalling shyness and extreme self-consciousness in childhood, but somewhat more of the older group had adult bothers with shyness and more of them had no close adult friends, though the proportions were not very discrepant between the two groups. What does seem to be becoming apparent is that the older drinkers experienced interpersonal difficulties but, like the psychiatric patients, attempted to cope and remain within the marital situation whereas the younger drinkers tended to react more by withdrawal and disruption of on-going relationships (preferred casual friends, were unfaithful, divorced, sought de factos).

Young Early/Old Early/Old Late comparisons (see Appendix, Tables 4.133 - 4.134): Unfortunately, with only 12 subjects in the Young Early starter group it was only infrequently that for chi-square computations there were really adequate frequencies in all cells. The only significant differences to emerge were that more Young Early than Old Late starters had sought de facto relationships, and almost significantly more Old Early than Old Late starters had been unfaithful, just short of the 5% level, though in proportions they barely differed on unfaithfulness from the Young Early men with their much shorter exposure to alcohol. If years of chronic inebriety exert a deteriorating effect on interpersonal dealings, the Old Early starters might have been expected to show the most disruption but this was only infrequently the case. While it was true that no Old Early starters had many close friends, more Old Early than Young Early and

Old Late starters felt themselves to be extremely shy and self-conscious, and more Old Early than Old Late starters found establishing of relationships difficult (sharing this with Young Early starters in relation to Old Late starters), in other comparisons it was the Young Early starters who were most disturbed, and Old Early starters who were less disturbed; fewer Old Early than Young Early starters had been divorced or separated, preferred casual to close friends, had no close friends, and opted for de facto relationships, and more Old Early than Old Late men were currently married, while fewer Old Early than Old Late starters lived alone - all of which would seem to indicate that years of chronic inebriety do not in themselves disrupt relationships. Since the Young Early men preferred casual friendships, sought de factos, and tended to be divorced or separated (of six ever married, five were divorced or separated, even though their average age was only about 25 years), this would seem to reflect a greater degree of interpersonal instability than was found in the Old Early starters. Taken as a whole, evidence does not suggest that inebriety extending over many years leads necessarily to disaffiliation, interpersonal instability, and social isolation. While it may lead to a reduction in the number of close friendships a man may have, it seems largely unrelated to more serious disruptive behaviour such as withdrawal from relationships or desire for superficial rather than lasting friendships; at least some indices of instability seem to be associated with personality disorder related to early onset of problem drinking rather than to years of problem drinking per se. The Old Late starters appeared to be much more stable than the other groups.

Not many studies have singled out younger problem drinkers for special study, but Foulds and Hassall (1969) found that more individuals whose pathological drinking began before age 30 had, like the subjects in this study, been divorced or separated than had drinkers whose pathological drinking began later in life, and Rosenberg (1969a,b) also reported a very high divorce rate of 55% in young drinkers (69% of young drinkers and 83% of Young Early starters in the N.Z. study). In Rosenberg's study, half of the younger

drinkers were living alone and 56% had drifted away from their families.

Clinical material from this and other studies suggests that alcohol is often used to facilitate interpersonal relationships, assuage shyness and social anxiety, and provide friendships that cannot be obtained elsewhere. In this present study one of the Biographical Data questionnaire items enquired into what it was that the individual liked most about heavy drinking. Almost every subject supplied several reasons but about 42% referred to alcohol's assuaging their loneliness, bringing them out of themselves so that they could talk to others; many spontaneously referred to themselves as "loners." Those who felt lonely and isolated made statements such as, "I'm a loner; there wasn't anything else to do but drink myself stupid ... loneliness, mostly" (No.45). No. 52 - "My wife and family are my only friends." No. 77 - "If you have no-one to share your troubles with, you talk to the bottle." No.81 - "Company ... I can't live alone; I can do things on grog." No. 37 - "If the hotel was empty I'd go elsewhere." No. 92 - "Drink frees me, I can mix more easily." No.97 - "I'm a loner, I even drink on my own." No. 51 - "I never was one to mix, always a lone drinker." No. 28 was so embarrassed over his isolatedness that he used to write himself letters from Hanmer so that the others would think he had friends.

Several subjects clearly had a very dubious sense of their own identity and used alcohol to enhance this and to integrate themselves. No. 93, a schizophrenic, spent much of the interview wondering who he was and why his parents had deserted him (he was adopted). He also said that he was nicknamed "The drifter." In Rosenberg's (1969a) sample of 50 young drinkers, three were schizophrenics and two of these had been adopted. The writer noted that her two drinkers and one criminal who had been adopted were all very concerned over their "real" identity and it would seem that being adopted may pose a considerable threat to feelings of identity. No. 31 felt that life was a series of roles he played; he had become very concerned that he "slipped in

and out of roles too facilely." No. 62 confessed to "Walter Mitty phantasies" as did No.19, who used to act as other characters, Walter Mitty style, but became afraid when he noticed a feeling that he was losing his own identity in these roles; he was reluctant to surrender the roles, however, because he felt that when drunk he was a "successful Mitty" and not his usual shy self. No. 74 was a pathetic man in his mid-forties who wept when telling the writer that his father had given him spirits at 8, that he had been an alcoholic by age 9, and on Skid Row by age 15. He seldom used his own name but operated under a series of aliases, some 12-15 of them, not because of any criminal intent but because he felt a different person in each role. For instance, while walking on a lonely beach one day, immersed in misery, he suddenly had the idea that his name might be Justin. The whole sound of the name had connotations of grandeur, he thought, as if it might have belonged to some English lord. He immediately felt immensely cheered because the "grand name gave me a certain grandeur," and Justin has remained his favourite alias ever since.

Some of the drinkers expressed or had engaged in behaviour that was rather odd, to say the least, and reflected some disturbance in ego functioning. No.23 had, for instance, married a Danish woman who spoke no English; they were married through an interpreter and in fact never managed to communicate at all! This man moved from one town to another frequently because of the (probable) delusion that his penis was too small and that everyone in town had heard about it. In answer to a query from No. 36 about the meaning of the Embedded Figures test, the writer remarked that no-one was absolutely certain what it measured. The subject replied, "I can tell you - about a quarter of an inch," and he held his thumb and forefinger over a portion of the card! No. 43 would not let his wife undergo a gynaecological examination, necessary if they are to have a child, because then she would be "spoiled, no longer pure." He later said he would like to go off to the jungles of S.America and roam there alone for the rest of his life. No. 44, when asked by the writer if he had any hobbies, shot off his chair and paced the room

agitatedly, muttering, "Can I tell her, can I tell her?" He finally decided he could, and it emerged that he spent hours "playing" with the gods Pan and Thor, cloven hoofs and all! He liked to conjure up images of the gods - "You can have lots of fun with them." Using his first wife as a medium he would "put filthy slimy things" into her mind so that she would dream about them. No.61 in the middle of the interview suddenly left his chair, went to a corner of the room, turned his back to the writer, and sneezed, after which he returned without a word to his task. Although he was a company manager and by no means down and out, he was wearing a pair of spectacles he had purchased from Woolworths! No. 62, in the middle of answering questions about himself from the BDQ, abruptly asked in all seriousness if the FBI would get a copy of the results. No.66 had the habit of cleaning his teeth 10 times daily. No.72 had tried to commit suicide thoroughly unrealistically - with Fergon (iron) tablets! "I couldn't get myself into gear," he complained. This patient attacked himself viciously when intoxicated. No. 41 had odd hypochondriacal ideas; he claimed that he had suffered five coronaries, 88 angina attacks, 5 fractured skulls, and had skin grafted from arm to eardrum to cure Menière's disease, and had once set his own dislocated shoulder. He also claimed that a doctor had accidentally castrated his brother during an appendicectomy. The day following the interview this 60-year-old man sought out the writer, to tell her that her "naked bodies test" had given him morning erections and could she kindly advise him what to do about them! Another subject, having become friendly with the writer, sought her out during a trip to Wellington. He was in trouble, needing somewhere to stay and having no cash, but instead of phoning the writer he sent her a series of telegrams (all of which were phoned through!) asking her to phone him at various numbers given in the telegram. Whenever she rang he had either just left or had never been heard of. When we finally managed to make contact and he was asked why he had not phoned directly, he looked completely astounded: "You know, I never thought of that." On one of the forms he completed at Hanmer was a space for name, age,

and sex. He wrote his age, but under "sex" he wrote, in all seriousness, "Not lately." No. 5 visited the hospital dentist and while the dentist left the room for a moment he saw a bottle of stuff and rapidly consumed the contents "in case it was gin." Even after the first mouthful, knowing it not to be gin, he finished the contents and "did not stop to think" that it might have poisoned him. Fortunately, it must have been an innocuous mouthwash! While it may be a matter of personal opinion whether the narrated incidents are regarded as "odd," in the writer's view they reflect the same sort of queer,off-beat thinking found in the Pilot Studies (pp.99-100 and pp.125-129).

In two cases there was an interruption of logical thought processes on the Massey test of verbal ability. No.12, after completing the three given examples correctly, looked at the first question asking subjects to select the word nearest in meaning to "Tremendous" and asked if the correct answer would be choice E because E stood for "Enormous" and that was nearest in meaning to "Tremendous" (correct answer being A, "Huge," while "Enormous" was not there at all). No.47, again after completing the three examples successfully, asked if the answer to "Tremendous" would be choice A because this letter was nearest (on the page) to "Tremendous," compared with B,C,D, and E! These sudden illogicalities were similar to some that occurred on the EFT, referred to under Hypothesis 4. In one case a complete denial of reality occurred on the intelligence test: No.21, a highly intelligent doctor, asked the meaning of "Refulgent" at the completion of the test. The writer told him, at which he retorted that he had known that all along and had in fact marked it so on the form. The writer showed him the form, with this item uncompleted, whereupon in full view of her he wrote in the correct answer, still asseverating that it had been there all the time! He was furious when the writer refused to acknowledge this item in his score.

PSYCHOLOGICAL DIFFERENTIATION

(Hypothesis 4)

The null hypothesis predicted no differential scoring amongst the groups on the criterion instrument, the Embedded Figures test.

RESULTS:

TABLE 3.41

Analysis of Variance on the EFT, Combined Groups Comparison

Source:	df	ss	ms	F	p
Between Groups	3	11538479.52	3846159.84	19.72	<.001
Within groups	216	42115604.59	194979.65		
Total	219	53654084.11			

TABLE 3.42

Means, Standard Deviations, and t-tests for the EFT, shown in Seconds

Group 1:	N	Mean	S.D.	t	p
PDs	50	922.12	506.41	PD/AB 5.521	<.001
PTs	30	470.25	300.69	PD/CR 2.380	<.01
ABs	30	382.14	221.39	PD/PT 4.434	<.001
CRs	30	656.82	439.55		
Group 2:					
PDs	50	1056.71	504.80	PD/AB 6.917	<.001
PTs	30	714.73	457.38	PD/CR 3.595	<.001
ABs	30	382.14	221.39	PD/PT 3.036	<.005
CRs	30	656.82	439.55		
Combined Groups:					
PDs	100	989.41	507.57	PD/AB 6.360	<.001
PTs	60	592.49	403.06	PD/CR 3.240	<.001
ABs	30	382.14	221.39	PD/PT 5.157	<.001
CRs	30	656.82	439.55		

From Table 3.41 it was apparent that there were significant differences amongst the groups in performance on the EFT; accordingly, the null hypothesis was rejected.

Table 3.42 indicated that findings were in the direction predicted by the experimental hypothesis, problem drinkers being significantly more field dependent by one-tailed test

than psychiatric patients, criminals, and abstainers in all three comparisons. Since Witkin and colleagues (1954; 1962) link field dependence with emotional immaturity, impulse control difficulties, diminished ability to cope actively with difficult life situations, and inadequate structuring or differentiation of the external environment and of one's own psychological processes, a continuum of field dependence greatest in drinkers, through patients and criminals with their greater personality diversity and variety of diagnoses, to the normally functioning abstainers would have been expected, and results substantiate this contention.

There was no significant difference between Group 1 versus Group 2 drinkers, but surprisingly, the two patient groups differed significantly from each other, Group 2 being more field dependent than Group 1. However, Group 1 drinkers were significantly more field dependent than Group 2 patients, and Group 2 drinkers significantly more field dependent than Group 1 patients, so that in five of five drinker-patient comparisons on the EFT, drinkers were significantly more field dependent (see Appendix, Tables 4.137 - 4.140).

DISCUSSION:

The above results confirm those of investigations elsewhere, though drinkers and controls in this study tended to obtain scores much less elevated than those of their U.S.A. counterparts. Studies by Burdick (1969), Rhodes and Yorioka (1968) and Rhodes et al (1968) show drinkers' EFT scores ranging from 1024.6 to 1598 and controls' from 1010 to 1254, while Karp et al (1965b) have studies in which drinkers' means reached 1887.90. Means in all studies vary widely, however; subjects in N.Z. may well be more field independent than their counterparts elsewhere, or individual experimenters' differences in timing, or handling subjects' problems with this quite difficult and frustrating test, may be responsible for these differences. The important point is that in all comparisons for a single experimenter, pathological drinkers are the more field dependent subjects.

Part of the aim of this study was to investigate

relationships between field dependence and intelligence, age, education, and years of pathological drinking, since these have not been adequately taken into consideration in studies of field dependence in drinkers and patients. Karp and Konstadt (1965) point out that while longitudinal studies are required for conclusive support for the "predisposition" rather than the "consequence" hypothesis, establishing that field dependence does not increase over years of excessive drinking and that young drinkers are more field dependent than other young subjects provides at least tentative support for field dependence as a predisposing personality variable. Witkin and associates (1954, pp.85-86; 1962, pp.368-379; 1967) regard field dependence as a relatively stable personality dimension, apart from its tendency to increase with advancing years (Schwartz and Karp, 1967) though, as was apparent from the literature review, other authors have emphasized its possible relationship to cognitive impairment resulting from years of excessive imbibition, not regarding it as necessarily a mode of personality functioning at all. To clarify these issues, EFT scoring patterns were studied in relation to age of onset of alcohol abuse, and number of years of abuse.

Early/Middle/Late onset comparisons (see Appendix, Tables 4.142 - 4.143): If number of years of alcohol abuse exert an influence on psychological differentiation via cognitive impairment, the Early group with significantly more years of chronic inebriety behind it should have produced the most field dependent scores. However, the F-test indicated that there were no significant differences amongst the three groups, and examination of the means obtained showed that the Early group's score was actually the least field dependent of the three. There were no significant differences in length of education or intelligence as assessed by the Massey test of verbal ability amongst these groups (see Appendix, Tables 4.35, 4.36, 4.44, and 4.45), though the Early starters were significantly younger (see Appendix, Table 4.27).

Youngest/Oldest subjects comparisons (see Appendix, Tables 4.144 - 4.148): In all comparisons between younger versus older subjects the former were more field independent, though

significantly so only in the two groups with the widest age range, the drinkers and abstainers, who were matched for age. Between-group comparisons revealed that the older drinkers were significantly more field dependent than any of the other older subjects, and younger drinkers were significantly more field dependent than any of the other younger subjects. These findings that field dependence/independence can be influenced by age but that even young problem drinkers are more field dependent than other young subjects, confirm the work of Karp and Konstadt (1965) whose young alcoholics (with 8.85 years of abuse) were more field independent than old ones (25.25 years of abuse) but both of whose alcoholic groups were more field dependent than non-alcoholic controls on the EFT/RFT/BAT perceptual index. In the present study the younger drinkers had been abusing alcohol for 8.84 years and the older drinkers for 16.18 years (see Appendix, Table 4.57).

Young Early/Old Early/Old Late starter comparisons (see Appendix, Tables 4.149 - 4.150): The same reasoning applied here as in the Early/Middle/Late onset comparison; if cognitive impairment or any other sequelae of chronic inebriety influence psychological differentiation, the Old Early starters with 26.78 years of alcohol abuse should have obtained the most field dependent scores relative to Young Early starters (8.62 years of abuse) and Old Late starters (5.84 years of abuse). In fact they did not, the F-test indicating that there were no significant differences amongst the three groups. Young Early and Old Early starters obtained almost identical means on the EFT, with Old Late starters having the most field dependent score. Since this Old Late group was older than both other groups it would seem to confirm the impression that when variables other than personality differentiation influence EFT scores, age, and not years of chronic inebriety, is the crucial variable.

Correlations (see Appendix, Table 4.141) indicated that the more intelligent the subject, the more field independent he tended to be, though this relationship was significant only in drinkers and patients. Tempering acceptance of this at

its face value, however, is the finding that the Young Early starters, with greater field independence, obtained very significantly lower intelligence test scores than did the Old Early or Old Late starters and again, the 25 youngest drinkers with their significantly greater field independence were significantly less intelligent on the test than the 25 oldest drinkers (see Appendix, Tables 4.38 & 4.43). The only support for an important relationship between EFT scores and intelligence derives from the correlation, therefore. The most reasonable inference might be that while intelligence clearly would have some influence over EFT scores it is not as important as age and ego differentiation in determining field dependent patterns of scoring. Age and EFT correlations were all in the expected direction, youth being significantly associated with greater field independence (though not significantly so in criminals). Lower levels of education were significantly associated with field dependence but only in patients and abstainers. Number of years of alcohol abuse was, as expected, not significantly related to scores. It would seem that an intelligence decline factor may be operating in the case of the older subjects; as the EFT is a timed test, the problem may be one of a slowing of perceptual processes.

It would seem unequivocal that problem drinkers are field dependent personalities, relative to psychiatric patients, criminals, and abstainers, and that field dependence as measured by the EFT is a personality characteristic subject to some fluctuation with age but not too importantly related to verbal intelligence or level of education - though undoubtedly influenced by these - and completely uninfluenced by years of chronic inebriety. No matter which way the data were manipulated, even those drinkers with greater field independence were still less field independent than any other group of subjects. No findings in this N.Z. study supported the concept of limited psychological differentiation as a consequence of pathological drinking; it therefore seems a reasonable inference that it antedates such drinking and possibly predisposes to it.

Witkin et al (1962) and Karp (1963) hold that field independent functioning reflects ability to differentiate parts of the field from one another, to analyse deliberately the complex EFT figure while eliminating distracting, embedding aspects of the field as one proceeds to locate the simple figure in the complex one. Only three of 100 drinkers clearly verbalized attempts to proceed in this analytical fashion (though there may well have been others, who simply did not verbalize their approach), remarks exemplifying this approach being, "The figure [simple figure] has two horizontal lines, therefore one must use these horizontal lines [on the complex figure] as they are the only ones there," or, "Well, this shape has a vertical line here and a horizontal one there, so it would have to be in this area." The majority of drinkers, instead, waited for a solution to occur to them serendipitously, rather than structuring the situation and actively searching for the simple figure by elimination. They would say, "Here it is," or, "I wonder where it's hiding," and emit squeals of surprise and pleasure when the frustratingly elusive figure made its appearance. In many cases, also, subjects would say they could see the correct area for the simple figure, but when trying to trace it they seemed to be drawn inexorably down the wrong track by the lines, as if they could not resist the "pull" of certain geometrical arrangements in the figure. They knew this and could say, "I know that's wrong," but would be unable to correct the perseverative tendency, as if the lines drew their finger and eye into an inextricable tangle. It seemed that in many cases the figure was visible to them until tracing began, but then became embedded in the ineluctable pull of the field. The approach of the abstainers was predominantly analytical, with much verbalizing about line arrangements of the simple figure and corresponding line arrangements in the complex one. By far the majority of them enjoyed the test, while the majority of drinkers found it quite nightmarish.

One or two drinkers revealed a sudden interruption of logical thought processes on this test. One man began looking for the previous card's simple figure in the next card's

complex one. Another man suddenly traced the simple figure on the table instead of on the complex figure, and could not correct this immediately when asked to do so, although he had done the three preceding cards correctly.

EFT performance by the drinkers was at times extraordinary as subjects tried to distort the "reality" of the complex figure to make it conform to where they thought they might find the simple figure. Typical remarks were: No.1 - "I see where I went wrong; I was trying to put in a straight line [on the simple figure] where it wasn't." No.42 - "I would have to combine these two middle squares [no reason why at all] and then it [the stem of the 'T' shape] would be too wide." He did not think of omitting one of the middle squares, which would have solved his problem. No.14 - "This line shouldn't be there," and again, "If that line wasn't there I could find it." No.35 - "If I blot this one out [a line], the shape will be there" (but, of course, this meant arbitrarily altering the complex figure to accommodate the simple one). No.10 - "If I could put that line over there, this would work out." No.48 - "It must be in that corner even though that [a line] is in the wrong way." No.12 - "Turned upside down [which he knew wasn't allowed] I could find it quite easily." No.19 - "It's down in that bottom corner there, except that the line there goes the wrong way." No.8 - "It's over there, except that the straight line [on the simple figure] isn't there."

These quoted comments seem to mirror the drinkers' approach to difficult life situations. Rather than actively analysing these and making some attempt to realistically cope, the habitual response is the ostrich-like head in the sand in the hope that once the drinker emerges from his alcoholic haze, the reality he hoped to escape from will somehow have magically changed. Alcohol is used to change the reality of the unpleasant outer situation by drugging ability to perceive it - rather than making some attempt to tap inner resources to realistically interact with the frustrating or threatening reality. The outer situation is thus arbitrarily distorted

to accommodate the drinker's need. It is surely this defect in reality testing which makes it possible for the drinker to achieve the terminal state of problem drinking, popularized as "reaching rock bottom."

AGGRESSION

(Hypothesis 5)

The null hypothesis predicted no differential scoring amongst the groups on the criterion instruments used to assess aggression: HDHQ and Stereoscope.

RESULTS:

TABLE 3.43

Analysis of Variance on the HDHQ, Combined Groups Comparison

Source:	df	ss	ms	F	p
Between Groups	3	2650.98	883.66	15.68	<.001
Within groups	216	12167.24	56.32		
Total	219	14818.22			

TABLE 3.44

Means, Standard Deviations, and t-tests for the HDHQ

Group 1:	N	Mean	S.D.	t	p
PDs	50	23.14	8.32	PD/AB 6.712	<.001
PTs	30	19.43	6.39	PD/CR 1.902	<.05
ABs	30	12.00	4.66	PD/PT 2.093	<.025
CRs	30	19.40	8.81		
Group 2:					
PDs	50	22.20	8.23	PD/AB 6.204	<.001
PTs	30	19.83	6.82	PD/CR 1.434	<.10 p>.05
ABs	30	12.00	4.66	PD/PT 1.323	<.10 p>.05
CRs	30	19.40	8.81		
Combined Groups:					
PDs	100	22.67	8.25	PD/AB 6.754	<.001
PTs	60	19.63	6.56	PD/CR 1.873	<.05
ABs	30	12.00	4.66	PD/PT 2.425	<.01
CRs	30	19.40	8.81		

TABLE 3.45

Analysis of Variance on the Stereoscope, Combined Groups Comparison

Source:	df	ss	ms	F	p
Between groups	3	930.92	310.30	11.17	<.001
Within groups	216	5996.60	27.76		
Total	219	6927.52			

TABLE 3.46

Means, Standard Deviations, and t-tests for Number of Aggressive Stereograms reported on the Stereoscope

Group 1:	N	Mean	S.D.	t	p
PDs	50	13.18	6.49	PD/AB 4.431	<.001
PTs	30	8.43	3.42	PD/CR 0.764	N.S.
ABs	30	7.36	3.93	PD/PT 3.700	<.001
CRs	30	12.10	5.41		
Group 2:					
PDs	50	11.92	5.88	PD/AB 3.760	<.001
PTs	30	9.33	4.32	PD/CR 0.136	N.S.
ABs	30	7.36	3.93	PD/PT 2.090	<.025
CRs	30	12.10	5.41		
Combined Groups:					
PDs	100	12.55	6.19	PD/AB 4.320	<.001
PTs	60	8.88	3.89	PD/CR 0.358	N.S.
ABs	30	7.36	3.93	PD/PT 4.118	<.001
CRs	30	12.10	5.41		

Tables 3.43 and 3.45 indicated that there were significant differences amongst the groups on both HDHQ and Stereoscope. The null hypothesis was accordingly rejected.

Table 3.44 showed that problem drinkers' scores on the HDHQ were elevated above those of the other groups. Drinkers obtained significantly higher hostility scores than patients, abstainers, and criminals in Group 1 and Combined Groups, with differences in the predicted direction just failing to reach the 5% level of significance by one-tailed test in Group 2 for drinkers versus patients and drinkers versus criminals. Table 3.46 showed that on the Stereoscope problem drinkers reported significantly more aggressive stereograms than did patients and abstainers in all three comparisons, though not differing significantly from criminals in any comparison.

There were no significant differences on either measure between Group 1 versus 2 drinkers, or Group 1 versus 2 patients (see Appendix, Tables 4.155 - 4.156). On the Stereoscope, Group 1 drinkers obtained significantly higher scores than Group 2 patients, and Group 2 drinkers significantly higher scores than Group 1 patients, so that in five of five comparisons with this measure drinkers were significantly more aggressive than patients, but on the HDHQ Group 1 drinkers obtained significantly higher scores than Group 2 patients

while the difference in the same direction between Group 2 drinkers and Group 1 patients just failed to reach the 5% level of significance, so that in only three of five comparisons were drinkers more hostile than patients on this measure (see Appendix, Tables 4.157 - 4.158).

DISCUSSION:

In general the results support those of others who have used the HDHQ on U.K. samples. Psychotics and character disorders (psychopaths) score about 19-28 (Foulds, 1965, p.94; 1967; 1968); neurotics about 16-19 (Foulds, 1965, p.94; Hope, cited by Phillip, 1968; Vinoda, 1966; Phillip, 1968), and normals about 12-15 (Foulds, 1965, p.94; Hope, cited by Phillip, 1968; Phillip, 1968; Vinoda, 1966). In studies by Hassall and Foulds (1968), Kraft and Wijesinghe (1970), Ritson (1971), and Walton (1968), alcoholics have scored 27.6, 25.3, 18.9 (in-patients) and 20.5 (out-patients), and 20.6 respectively (and 20.7 in the writer's Pilot Study, with Pilot Study normals scoring similarly to abstainers in the present study: 10.41 and 12.00 respectively). Problem drinkers would thus seem to score more within the range of the character disorders than within the neurotics' range of 16-19.

The Stereoscope appears to have not so far been used on a problem drinking or psychiatric patient population, so far as the writer is aware, and so there are no available comparative studies.

On theoretical grounds it was expected that elevated hostility scores would be associated not just with experienced aggressiveness but a tendency to act it out. In a comparison of scores of drinkers and patients with and without criminal records, the finding was that arrested subjects in both groups tended to gain significantly higher hostility scores on the HDHQ, compared with those never arrested, though only arrested drinkers (not arrested patients) gained significantly higher Stereoscope scores. Drinkers with a criminal record were only non-significantly more aggressive than patients with a criminal record, on the HDHQ, though significantly more aggressive on the Stereoscope (see Appendix, Tables 4.159 - 4.162).

Taken in conjunction with the findings in Table 3.46 that drinkers did not differ from criminals in report of violent stereograms, this may indicate greater usefulness of the Stereoscope in assessing tendencies toward acting out of aggressiveness.

Correlations (see Appendix, Tables 4.163 - 4.164) indicated a significant association between augmented HDHQ hostility and number of arrests for serious crimes, in drinkers, and this relationship bordered on significance with the Stereoscope in drinkers and reached it in criminals. (In their 1968 study Hassall and Foulds reported a non-significant correlation between HDHQ scores and police convictions in problem drinkers, but convicted drinkers had higher scores). Surprisingly, correlations between HDHQ and Stereoscope did not quite reach acceptable significance levels, but the two groups, which on theoretical grounds might be expected to demonstrate less defensiveness over admitting socially undesirable feelings - drinkers and criminals - were those producing higher positive correlations, suggesting a possibility that patients and abstainers might have distorted HDHQ results, or reported fewer violent stereograms than were actually seen, because of their greater need to conform to socially desirable attitudes. Not unexpectedly, there was a significant inverse correlation between the HDHQ and the So scale for all but abstainers, and between the Stereoscope and the So scale for drinkers, under-socialization being associated with greater hostility; for criminals the correlation was not significant but in the same direction while for abstainers and patients it was positive (but not significant) between the Stereoscope and the So scale.

Although Hassall and Foulds (1968) reported that significant correlations between age and HDHQ scores were not usually found, in the present study elevated HDHQ scores were significantly associated with youth, in drinkers and criminals, and the same relationship obtained on the Stereoscope except for patients. Superior verbal ability was significantly associated with lower hostility only on the HDHQ, in drinkers and criminals. Both HDHQ and Stereoscope correlated signif-

icantly with age of onset of alcohol abuse, elevated hostility being associated with earlier onset, but not with number of years of abuse. Higher HDHQ scores were significantly associated with shorter imprisonment in the criminals.

Early/Middle/Late onset comparisons (see Appendix, Tables 4.165 - 4.167): Foulds and Hassall (1969) have endeavoured to link early onset of problem drinking with personality disorder, as opposed to neurosis, and both they and Rosenberg (1969a) consider that extreme difficulties in relating to others - excessive dependency, withdrawal, or hostility - are indicative of personality disorder. The expectation in the present study, therefore, was that the Early starters would obtain higher hostility scores on both measures, relative to Late starters. The F-tests revealed that there were significant differences amongst the three groups. As expected, the Early starters obtained the highest scores on both measures, with drinkers of Late onset gaining significantly lower scores than both Early and Middle onset drinkers on the Stereoscope and significantly lower scores than Early onset drinkers on the HDHQ. The Early onset group, of course, had been abusing alcohol for significantly longer than the other groups (see Appendix, Table 4.54), so that from these comparisons the possible effects of chronic inebriety cannot be excluded.

Youngest/Oldest subjects comparisons (see Appendix, Tables 4.168 - 4.174): F-tests for the four groups of youngest and four groups of oldest subjects were significant, though only just, in the case of the latter. It was apparent from the tables that all younger subjects gained higher hostility scores on both measures than their older counterparts, but only in the case of drinkers on the HDHQ and drinkers and abstainers on the Stereoscope were the younger subjects significantly more hostile. Between-group comparisons indicated that younger drinkers were significantly more hostile than all other young subjects on the HDHQ, while on the Stereoscope they were significantly more hostile than patients and abstainers but did not differ significantly from young criminals. Older drinkers obtained significantly higher hostility scores than older abstainers on both measures, with

the difference in the same direction just failing to reach the 5% level of significance for drinkers versus criminals on the HDHQ, though on both measures drinkers always had the highest hostility scores with one exception - older criminals obtained a non-significantly higher Stereoscope score than older drinkers. The failure to find significant differences between old drinkers and old patients may reflect the former's more neurotic-like personality structure.

Phillip (1973) reported a mean of 14.98 for a normative sample of individuals between the ages of 20 and 29, and one of 11.61 for the age-group 50-59, on the HDHQ, so there may be some moderate tendency for younger normals to obtain higher scores on this scale (though numbers in Phillip's 50-59 group were small). The younger abstainers in this study obtained a mean of 12.20 and the older ones 11.80, not very different from Phillip's (1973) U.K. norms, while the younger and older drinkers obtained means of 26.72 and 20.84 respectively, well beyond Phillip's means. Hassall and Foulds (1968) considered age and hostility scores to probably be unrelated, but the drinkers in their study were all less than 30 years of age and the average age was about 25, so it would seem unlikely that their group covered a sufficiently wide age range against which to test a correlation. The score of their drinkers, however, was 27.6, which is much higher than that of the older drinkers in the N.Z. study but almost identical to the younger drinkers (26.7).

Young Early/Old Early/Old Late starters (see Appendix, Tables 4.175 - 4.177): The reasoning behind directional expectations here was similar to that in the Early/Middle/Late onset comparisons. If personality disorder is related to early age of onset of problem drinking, and if excessive hostility is associated with personality disorder, then both Young Early and Old Early starters should have obtained higher hostility scores than Old Late starters, while if number of years of alcohol abuse were an important determinant of elevated scores (the hostility presumably arising from frustration of hopes and expectations, experiences of failure in trying to control inebriety, general personality deterioration, and so on) the

Old Early starters who had been chronic inebriates for 26.78 years should have obtained higher scores than the Young Early starters whose years of abuse averaged only 8.62. Results indicated that on the HDHQ, Young Early starters were significantly more aggressive than both Old Early and Old Late starters, as expected, but Old Early starters obtained only non-significantly higher hostility scores than Old Lates; on the Stereoscope, both Young Early and Old Early starters obtained higher scores than Old Late starters, but the scores of the early-starting groups were virtually identical. There is thus no support for the view that high levels of hostility are associated with many years of alcohol abuse; rather, high levels tended to be found in the Young Early starters - at least on the HDHQ, and on the Stereoscope this group was as aggressive as those of longer history of abuse. On both measures, the later the age of onset, the lower was the level of hostility. Being older per se was no guarantor of low scores, however, since the Old Early starters had higher hostility levels than the similarly aged Old Late starters.

The differences found here between Young Early, Old Early, and Old Late starters parallel those reported by Foulds and Hassall (1969) with a U.K. sample. Although significance levels in their study cannot be read, since they divided the HDHQ scale into intropunitive and extrapunitive sections and calculated significance levels for these separately, whole-scale scores indicate considerable similarity with the N.Z. study. Their Young Early starters scored about 28, Old Early starters about 26, and Old Late starters about 18, while scores in the N.Z. study were 29.7, 22.6, and 18.6 respectively. The similarity in results between the two studies argues cogently for the validity of age of onset divisions in studying personality factors in problem drinking - at least with respect to hostility.

The results of this study of aggression in problem drinkers support those studies cited in the review of the literature which found augmented aggression in drinkers, and do not support those few which reported drinkers to obtain low scores on hostility (e.g. Hoffmann, 1970; Hoffmann and

Nelson, 1971). By far the majority of studies have found augmented hostility, though only a minority have compared drinkers with psychiatric patients on this variable. The longitudinal studies of Jones (1968), McCord et al (1960 p.139), McCord and McCord (1962, pp. 427-428) and Robins et al (1962, pp. 407-409), which found high levels of hostility with poor control of it in pre-alcoholics, and studies reporting the same findings with young student heavy drinkers (Barron, 1971; Kalin, 1972b, p.231; Williams, 1967b; 1968), were supported by the results of the N.Z. study, as were retrospective reports of drinkers about hostility in childhood (Calahan and Room, 1974, pp. 112-116; Goodwin et al, 1975).

In further consideration of the hypothesis, numbers of subjects involved in assaults were compared. 15% of the total problem drinker population had been arrested for assault, having committed some 30 assaults altogether, while 8% had committed a number that had gone undetected and 3% had been arrested for carrying or presenting offensive weapons. Only 3% of the patients had been arrested for assault, having committed only 2. 33% of the criminal group had been arrested for some 22 assaults while 3% had been arrested for carrying an offensive weapon. Significantly more drinkers than patients, and significantly more criminals than drinkers, had been arrested for assault (see Appendix, Table 4.178). Although the criminals had clearly committed many such offences - though fewer numbers of assaults than the drinkers - they did not give the impression of being chronically angry people, while the drinkers did. The criminals' assaults seemed usually to have been committed in the context of robbery, with the robbery being the basic aim, whereas the drinkers were angry people who started a fight for the sake of doing some damage, of releasing their ill-controlled anger against the nearest person.

Many drinkers verbalized intense feelings of hostility, especially toward women. No.85 changed women frequently on the grounds that "Women want to talk in bed and then pass on the information ... they're all nosy bitches." No.22, who picked up a different woman every night, said with intense hatred, "All the trouble in the world comes from women."

No.28 claimed to have left his mark on all his sisters, one of them having been attacked by him with a pair of pliers, and Nos.67, 68, and 69 admitted to frequently assaulting their wives. Nos.23 and 68 had assaulted their fathers, as teenagers, and Nos.23 and 76 had been amateur boxers. No.19 had been forced to leave school when he punched a teacher who he considered was unfairly treating him and complained that his temper had caused his dismissal from many jobs, while No.40 also complained of very poor temper control and No.32 said he was violent when drunk. No.14 remarked, "If I saw a man and a deer on a hill I'd shoot the man, figuratively speaking." No.63 was a painter and while painting the roof of an hotel in Rotorua he accidentally sprayed aluminium paint into the hotel's thermal pool. Although he suspected the spray might severly burn anyone who swam there and later sun-bathed, he and his mate watched with considerable amusement while an elderly hotel guest swam, sunbathed and, according to the subject, was badly burned.

Subjects commented on their feelings of anger in such terms as, "I'm a killer when I don't like someone ... once I hate, I hate" (No.66). No.78 described his feelings when intoxicated as "Smashed out of my eye balls ... smashed out of my brain." No.79 said that if he got annoyed, "To hell with everyone - I'll go to the pub." No.45 commented, "I'm always out to hurt others, never help them ... people would do anything to me if I didn't let fly at them." When his daughter complained of being ill-treated in her foster-home he charged round to the Child Welfare office and "threatened to punch everyone's heads in" if they didn't do something about it. He took no realistic steps to protect her, however.

There were marked differences in verbal response to the Stereoscope situation amongst the groups. The drinkers were markedly blatant in their descriptions of the violence they saw, on the whole, though there was considerable variability from subject to subject, but responses were very often quite crude - though an accurate interpretation of what the stereogram depicted. For example, on card 5, which depicts two persons wrestling, very few drinkers failed to report this

and a quite typical response was, "A guy throttling another guy" (No.92), whereas psychiatric patients tended to defensively distort the situation while clearly having seen the violent stereogram - "An advertisement for 'Fung-chung' - Japanese self-defence" (No.8). Again, drinker No.59 responded to card 18, which depicted a pneumatic drill on one side and a man holding a knife to another's throat on the other side, "Guy with sword in another's neck," while patient No.47 responded, "Man shearing a sheep." This defensiveness did appear in some drinkers, e.g. No.89, responded to the same card, "Bloke destroying a statue with a pneumatic drill." Card 15 depicts on one side a man sawing with his knee on a bench, and on the other side a man sawing or shooting a body. Drinkers tended to say quite blandly, "A man sawing up another man " (No.42), while patients very infrequently reported seeing the body or made defensive verbalizations such as, "Chap's got his knee on a park bench - no-one else there" (No.31), or, "A man leaping onto another man's body with glee " (No.16), or, "Man sawing and his helper has fallen down " (No.8). In general the abstainers were the group most disturbed by the aggressive stereograms. It was not uncommon for this group to report only the most obvious of the aggressive stereograms, such as the wrestling one mentioned above, while evidencing acute discomfort throughout the test. One man exploded into violent bouts of coughing the moment the stereoscope was activated, while another blinked so compulsively that he would have prevented himself from seeing any of the cards if the writer had not observed him very carefully and switched on the stereoscope immediately following a blink. At conclusion of the interview, when subjects were shown the whole series of stereograms, it was not uncommon for the abstainers to actually deny that these were the same cards they had seen in the stereoscope, stating that there had been no cards depicting guns, knives, or people being attacked. This group was also conspicuously lacking in interest about their performance on the test, whereas the drinkers and patients found the test results quite fascinating and were anxious to know whether they were below or above average in perceiving aggressive stereograms. Abstainers appeared to

have no tolerance for any implications of aggression in themselves at all.

These differential ways of responding in a stereoscopic situation would make a fascinating study in themselves, but unfortunately the writer did not have the time to pursue this aspect of response - defensive distortion or denial versus comfortable acceptance of bald violence - but would suggest that some such approach would be well worth following up.

FUTURE TIME PERSPECTIVE

(Hypothesis 6)

The null hypothesis predicted no differential scoring amongst the groups on either of the criterion instruments used for assessing length of future time perspective: FTP1 (spontaneous provision of personal events) and FTP2 (selection from a provided list of future personal events).

RESULTS:

TABLE 3.47

Analysis of Variance for FTP1, Combined Groups Comparison

Source:	df	ss	ms	F	p
Between groups	3	627.17	209.05	13.27	<.001
Within groups	216	3400.71	15.74		
Total	219	4027.88			

TABLE 3.48

Means, Standard Deviations, and t-tests for FTP1, shown in Years

Group 1:	N	Mean	S.D.	t	p
PDs	50	2.51	3.31	PD/AB 5.960	<.001
PTs	30	4.30	3.37	PD/CR 2.326	<.025
ABs	30	7.40	3.93	PD/PT 2.332	<.025
CRs	30	4.72	5.19		
Group 2:					
PDs	50	2.85	3.10	PD/AB 5.732	<.001
PTs	30	6.46	5.09	PD/CR 2.016	<.025
ABs	30	7.40	3.93	PD/PT 3.940	<.001
CRs	30	4.72	5.19		
Combined Groups:					
PDs	100	2.68	3.19	PD/AB 6.713	<.001
PTs	60	5.38	4.42	PD/CR 2.615	<.01
ABs	30	7.40	3.93	PD/PT 4.469	<.001
CRs	30	4.72	5.19		

TABLE 3.49

Analysis of Variance for FTP2, Combined Groups Comparison

Source:	df	ss	ms	F	p
Between groups	3	855.46	285.15	9.38	<.001
Within groups	216	6560.31	30.37		
Total	219	7415.77			

TABLE 3.50

Means, Standard Deviations, and t-tests for FTP2, shown in Years

Group 1:	N	Mean	S.D.	t	p
PDs	50	5.61	4.67	PD/AB 4.547	<.001
PTs	30	8.15	4.70	PD/CR 2.197	<.025
ABs	30	11.57	7.04	PD/PT 2.341	<.025
CRs	30	8.19	5.71		
Group 2:					
PDs	50	6.10	5.43	PD/AB 3.890	<.001
PTs	30	9.26	5.84	PD/CR 1.632	<.10 p>.05
ABs	30	11.57	7.04	PD/PT 2.443	<.01
CRs	30	8.19	5.71		
Combined Groups:					
PDs	100	5.86	5.04	PD/AB 4.930	<.001
PTs	60	8.70	5.29	PD/CR 2.153	<.025
ABs	30	11.57	7.04	PD/PT 3.388	<.001
CRs	30	8.19	5.71		

Tables 3.47 and 3.49 indicated that there were significant differences amongst the groups on both FTP1 and FTP2. The null hypothesis was therefore rejected.

Table 3.48 revealed that problem drinkers were discriminated from patients, abstainers, and criminals on FTP1 in the predicted direction, obtaining a significantly shorter future perspective score in every comparison. From Table 3.50 it can be seen that the predicted direction of scoring was again supported, problem drinkers obtaining a significantly shorter future perspective on FTP2 relative to patients and abstainers in all three comparisons, and relative to criminals in Group 1 and Combined Groups with the Group 2 comparison just failing to achieve significance at the 5% level by one-tailed test. As the alternative hypothesis predicted, drinkers did seem to experience greater difficulty than other subject groups in extending personal phantasy expectations into a distant future. In all comparisons on both measures, abstainers achieved the longest future perspectives, while patients and criminals seemed not to differ much from each other on either measure.

There were no significant differences between Group 1 versus Group 2 drinkers on either measure, or between Group 1

versus Group 2 patients on FTP2, but the difference between Group 1 and 2 patients on FTP1 fell just short of significance at the 5% level in favour of the latter's obtaining a longer extension score. In comparisons of Group 1 drinkers with Group 2 patients, and Group 2 drinkers with Group 1 patients, drinkers obtained significantly shorter perspective scores on both measures, so that in five of five comparisons with both measures they were significantly less future-orientated than were patients (see Appendix, Tables 4.185 - 4.188).

TABLE 3.51

Analysis of Variance for Number of FTP1 Responses, Combined Groups Comparison

Source:	df	ss	ms	F	p
Between groups	3	93.48	31.16	6.90	<.01
Within groups	216	974.67	4.51		
Total	219	1068.15			

TABLE 3.52

Means, Standard Deviations, and t-tests for Number of Responses provided for FTP1

Group 1:	N	Mean	S.D.	t	p
PDs	50	3.76	2.28	PD/AB 2.685	<.01
PTs	30	3.66	1.95	PD/CR 1.760	<.10 p>.05
ABs	30	5.16	2.24	PD/PT 0.186	N.S.
CRs	30	4.66	2.13		
Group 2:					
PDs	50	3.06	2.30	PD/AB 3.993	<.001
PTs	30	3.63	1.40	PD/CR 3.097	<.01
ABs	30	5.16	2.24	PD/PT 1.229	N.S.
CRs	30	4.66	2.13		
Combined Groups:					
PDs	100	3.41	2.30	PD/AB 3.676	<.001
PTs	60	3.65	1.68	PD/CR 2.656	<.01
ABs	30	5.16	2.24	PD/PT 0.700	N.S.
CRs	30	4.66	2.13		

Table 3.51 indicated that there were significant differences amongst the groups in the number of responses supplied. From Table 3.52 it can be seen that no groups supplied the ten responses requested, with drinkers and patients apparently experiencing the greatest difficulties here. It could perhaps be argued that those groups able to

provide a greater number of responses were thereby increasing their chances of obtaining a longer future perspective, but this would not account for the significant differences in perspective obtained in Table 3.48 between drinkers and patients, both of whom supplied roughly the same number of responses, and inspection of individual subjects' responses revealed that one man might supply three responses all estimated to take place in several years' time whereas another man might supply the full ten responses but estimate them all as likely to occur within the next year. Why the groups experienced such difficulty in supplying ten responses is not clear; Smart (1968b), who used this approach with alcoholics and moderate drinkers, evidently managed to achieve ten responses from every subject, whereas those in the present study looked aghast at the request. Very typical responses, especially from drinkers, were, "I never look into the future," or, "I live just for the moment." Both drinkers and criminals tended to respond very literally to this test, many commenting that while certain things would definitely happen to them in the future (e.g. death), there was no way of their knowing when these events would occur. Efforts to force them to guess an age often met with considerable resistance, not because they were unwilling to comply but because they seemed unable to detach themselves from the "reality" of the situation and see it almost as a guessing game, an estimate of things as they might be. The fact that the abstainers were able to produce the most responses possibly indicates a greater imaginativeness in projecting the self in phantasy into a personalized future and consequent greater planning for future expectations and consequences, as well as a greater capacity for detachment from the immediate situation instead of being bound to things as they most likely would be rather than as they might be. Several drinkers, for instance, after having said reluctantly that they might be, say, seventy when they died, commented that they did not like being so specific about something so dreaded - as if estimating a date might magically influence fate to dispose of them on that date! Intelligence seemed to play a moderate role in influencing number of responses supplied, though correlations between Massey test scores and number of responses were significant only for drinkers (see

Appendix, Table 4.189). Age, and years of education, were not significantly related to ease of responding. Length of incarceration in criminals was calculated on the offchance that their significantly longer institutionalization might have influenced performance in direction of reduction of responses, but the non-significant correlation suggested a moderate trend in the opposite direction..

DISCUSSION:

It is difficult to compare results of this study with those elsewhere, since most investigators used somewhat different methods of assessing extension. Smart (1968b) used the same FTP1 procedure as the writer, but obtained a median extension of 5 years for problem drinkers and 22 years for moderate drinkers. While 5 years does not differ so markedly from the writer's 2.51 years in Group 1 and 2.85 in Group 2, the normals' mean of 22 years is way beyond that of the abstainers in this study. Scores reported by Foulks and Webb (1970) with a Time Reference inventory are most similar to those here: 11 years for normals, 3.7 years for depressives (who probably largely correspond to the writer's neurotics), and 2.7 years for the drinkers. However, in all studies problem drinkers have obtained the lowest scores relative to other groups, regardless of method used (Foulks and Webb, 1970; Imber et al, 1971; Smart, 1968b).

The question arises whether ability to extend oneself into a personalized distant future is importantly influenced by age, intelligence, education, or, in the case of the drinkers, by possible cognitive impairment after years of alcohol abuse. On commonsense grounds an association of longer perspective with superior intelligence, education or youth might be expected, although investigations generally have failed to reveal important relationships in these areas. Correlations (see Appendix, Tables 4.190 - 4.191) indicated that only in the case of the criminals was superior education significantly correlated with longer perspective, on FTP1, though youth was significantly associated with longer perspective in drinkers and abstainers. Verbal ability test scores were not significantly related to either FTP1 or FTP2

performance, nor was length of education significantly associated with FTP2. However, correlations of age with FTP2 were significant for all subjects except patients, youth being associated with longer perspective. FTP2, of course, contained certain age-related social achievements such as age at which marriage might occur, age when child might achieve his greatest success, age when first grand-child might be born, and so on, so that older subjects would naturally show a shorter future time span if they chose to answer those particular items, compared with a younger subject for whom the future has not yet unfolded. Neither age of onset of chronic inebriety nor number of years of inebriety were significantly associated with FTP1 performance, but number of years of inebriety were significantly associated with FTP2 performance, shorter perspective going with a longer period of alcohol abuse - possibly because drinkers with a longer history of abuse tended to be older as well, or because the items relating to family life, which had a greater "pull" for longer extension, would be less relevant for drinkers with some 26 or more years of chronic drunkenness behind them, so that they might have opted for items with less future pull that were more immediately relevant such as "improving physical health" or "having emotional security." Length of imprisonment did not appear to affect criminals' performance significantly, though there was a moderate trend for those imprisoned longer to manifest a shorter perspective on FTP2. As expected, FTP1 and FTP2 correlated significantly together, other than in abstainers.

Early/Middle/Late onset comparisons (see Appendix, Tables 4.192 - 4.194): Perspective scores appeared to be unrelated to age of onset of pathological drinking, the tables indicating that there were no significant differences amongst the three groups on either measure.

Youngest/Oldest subjects comparisons (see Appendix, Tables 4.195 - 4.201): For all subjects on both measures, younger subjects gained longer future time spans compared with older subjects, significantly so in the case of abstainers on FTP1, and drinkers and criminals on FTP2, with significance just

failing to be reached at the 5% level on FTP1 for drinkers. On both measures young problem drinkers gained the shortest perspective scores of any of the younger subjects and the same held true for old drinkers relative to the other older subjects, but these differences were significant only in the case of younger drinkers versus younger abstainers on FTP1; younger drinkers versus younger abstainers and criminals on FTP2; older drinkers versus all other older subjects on FTP1; and older drinkers versus older patients and abstainers on FTP2, with the difference between drinkers and criminals just falling short of significance at the 5% level. An anomaly in these results is that younger drinkers were not significantly distinguished from younger patients; one possible explanation is that young patients in this sample tended to be much more psychiatrically disturbed than the older patients, and there is some evidence that more severe psychopathology is associated with shorter future perspective (e.g. Shybut, 1968). Comparison of perspective scores obtained by all young subjects (Appendix, Table 4.197) with those obtained by their whole-group counterparts (Tables 3.48 and 3.50) revealed that in every group but the patients the younger subjects obtained longer perspectives than the total group of subjects. This would seem to support the explanation offered above, that severity of psychopathology might have influenced performance of the younger patients in direction of shorter time span.

Young Early/Old Early/Old Late starter comparisons (see Appendix, Tables 4.202 - 4.204): The F-test for FTP1 showed that there were no significant differences amongst the groups, time span being uniformly short. On FTP2, however, Young Early starters obtained a significantly longer future time span than Old Early starters, though not differing significantly from Old Late starters, who in turn did not differ significantly from Old Early starters. This latter finding is of importance in suggesting that many years of pathological drinking probably do not influence future time perspective, since Old Late and Old Early starters were not discriminated from each other.

Considering the results from FTP1 and FTP2 as a whole, a reasonable inference might be that shorter future span is characteristic of problem drinkers, when compared with other groups (especially in view of the fact that FTP1, which was not age-related, did not vary amongst the Young Early/Old Early/Old Late groups) and is a relatively stable aspect of personality structure in drinkers. When factors other than personality structure influence future perspective, the crucial variable seems to be age. However, the finding that Old Early starters had a very slightly (non-significantly) shorter future span on FTP2 than had Old Late starters might suggest that years of inebriety could make some contribution to extension scores on this measure. It would seem likely that years of alcohol abuse would in many cases so disrupt familial ties that items with greatest future pull - e.g. son's greatest success in life, having most of the things one wants, grandchildren being born, etc. - may be much less relevant for the drinker with some 26 years of pathological drinking behind him. Smart (1968b) speculated that drinkers may attenuate perceptions of the future because they have every reason to be pessimistic about it, hence gaining shorter perspectives than other groups - though there seems no valid reason why a psychiatric patient, with a firmly entrenched and crippling personality disorder of many years' standing, or a criminal who faces many more years of imprisonment, should be any less pessimistic, yet both these groups gained longer extensions than did drinkers. A more likely possibility is that there is a complex interaction between such factors as the emotional immaturity, poor development of ideation as opposed to action, and limited ability to delay - outlined in the "Constructs" section as possibly underlying short future span - and differential sensitivity to loss amongst the groups. From spontaneous verbalizations by the drinkers it appeared that this group was particularly sensitive to loss, and it is probable that this anxiety would make a contribution to a diminished investment in future goals. Several drinkers commented that they were reluctant to attempt the FTP measures because, "What is the use of wanting things to happen in the future? If I want them and they don't come,

I get upset, and then I only get hurt. It's best not to look forward to anything" (No.54). Remarks of other subjects exemplified how impaled they were in the present moment: "We don't care about the next day or day after, only the moment we're living in" (No.83). As No.84 commented, "I never think about why I do anything - I just do it."

No statistical treatment was applied to subjects' choice of items on FTP2, but percentage treatment makes it clear in which areas groups tended to differ from one another (see Appendix p.393). Abstainers tended to be more family and work orientated, more of them choosing items such as age at retirement, age when first grandchild was born, when youngest child married, when son achieved his greatest success, when obtaining a promotion, etc., while tending to avoid the more unconventional items such as age at which interest in sex might be lost, the last sexual intercourse might occur, and one could no longer have children. Few abstainers thought of changing their jobs or of improving their health or body-build or expecting to have emotional security. Drinkers were less orientated to family life, not many choosing items about birth of grandchildren or great-grandchildren, or marriage of their children, while more of them answered the less conventional questions about loss of interest in sex, last intercourse occurring, and no longer being able to father children. More drinkers thought of moving to another city and more thought of obtaining a divorce - an item no abstainers selected - and more drinkers answered the items on age of winning lots of money, and having emotional security, while avoiding such items as age when mother or father might die; they conspicuously avoided choosing the item on age of their own death, whereas this was frequently chosen by the other three groups. Percentage differences amongst the groups on all items were mostly quite small, however.

SOCIALIZATION

(Hypothesis 7)

The null hypothesis predicted no differential scoring amongst the groups on the criterion instrument assessing socialization, the So scale.

RESULTS:

TABLE 3.53

Analysis of Variance on the So scale, Combined Groups Comparison

Source:	df	ss	ms	F	p
Between Groups	3	3800.60	1266.86	33.17	<.001
Within groups	216	8248.10	38.18		
Total	219	12048.70			

TABLE 3.54

Means, Standard Deviations, and t-tests on the So scale

Group 1:	N	Mean	S.D.	t	p
PDs	50	26.80	6.57	PD/AB 9.464	<.001
PTs	30	33.13	6.04	PD/CR 1.463	<.10 p>.05
ABs	30	39.33	3.92	PD/PT 4.295	<.001
CRs	30	29.06	6.91		
Group 2:					
PDs	50	27.78	6.82	PD/AB 8.457	<.001
PTs	30	32.90	5.65	PD/CR 0.812	N.S.
ABs	30	39.33	3.92	PD/PT 3.456	<.001
CRs	30	29.06	6.91		
Combined Groups:					
PDs	100	27.29	6.68	PD/AB 9.378	<.001
PTs	60	33.01	5.80	PD/CR 1.266	N.S.
ABs	30	39.33	3.92	PD/PT 5.504	<.001
CRs	30	29.06	6.91		

Table 3.53 indicated that there were significant differences amongst the groups on the So scale. The null hypothesis was therefore rejected.

It was apparent from Table 3.54 that results were in the direction predicted by the experimental hypothesis. Problem drinkers obtained significantly lower socialization scores than did patients and abstainers in all three

comparisons, while not being significantly distinguished from criminals other than that in Group 1 the difference fell just short of significance at the 5% level by one-tailed test.

Because the So scale contains two questions on drinking habits, the criticism has been made that such scales might distinguish groups only because of their "alcoholismic" questions (e.g. MacAndrew and Geertsma, 1963). Comparisons amongst the groups were therefore made with these two questions omitted.

TABLE 3.55

Analysis of Variance on the So scale, Group 1 Comparison

Source:	df	ss	ms	F	p
Between Groups	3	2237.11	745.70	20.83	<.001
Within groups	136	4867.88	35.79		
Total	139	7104.99			

TABLE 3.56

Analysis of Variance on the So scale, Group 2 Comparison

Source:	df	ss	ms	F	p
Between Groups	3	1935.76	645.25	17.90	<.001
Within groups	136	4899.92	36.02		
Total	139	6835.68			

TABLE 3.57

Means, Standard Deviations, and t-tests on the So scale after removal of Two Questions on Drinking Habits

Group 1:	N	Mean	S.D.	t	p
PDs	50	28.72	6.54	PD/AB 8.042	<.001
PTs	30	33.63	5.83	PD/CR 1.379	<.10 p>.05
ABs	30	39.33	3.92	PD/PT 3.380	<.001
CRs	30	30.83	6.77		
Group 2:					
PDs	50	29.54	6.71	PD/AB 7.265	<.001
PTs	30	33.33	5.60	PD/CR 0.830	N.S.
ABs	30	39.33	3.92	PD/PT 2.596	<.01
CRs	30	30.83	6.77		

Tables 3.55 and 3.56 indicated that with the two questions on drinking omitted there were still significant differences amongst the groups on the So scale, and Table 3.57 showed that these differences were in the same direction as in Table 3.54, drinkers obtaining significantly lower socialization scores than did patients and abstainers. Criticism of the So scale for its bias in awarding low scores to problem drinkers seems unsubstantiated; these two questions on drinking habits make little difference to ultimate results.

There were no significant differences between Group 1 versus 2 drinkers, or Group 1 versus 2 patients, but Group 1 drinkers obtained significantly lower scores than Group 2 patients, as did Group 2 drinkers when compared with Group 1 patients. Thus, in five of five comparisons with psychiatric patients, drinkers obtained significantly lower So scale scores (see Appendix, Tables 4.207 - 4.210).

DISCUSSION:

These results confirm those with the So scale elsewhere. Pathological drinkers have tended to obtain scores in the range of 24-29 (Allen, 1969; Canter, 1963; Corotto, 1963; Stein et al, 1971), similar to the scores of delinquents (29.0) and prison inmates (27.5) reported by Gough (1957, p.34), subjects with a variety of disciplinary problems (27.98) reported by Gough (1960), and federal reformatory inmates (27.77) reported by Donald (cited by Gough 1960), compared with the 33.7 reported for psychiatric patients (Gough, 1957, p.34) which is almost identical to means in this study, and the 36.74 reported for normals by Gough (1960), similar to the abstainers' scores in this study. These results would appear to substantiate for a N.Z. sample the findings elsewhere with the So scale: that problem drinkers resemble individuals with a variety of antisocial problems, rather than psychiatric patients.

Correlations (see Appendix, Table 4.211) indicated that only in criminals was inferior intelligence test performance associated with a lower socialization score, though the correlation was approaching significance in the same direction

for drinkers, while superior education was significantly associated with higher socialization scores only in the abstainers and criminals. Youth was significantly associated with lower socialization scores in drinkers and criminals. Number of years of chronic inebriety were not significantly associated with So scale performance, but age of onset of abuse was, earlier onset being significantly associated with lower So scale scores. Greater length of incarceration in criminals was significantly associated with superior So scale scores - possibly because those subjects who were serving the longest sentences were not tough sociopathic recidivists but had committed one crime only, usually murder or attempted murder, under circumstances that might have provoked many persons into such an act.

Early/Middle/Late onset comparisons (see Appendix, Tables 4.212 - 4.213): In line with the work of Foulds and Hassall (1969) it was expected that drinkers of Early onset would be more under-socialized than those of Late onset. The tables indicated that Early onset drinkers obtained significantly lower So scale scores than did Middle or Late onset starters, while Middle starters obtained scores that just failed to reach the 5% level of significance in being lower than Late starters'. Drinkers of Late onset had a So scale score of 31.07, which was higher in direction of socialization than the mean of Group 1, 2, or Combined Group drinkers as a whole. Possible effects of lengthy alcohol abuse could not be disregarded in evaluating the So scale score of the Early group, however.

Youngest/Oldest subjects comparisons (see Appendix, Tables 4.214 - 4.218): There were significant differences amongst the younger subjects, with young drinkers obtaining significantly lower So scale scores than any other young subjects, including young criminals. However, older drinkers were significantly distinguished only from older abstainers, though the difference between them and older patients just failed to reach the 5% level of significance with older patients obtaining higher socialization scores. In all comparisons abstainers obtained the highest socialization scores, as might be expected, with patients next, then

criminals, and finally the drinkers, with the lowest scores. Only in the drinkers and criminals did young subjects obtain lower socialization scores than older counterparts, and only in the drinkers was this trend significant, even though the number of years of abuse of alcohol in the younger drinkers was only half that of the older drinkers, which would suggest that years of inebriety do not influence those personality factors measured by the So scale.

Young Early/Old Early/Old Late starter comparisons (see Appendix, Tables 4.219 - 4.220): If years of chronic inebriety influence behaviour in the direction of under-socialization, the Old Early starters whose length of abuse (26.78 years) was almost five times as long as the Old Late starters' (5.84 years) and more than three times as long as the Young Early starters' (8.62 years) should have obtained the lowest So scale scores. This proved not to be the case. The Young Early group was significantly more under-socialized, with a So scale mean of only 20.00, than either the Old Late or Old Early starters (means of 30.88 and 27.21 respectively). The difference between Old Early and Old Late starters just failed to reach significance at the 5% level. It would seem, therefore, that sociopathy is related to early onset of pathological drinking and is not the result of alcohol abuse. Disturbances in the socialization process would thus appear to be a very consistent area for problem drinkers, both in this study and in those elsewhere. These subjects would appear to be nearer in personality structure, as assessed by the measures used in this study, to subjects by socio-legal definition under-socialized (prison populations) than to individuals who have personality problems but who do not drink pathologically (psychiatric patient populations).

In a further investigation of the findings of the hypothesis, material on other aspects of sociopathy was gathered, such as (1) Occupational and geographical instability and wanderlust (from preference, not because of drinking problems), (2) Impulsiveness, (3) General promiscuity (de facto relationships, unfaithfulness to wives, illegitimate children), (4) Disciplinary and other difficulties during school years, and (5) Difficulties with the law. Schuckit

(1973), investigating relationships between inebriety and sociopathy, listed truancy or expulsion from school, non-traffic arrests, wanderlust, frequent impulsive job changes, outbursts of rage or fighting, and promiscuity as indices of sociopathic personality disorder, and also hinted that alcoholics and sociopaths might share impulsiveness; these same indices were used by Guze, Goodwin, and Crane (1969) and Schuckit et al (1970). Questions covering these areas were included in the BDQ, while information on childhood disciplinary problems was extracted from answers to questions 1,10,72,103, and 107 of the HDHQ/So inventory (see Appendix, p.385 and self-ratings of impulsivity were assessed from question 27 of the inventory. Only the Combined Groups comparison was used for these chi-square computations, full details of which can be found in the Appendix, Tables 4.221 - 4.238.

(1) Wanderlust, occupational and geographical instability (see Appendix, Table 4.221): Significantly more drinkers than patients and abstainers preferred frequent job changes and frequent locality changes, and claimed to have a wanderlust. It was expected that drinkers might reveal their wandering proclivities by tending not to be New Zealand-born, compared with patients and abstainers, and by numbering more sailors amongst them. Significantly more drinkers than patients had been sailors but, while significantly fewer drinkers than criminals were New Zealand-born, differences between drinkers and patients were not significant, with differences between drinkers and abstainers just failing to reach the 5% significance level. 66% of drinkers, 77% of patients, 87% of abstainers, and 90% of criminals were New Zealand-born, these findings being similar to Rosenberg's (1969b) Australian study in which 76% of drinkers but 90% of neurotics were Australian-born. In all these comparisons, with the exception of nationality, drinkers did not differ significantly from criminals.

Only wanderlust and sea-faring can be compared with studies elsewhere. 65% of drinkers and 70% of criminals claimed to have a wanderlust, while figures reported for alcoholic and non-alcoholic felons were 33% and 18% by Guze et al (1962) and 48% and 23% by Goodwin et al (1971).

Discrepancies might have resulted from the fact that these were imprisoned alcoholic felons, not hospitalized alcoholics.

In the present study 42% of drinkers preferred frequent occupational changes (50% in the Pilot Study), 62% preferred frequent geographical changes (58% in the Pilot Study), and 38% had been sailors (25%). Results from the two studies are therefore quite consistent. Kjølstad (1966) also reported 38% of drinkers to have been sailors, while McCance and McCance (1969) found this in only 5% of psychiatric patients but 18% of alcoholics.

(2) Impulsiveness (see Appendix, Table 4.222): Significantly more drinkers than patients and abstainers claimed to be impulsive, while drinkers did not differ significantly from criminals.

(3) General promiscuity - de factos, unfaithfulness to wives, illegitimate children (see Appendix, Table 4.223): Promiscuity has already been considered under Hypothesis 3, where significantly more drinkers than patients had de facto relationships, and significantly more drinkers than patients and abstainers had been unfaithful to their wives. Significantly more drinkers than patients and significantly more criminals than drinkers had illegitimate children (no abstainers). Figures for drinkers are high and confirm findings from the Pilot Study where 21% had such children. In the present study 15% of drinkers had 33 illegitimate children between them and 37% of criminals 19 such children. In the Pilot Study 42% of drinkers had de facto relationships, compared with 51% in the present study.

In the above comparisons drinkers did not differ from criminals significantly on any indices, other than that fewer had illegitimate children.

(4) Disciplinary and other difficulties during school years (see Appendix Table 4.224): Significantly more drinkers than abstainers had been frequently sent to the Principal for playing up (Question 1 of So/HDHQ inventory); significantly more drinkers than patients had been suspended once or more from school (Question 10 of So/HDHQ inventory); significantly

more drinkers than patients and abstainers had been habitual truants (Question 72 of So/HDHQ inventory); significantly more drinkers than patients and abstainers admitted to a period of thieving during childhood (Question 103 of So/HDHQ inventory); and significantly more drinkers than abstainers recalled giving their teachers lots of trouble (Question 107 of So/HDHQ inventory). In the above comparisons drinkers did not differ significantly from criminals on any indices.

These results may be compared with findings from the Pilot Study. In this present study 58% of drinkers had been sent to the Principal frequently for playing up (55% in Pilot Study), 12% had been suspended from school once or more (10% in Pilot Study), 40% had been habitual truants (30% in Pilot Study), 72% admitted to periods of thieving in childhood (65% in Pilot Study), but giving teachers lots of trouble was a question not used in the Pilot Study. There is considerable consistency between the results of the two studies, therefore. Calahan and Room (1974, pp.112-116) also found that "youthful rashness" - truanting, being sent to the Principal for playing up - was a predictor in young males in a general population sample of later alcohol problems.

(5) Criminal record (see Appendix, Table 4.225; details of all subjects' criminal records can be found in the Appendix, p.394): Significantly more drinkers than patients had been arrested for any legal infringements, as would be expected, but also for serious (non-inebriety-related, non-traffic) offences. No abstainers admitted to having been arrested. 78% of drinkers and 30% of patients had been arrested for any legal infringements, and 43% of drinkers and 22% of patients for serious offences. The 43% of drinkers had an average number of 5.67 arrests between them, the 22% of patients 1.30 arrests, and the 100% of criminals 5.73 arrests. The figures for numbers of drinkers arrested are very similar to those in the Pilot Study where 71% had been arrested for any legal infringements and 46% for serious offences, so there would appear to be consistency in this area for N.Z. samples. Criminal records in drinkers reported in a series of studies referred to on p. 78 ranged from about 20% to 46%, but it is not always clear whether

inebriety-related crimeswere included in these figures.

All of the indices examined in this section were investigated, as well, in the problem drinking group divided into Early/Middle/Late onset groups, Youngest/Oldest groups, and Young Early/Old Early/Old Late groups, with the expectation that young drinkers and early starters would manifest more evidence of personality disorder or sociopathy than late starters. The effects of years of abuse in the early starters could not be ruled out if predictions were confirmed, but in the comparison of Young Early and Old Early relative to Old Late starters this could be controlled. For ease of visual comparison the findings are presented in tabular form. Full details of chi-square computations and significance levels can be found in the Appendix, Tables 4.226 - 4.230 for Early/Middle/Late comparisons; Table 4.231 for Youngest/Oldest comparisons; and Tables 4.232 - 4.236 for Young Early/Old Early/Old Late comparisons.

TABLE 3.58

Comparison of Youngest versus Oldest, and Early versus Middle or Late Starters

Occupational change	More Y	More E than L**
Geographical change	More Y	More E than L**
Wanderlust	More Y	More E than L**
Impulsive	More Y*	More E than L & M
De facto relations	More Y**	More E than L**
Unfaithful to wife	More Y	More E than L
Illegitimate children	Y only	More E than M (no L)
Sent to Principal often	No diff.	More E than M* More E than L
Suspended once or more	No diff.	More E than M (no L)
Habitual truanting	More Y**	More E than L**
Childhood thieving	More Y	More E than L*
Gave teachers trouble	More Y**	More E than M* More E than L
Inebriety arrests	More Y**	More E than L**
Serious crime arrests	More Y**	More E than L**

*p<.10 p>.05 **p<.05 or better

TABLE 3.59

Comparison of Young Early, Old Early, and Old Late Starters

Occupational change	More YE than OL
Geographical change	More YE than OL**
	More OE than OL**
	More YE than OE
Wanderlust	More OE than OL*
	More YE than OL
Impulsive	More YE & OE than OL
	More YE than OE
De facto relations	More YE than OL**
	More YE than OE
Unfaithful	More YE than OL
	More OE than OL*
Illegitimate children	More YE than OE & OL
	More OE than OL
Sent to Principal often	More YE than OE & OL
	More OE than OL
Suspended once or more	More YE than OE (no OL)
Habitual truanting	More YE than OE
	More YE than OL**
Childhood thieving	More YE than OL
	More OE than OL*
Gave teachers trouble	More YE than OE**
	More YE than OL**
Inebriety arrests	More YE than OL**
	More OE than OL**
Serious crime arrests	More YE than OL**
	More OE than OL**
	More YE than OE*

*p<.10 p>.05 **p<.05 or better

In consideration of the results obtained as a whole in sections (1), (2), (3), (4), and (5) above, two main conclusions can be drawn. Firstly, the drinkers in this study did not differ from the criminal group on items held to be indicative of sociopathic behaviour (other than that more criminals had illegitimate children, though even here the drinkers had more of such children). Drinkers differed from patients and abstainers in areas of preference for occupational and geographical instability and wanderlust, impulsiveness, being a school disciplinary problem with truanting and misbehaving, and engaging in periods of childhood thieving, as well as having extensive criminal records for serious offences. In general patients seemed to be as similar to

abstainers as drinkers were to criminals. These findings support those with the So scale and confirm theories and studies suggesting that under-socialization and sociopathic tendencies are integral parts of personality structure in problem drinkers. The findings confirm the conclusions of Guze et al (1962; 1969) that of psychiatric disorders associated with criminality, problem drinking rather than neurotic disorder is importantly related.

The second main conclusion to be drawn from the results is that length of exposure to alcohol intake did not influence behaviour in the direction of greater sociopathy, in terms of the indices investigated here. If it had, the Old Early starters, with a history of abuse of 26.78 years, should have been the most sociopathic of all groups. This was not the case; it was the Young Early starters, with a history of pathological drinking of only 8.62 years, who were the most sociopathic, though mostly the differences between them and Old Early starters were not significant but were simply trends in the direction of greater sociopathy in the young group. This group also differed markedly from the Old Late starters on all indices, though histories of chronic inebriety were quite similar in length (5.84 years), and both Young Early and Old Early starters were more sociopathic as measured by these indices than were the Old Late men. Impulsiveness, however, appeared to be a very consistent aspect of drinkers' personality structure, with no significant differences occurring amongst the groups, though the proportions of Young Early starters, Youngest drinkers, and Early onset drinkers answering the impulsivity question affirmatively ranged from 83% to 88% (Old Early starters 74%, Old Late starters 65%) and were thus higher than the 75% for the problem drinker group as a whole. It would seem, therefore, that self-descriptions of impulsiveness are especially associated with early onset of problem drinking but not with number of years of alcohol abuse. In the Pilot Study as in the present one, 75% of drinkers described themselves as impulsive. Having illegitimate children was particularly associated with early onset of abuse but mostly in young drinkers; 33% of Young

Early, 11% of Old Early, but only 4% of Old Late starters had such children.

If years of alcohol abuse exert a deteriorating effect on behaviour, Young Early and Old Early starters should have differed significantly on many of the indices in Table 3.59. In fact there was only one significant difference between them on the indices covered in sections (1),(2),(3),(4), and (5), with one falling just short of the 5% level of significance in favour of greater sociopathy in the Young Early group. In contrast, Old Early differed significantly from Old Late men in direction of greater sociopathy on three indices and on a further three the differences fell just short of the 5% level of significance, while Young Early differed significantly from Old Late starters on six indices. These findings confirmed the expectation that Young Early and Old Early men would perform more similarly to each other than to Old Late starters because of important similarities in personality structure between them and because exposure to alcohol is not the determinant of scoring patterns. On similar indices, Foulds and Hassall (1969) found seven of eight significant differences between Old Early and Old Late starters, and between Young Early and Old Late starters, but only two differences not quite reaching significance at the 5% level between Young Early and Old Early starters.

While it is usually held that criminality is associated with years of inebriety, findings in this study did not support that contention: of those Young Early starters arrested for serious offences, the average number of arrests was 6.70, compared with only 3.12 for the Old Early starters and 1.00 for Old Late starters. 83% of the Young Early, 42% of the Old Early, and only 12% of the Old Late starters had been arrested for serious offences. The same findings obtained for younger compared with older drinkers: with a history of abuse only half as long as that of the older group, the younger drinkers with a criminal history had averaged 8.16 arrests for serious offences, compared with 1.25 arrests for the older drinkers with a criminal record.

These findings of the importance of age of onset were supported by findings from the Early/Middle/Late onset comparisons, which tended to parallel those cited above. The Early starters would have been expected to demonstrate more sociopathy than the Late starters (Table 3.58), the former group roughly corresponding to, but including more subjects than, the Young and Old Early groups combined. There were seven significant comparisons and one just failing to reach significance at the 5% level between Early and Late starters in favour of the former's being more sociopathic, while there were only two comparisons, both of which fell just short of the 5% level of significance, and no significant comparisons between Early and Middle onset drinkers; between Middle and Late onset drinkers there was only one significant comparison and two just short of the 5% level of significance, always in favour of the later-starting groups being less sociopathic. In these comparisons the influence of years of alcohol abuse in the Early group cannot be ruled out as a contributor to differential scoring, but in the Young Early/Old Early/Old Late comparisons this could be controlled with the same results being produced.

It would appear that individuals whose drinking commences late in life are very different in some personality aspects from those beginning drinking early. Foulds and Hassall (1969) suggested that if a sample of problem drinkers contained an excess of old late starters it would present a neurotic-like profile and the conclusion would be drawn that problem drinkers are neurotic-like in personality structure (e.g. Fuller, 1966), whereas if the sample contained many young early starters the profile would be one of sociopathy. Foulds and Hassall (1969), Rosenberg (1969a) and Schuckit et al (1970) found that young problem drinkers tend to present evidence of sociopathy, and this present study supports their findings. However, to carry the investigation a step further, the combined psychiatric patient group was compared with the Young Early and Old Late starters on the indices in this section (see Appendix, Tables 4.237 - 4.238). Significant differences were obtained between patients and Young Early starters in twelve

of the fourteen comparisons, and one difference just failed to reach the 5% significance level, while only two of fourteen comparisons reached significance and a third fell just short of it between the patients and Old Late starters. It would therefore seem unequivocal that problem drinkers whose alcohol abuse begins late in life are those who are much more neurotic-like than are those whose abuse begins before the age of thirty.

From the findings in this section there would appear to be no support for the view that length of exposure to alcohol influences the types of behaviour examined here. There is certainly no support for the belief that chronic inebriety leads inevitably to "moral deterioration" in an otherwise impeccable and normal personality. By far the majority of drinkers investigated here recalled serious difficulties with regard to self-control, self-observation and self-discipline while still at school. These early antisocial difficulties in drinkers have also been reported in the literature by Guze et al (1962), Robins, Bates and O'Neal (1962), Robins (1966), and Rosenberg (1969b), the last-named finding that stealing and truancy were more characteristic of drinkers than of psychiatric patients in his Australian sample.

It was also possible to demonstrate, using BDQ material, that many of the crimes committed by drinkers preceded the development of problem drinking. Of the 43 drinkers who had been arrested for serious legal infringements, 28 had committed the first crime either before the age at which drinking was said to have become a problem or before the age of the first arrest for inebriety. Of this 43, 36 answered affirmatively the So scale question about having engaged in periods of thieving in childhood. 24 subjects had committed offences before the age of 20, though some of these had not been arrested, the crimes having gone undetected. 32 subjects had committed crimes which had gone undetected, 24 of these having committed the crime either before drinking became a problem or before the first arrest for inebriety.

24% of the total problem drinker sample had committed offences before the age of 20. Three had been sent to Boys'

Homes or placed under Child Welfare custody for shop-lifting or other thefts; several had committed thefts, or converted cars, starting from as early as age six in one case, and years seven, eight and nine in other cases. One child had run a racket in which his father repaired shoes and the child would over-charge when delivering the shoes to the customers. One recalled pulling off successful frauds before the age of fifteen, and one had been a compulsive burglar since the age of sixteen. Two had been sentenced to borstal training.

A large amount of behaviour betraying an underlying sociopathic attitude to other people was spontaneously referred to by many drinkers; this behaviour could in no way be seen as a deterioration resulting from desperation to get money for alcohol supplies, or to preserve the addiction, as Fox (1968) implies. To cite just a few examples, No.13 owned a fish-shop from which he sold under-sized crayfish as a business. He explained in detail how a shop could profit by cutting fish under just the right conditions and baking it in special batter at certain temperatures so that a thin bit of fish would puff up to seem a lovely fat crisp bit. He said he had made his fortune this way. This subject was not using his fortune on liquor; both his children owned ponies, they were a two-car family, and both children attended Christchurch's most expensive private schools. No.54 said he had learned early from his father how to get money out of people. He stole from the till, cheated the public, and was stealing from his father at the same time. Nos. 9 and 66 both evaded income tax by holding jobs under two different names. During the war No. 82 used to strip lead from rooves and sell it for profit; however, the cash reward was not the only incentive because he would always arrange to be near the damaged house when the owner discovered what had happened, and seeing the owner's face was the best part of the coup. No.21, a highly intelligent medical specialist whose hospital notes began, "Brought to the hospital by his wife, at the urgent request of his mistress," told the writer he had married his wife for her "breeding potential." He had studied her family tree and before marrying her he gave her an intelligence test, to ensure she would be able to produce brilliant sons for him.

Apart from occasional returns to the home to procreate another son he has lived with the mistress. No. 27 had been an auctioneer. He boasted of how, with the speedy patter, clients can sometimes be confused over what they are buying, and related how he had once sold a farmer his own cow and another man was sold his own horse back after the subject had docked its tail and changed its colouring somewhat! No. 39 had a wife with diabetes, who had miscarried three times and had been told she must spend the whole 9 months in bed if she wanted a baby. The husband, while yearning for a baby and referring to his wife as "my only treasure," shouted,"That bitch, nothing wrong with her, lying there for nearly a year while I work and cook ... she can bugger off." A compulsive burglar since 16, he had been arrested 35 times for burgling. Although he confessed to stealing anything, he added that whenever he burgles he is careful to steal, in addition, "Something the people really treasure" such as a photograph, small ornament, etc. No. 10 spent much time talking about his wife's coldness in rejecting him sexually. Close questioning revealed that he had never thought of foreplay, or of satisfying her needs in any way. He would simply ejaculate, turn over, and go to sleep! He was astounded to think she might have some feelings in the matter. No. 81 indulged in sexual orgies with multiple partners, with three or four men attached to the one woman with the aim of simultaneous orgasm. These orgies were described in the crudest terms possible. No.44 had been arrested 38 times for safe-blowing, dating from his early teens: "I wanted to be the world's best safe-blower." No. 57 had enormous innocent blue eyes. Throughout every test he endeavoured to cheat. On the Zamansky pictures test he tried looking at both pictures simultaneously, watching the writer carefully to see if she had noticed, and with the Embedded Figures test he would gently push the writer's hand away when she held the simple figure over the complex one, so that he could see both at once. At the end of the intelligence test, time being up, he said reproachfully that he had been sure the writer would have given him an extra minute in which to complete the test. When he finally departed from the interview, the writer had to pursue him: he had

taken her cigarettes and two pens with him! He told the writer that the last time he was at Carrington hospital he had been discharged when he had dug up the hospital's tomatoes, bought paper bags for them, and sold them in the market for $20. "Put in a good word for me with the authorities," he begged; would the writer please tell the authorities that as her tests had proved him to be "completely normal" he should be allowed to go home (he was committed under the A. and D. Act).

It would seem that characteristic of all these episodes is the attitude toward other people that they are mere "things" to be cheated, stolen from, profited out of, or sexually used without any depth of emotion.

None of the psychiatric patients spontaneously reported antisocial childhood behaviour, though 2 subjects recalled stealing sweets (one had stolen some stamps, sold these, and used the money to buy sweets). They had not been apprehended by the police or placed in children's homes for such activities. 7 of the abstainers considered that they had broken the law, though none had been arrested. "Crimes" were rather amusing: apart from 4 traffic violations, one subject had removed the lights from some street works, one had flogged cases of sacramental wine from his job, one threw boulders onto a road once, one was rowdy in a bar during the war, one had stolen a pipe from a Catholic church organ, and one had deposited an old broken lavatory on the doorstep of the local police station! These infringements are clearly of quite a different flavour from those of the drinkers.

FAMILY BACKGROUND

No hypothesis was formulated for this section, its purpose being simply to explore some of the differences in background amongst the groups that theory and other studies' findings have suggested might be relevant to differential aetiology. Areas studied on the Biographical Data Questionnaire (questions 37-50) were problem drinking and psychiatric disturbance in parents, parental incompatibility, parental lack of warmth, and overt disruption of the home. It was expected that problem drinkers would have experienced more overt disruption in parent-child relationships, especially in the area of father-failure, while psychiatric patients might have experienced unpleasant parents but the conflict had been contained within the home.

All chi-square calculations carried out for this section can be found in the Appendix, Tables 4.239 - 4.249

RESULTS:

TABLE 3.60

Percentages of Subjects with Parental Problem Drinking in their Background

	PDs %	PTs %	ABs %	CRs %
N	100	60	30	30
Either parent a PD	47*	23	7	20
Father a PD	46**	22	7	17
Mother a PD	8	5	0	7

*Significantly different from all, $p < .02$ or beyond.
**Significantly different from all, $p < .01$ or beyond.

TABLE 3.61

Percentages of Subjects with Parental Psychiatric Illness in their Background

	PDs %	PTs %	ABs %	CRs %
N	100	60	30	30
Either parent ill	27	33	17	10
Father ill	9	15	10	3
Mother ill	20	25	7	10

All N.S.

As is usually reported in the literature, significantly more problem drinkers than other subjects had problem drinking parents, and differed from others in having had significantly more problem drinking fathers, though not in having had such mothers. 7% of the drinkers had pathological drinking in both parents to contend with, compared with only 3% of patients. Parental psychiatric illness did not appear to distinguish groups (Tables 3.60 and 3.61).

TABLE 3.62

Numbers of Mothers versus Fathers who were Problem Drinkers (percentages parenthesized)

	N	Mother PD	Father PD	X^2	p
PDs	100	8 (8)	46 (46)	34.72	<.001
PTs	60	3 (5)	13 (22)	5.84	<.02
ABs	30	0	2 (7)	-	-
CRs	30	2 (7)	5 (17)	0.65	N.S.

TABLE 3.63

Numbers of Mothers versus Fathers who were Psychiatrically Ill (percentages parenthesized)

	N	Mother ill	Father ill	X^2	p
PDs	100	20 (20)	9 (9)	4.03	<.05
PTs	60	15 (25)	9 (15)	1.30	N.S.
ABs	30	2 (7)	3 (10)	-	-
CRs	30	3 (10)	1 (3)	-	-

Table 3.62 indicated that both drinkers and patients had significantly more fathers than mothers who had been problem drinkers, while Table 3.63 showed that drinkers had been exposed to significantly more mothers than fathers who were psychiatrically disturbed. Numbers within the abstainer and criminal group were too small for chi-square comparison.

TABLE 3.64

Subjects' Perceptions of Parents, their Compatibility with each other, and preferences for the Mother

	PDs %	PTs %	ABs %	CRs %
N	100	60	30	30
Mother warm & kind	55*	52	80	57
Mother positively rated	80	78	97	80
Father warm & kind	34**	47	63	37
Father positively rated	57**	72	87	50
Both warm & kind parents	21**	32	50	30
Incompatible parents	51	42	33	33
Preferring the mother	42	30	43	33

*Significantly different from AB, $p < .05$
**Significantly different from AB, $p < .01$

In Table 3.64, none of the differences between drinkers and patients, or drinkers and criminals reached the 5% level of significance though differences between drinkers and patients on ratings of father as positive just failed to reach this level (and the same was true for drinkers versus abstainers on ratings of the mother as positive).

TABLE 3.65

Subjects' Perceptions of Mothers versus Fathers as Warm and Kind (percentages parenthesized)

	N	Mother	Father	X^2	p
PDs	100	55 (55)	34 (34)	8.09	<.01
PTs	60	31 (52)	28 (47)	0.13	N.S.
ABs	30	24 (80)	19 (63)	1.31	N.S.
CRs	30	17 (57)	11 (37)	1.67	N.S.

TABLE 3.66

Subjects' Perceptions of Mothers versus Fathers as Positive (percentages parenthesized)

	N	Mother	Father	X^2	p
PDs	100	80 (80)	57 (57)	11.21	<.001
PTs	60	47 (78)	43 (72)	0.40	N.S.
ABs	30	29 (97)	26 (87)	-	-
CRs	30	24 (80)	15 (50)	4.68	<.05

Note: The rating of "Positive" was the sum of ratings of Warm and kind plus inconsistent but mostly warm and kind (see BDQ Qu.47, p.390).

TABLE 3.67

Subjects' Preference for Mother versus Father (percentages parenthesized)

	N	Mother	Father	X^2	p
PDs	100	42 (42)	21 (21)	9.26	<.01
PTs	60	18 (30)	12 (20)	1.11	N.S.
ABs	30	13 (43)	4 (13)	5.25	<.05
CRs	30	10 (33)	3 (10)	3.54	<.10 p>.05

Table 3.65 indicated that only the drinkers had a significant discrepancy between their feelings about both parents in terms of fewer fathers being seen as warm and kind, and these findings were repeated when fathers were compared with mothers in terms of being generally positive (Table 3.66) except that criminals as well as drinkers rated fewer fathers than mothers as positive. Preferences for mothers amongst the groups (Table 3.64) were not significant, but preferences for the mother versus the father were significant in favour of mother for drinkers and abstainers, and fell just short of the 5% level of significance for criminals (Table 3.67). It would seem usual for subjects to prefer mothers to fathers.

TABLE 3.68

Percentages of Subjects Separated from One or Both Parents before the Age of 16

	PDs %	PTs %	ABs %	CRs %
N	100	60	30	30
Separated	64	35**	37*	63

*Significantly different from PDs, p<.02
**Significantly different from PDs, p<.001

TABLE 3.69

Percentages of Subjects Separated from One or Both Parents Before the age of 16 for longer than one Year

	PDs %	PTs %	ABs %	CRs %
N	100	60	30	30
Separated	55	25**	23*	53

*Significantly different from PDs, p<.01
**Significantly different from PDs, p<.001

Following the example of Hassall (1968), the writer included in Table 3.68 all kinds of separations from the parents, including lengthy hospitalizations of subject or his parent, the father's job keeping him out of the home most of the time (e.g. if he were a sailor), subject running away from home, being sent to boarding school, and so on, as well as separations arising from death, divorce, and desertion; only separations lasting longer than one year were included in Table 3.69, while Table 3.68 included a small minority of subjects whose length of separation could not really be gauged (e.g. father's job keeping him away from home) and a small group whose separations were for a shorter period (hospitalizations occuring before the age of three but lasting at least two months).

What is striking about Tables 3.68 and 3.69 is the similarity between drinkers and criminals on the one hand, and abstainers and patients on the other. The two groups which, on theoretical grounds, might have been expected to have experienced the greatest degrees of overt disruption had in fact done so, suggesting that overt disruption of the home is associated with conduct disorders such as problem drinking and criminality rather than with neurosis.

The following tables compared groups on separations by death versus separations for other reasons (divorce, desertion, boarding school, etc.)

TABLE 3.70

Separation of Subjects from Parents by Death
(percentages parenthesized)

	Never separated	Separated by other than death	Separated by death	Total
PDs	36 (36)	47 (47)	17 (17)	100
PTs	39 (65)	14 (23)	7 (12)	60
ABs	19 (63)	10 (33)	1 (3)	30
CRs	11 (37)	14 (47)	5 (17)	30

All N.S.

TABLE 3.71

Separation of Subjects from Parents by reasons other than Death (percentages parenthesized)

	Never separated	Separated by death	Separated by other than death	Total
PDs	36 (36)	17 (17)	47 (47)*	100
PTs	39 (65)	7 (12)	14 (23)	60
ABs	19 (63)	1 (3)	10 (33)	30
CRs	11 (37)	5 (17)	14 (47)	30

* Significantly different from PTs, $p<.01$

Tables 3.70 and 3.71 indicated that there were no significant differences amongst the groups with regard to separations resulting from death of a parent, but that significantly more drinkers than patients had been separated from parents for reasons other than death, though differences between drinkers versus abstainers and criminals were not significant.

TABLE 3.72

Separation of Subjects from Father for longer than one year (percentages parenthesized)

	Never separated	Not sep. from father only	Sep.< 1 year	Sep.> 1 year	Total
PDs	36 (36)	38 (38)	9 (9)	17 (17)	100
PTs	39 (65)	9 (15)	6 (10)	6 (10)	60
ABs	19 (63)	4 (13)	4 (13)	3 (10)	30
CRs	11 (37)	9 (30)	3 (10)	7 (23)	30

All N.S.

TABLE 3.73

Separation of Subjects from Mother for longer than one Year (percentages parenthesized)

	Never separated	Not sep. from mother only	Sep.< 1 year	Sep.> 1 year	Total
PDs	36 (36)	52 (52)	9 (9)	3 (3)	100
PTs	39 (65)	13 (22)	6 (10)	2 (3)	60
ABs	19 (63)	7 (23)	4 (13)	0	30
CRs	11 (37)	15 (50)	3 (10)	1 (3)	30

All N.S.

TABLE 3.74

Separation of Subjects from Both Parents for longer than one Year (percentages parenthesized)

	Never separated	Not sep. from both parents	Sep.< 1 year	Separated from both	Total
PDs	36 (36)	20 (20)	9 (9)	35 (35)	100
PTs	39 (65)	8 (13)	6 (10)	7 (12)**	60
ABs	19 (63)	3 (10)	4 (13)	4 (13)*	30
CRs	11 (37)	8 (27)	3 (10)	8 (27)	30

*Significantly different from PDs, p<.05
**Significantly different from PDs, p<.01

TABLE 3.75

Separation of Subjects from Mother versus Father for longer than one Year (percentages parenthesized)

	N	Separated from Mother only	Separated from Father only	X^2	p
PDs	100	3 (3)	17 (17)	9.39	<.01
PTs	60	2 (3)	6 (10)	1.21	N.S.
ABs	30	0	3 (10)	-	-
CRs	30	1 (3)	7 (23)	3.61	<.10 p>.05

Tables 3.72 and 3.73 indicated that drinkers did not differ from other subjects in having been separated from mothers only, or from fathers only, for longer than one year, but that separations from both parents distinguished them from patients and abstainers (Table 3.74). However, as Table 3.75 showed, drinkers were the only subjects who had been separated from significantly more fathers than from mothers, though differences for criminals in the same direction fell just short of significance at the 5% level.

DISCUSSION:

Studies reporting problem drinking in first degree relatives of drinkers have shown an incidence of about 42% (see pp.84-85) with neurotics generally showing a lower incidence - 38% in Rosenberg's (1969b) study, compared with 56% in drinkers, both groups showing early onset of their respective disorders. Guze et al (1962) found less parental problem drinking in non-alcoholic felons than in alcoholic felons (33% and 50% respectively), similar to the N.Z. study's finding of less parental problem drinking in the criminal group compared with the drinker group. A few studies report

psychiatric illness in parents of drinkers, incidence being roughly 26%. While, of course, the ratings in the present study were based purely on subjects' personal opinions and varied in type from one subject to another - some saying a parent had been hospitalized while others simply said a parent was "nervy" or "had a breakdown" - their views are probably under-estimates of psychiatric illness; an interesting study by Rimmer and Chambers (1969) found that drinkers were very conservative in ascription of psychiatric illness to parents, fully 63% being missed, and this was true of both upper- and lower-class drinkers. The authors concluded that drinkers tend to be either ignorant or cautious, but certainly not vindictive, in ascribing psychiatric illness to their parents. Generalization from one study to another is clearly unwise, but the figures reported for this N.Z. study do seem to correspond to those reported elsewhere, incidence of pathological drinking being 47% here and incidence of psychiatric illness 27%. In the Pilot Study, 6% of drinkers had a father and 21% a mother who was a chronic inebriate, compared with 46% and 8% respectively in the present study.

Roebuck and Kessler (1972, p.217) stress that needed are studies highlighting what might be specific to problem drinkers or found in the backgrounds of other psychiatric groups. It was seen that significantly more drinkers than other subjects had a problem drinking parent and that significantly more had problem drinking fathers but not more such mothers than did the other groups; only problem drinkers, not patients, had significantly more psychiatrically ill mothers; differences fell just short of the 5% level of significance on ratings of fewer fathers as positive by drinkers, compared with patients, and only drinkers and criminals (not patients) rated fewer fathers than mothers as positive; drinkers differed from patients in preferring significantly more mothers than fathers, suggesting that patients' parents did not differ so strikingly from each other; significantly more drinkers than patients had been separated from parents for longer than one year and also when separations shorter than one year were included if they had occurred before age three and had endured

for at least two months; significantly more drinkers than patients had been separated from parents for reasons other than death; significantly more drinkers than patients had been separated from both parents (though not from mother only or father only); and drinkers but not patients had been separated from significantly more fathers than from mothers.

In the Pilot Study 50% of parents were rated incompatible (51% in the present study); 29% of fathers were warm and kind (34% here); 54% of mothers were warm and kind (55% here); and significantly more controls than drinkers in the Pilot Study had warm and kind fathers with the same holding true for this present study when abstainers were compared with drinkers (83% versus 29% in the Pilot Study, 63% versus 34% in this one). In the Pilot Study 50% of drinkers had been separated from one or both parents for at least one year before age 16, compared with 33% of controls, while in the present study 55% of drinkers had been, compared with 23% of abstainers, 25% of patients, and 53% of criminals. There would thus seem to be considerable consistency between the present results and those of the earlier study, and also confirmation of the view expressed by such writers as Brown (1966), Wagner (1960), and Wardle (1961) that overt disruption of the home is related to conduct disorder rather than to the more internalized suffering of "typical" neurosis. In the studies reported on p.82, about 40% of drinkers had lost one or both parents by adolescence while figures for neurotics were around 28% and for normals around 21%. Like Hassall (1968) the writer found that separations by death did not distinguish drinkers from other subjects.

Early/Middle/Late onset comparisons (see Appendix, Tables 4.250 - 4.253): It would be expected that if parental behaviour is related to problem drinking outcomes, the more overt parent-child disruption that is experienced and the more exposure to pathological models the individual is subjected to, the more likely it is that he would turn to alcohol at an earlier age than someone who has not had these factors to contend with, whose personality is therefore possibly better organized to cope with stress, and who might not have turned to alcohol if certain precipitating events had not taken place.

Findings confirmed these expectations; significantly fewer Late than Early and Middle starters had problem drinking parents, and significantly fewer Late than Early starters had experienced separations from a parent. Although there were no other significant differences, almost significantly fewer fathers than mothers were rated as positive in both Early and Middle but not in Late onset drinkers (just short of significance at the 5% level).

Youngest/Oldest drinker comparisons (see Appendix, Table 4.254): Significantly more of the younger than older drinkers had been separated from a parent (92% versus 44%), and significantly more of the younger drinkers had a psychiatrically ill parent, though the groups did not differ on incidence of parental problem drinking (possibly because the older group had a number of Old Early starters in it who, as can be seen from the next section, had more problem drinking parents).

Young Early/Old Early/Old Late starter comparisons (see Appendix, Tables 4.255 - 4.258): Significantly more Young Early than Old Late starters had been separated from a parent (only 2 of 12 had not been, and both of these were adopted!), while differences between Old Early and Old Late starters were not significant but in the same direction (63% and 42% respectively). Significantly more Old Early than Old Late starters had problem drinking parents, with the difference falling just short of significance at the 5% level for Young Early versus Old Early starters, fewer Young Early men having problem drinking parents (though in both Young Early and Old Early groups there were two cases where both parents had been problem drinkers, with no such occurrences in the Old Late group). Significantly more Old Late than Old Early starters rated their father as warm; the Old Early group had very few warm fathers - 16% compared with 33% in the Young Early group and 50% in the Old Late group. In only the Old Early group was there a significant difference in favour of mother in positive ratings for mother versus father; clearly, this group had experienced the greatest amount of father-failure.

Following a hunch from the work of Foulds and Hassall

(1969) the writer compared Early* starters, Young Early starters, Old Early starters, and Old Late starters with the whole of the psychiatric patient group (see Appendix, Tables 4.259 - 4.262). There were no significant differences between patients and Old Late starters on any of the aspects of parental behaviour considered in this section (problem drinking, lack of warmth, or separations). Significantly more Young Early starters than patients had been separated from a parent; differences in the same direction between Old Early starters and patients fell fractionally short of significance at the 5% level with respect to separations, but significantly more of the former had a problem drinking parent and significantly fewer of them perceived their father as warm and kind. Significantly more of the Early onset group than the patient group had a problem drinking parent and had been separated from a parent, while significantly fewer perceived their father as having been positive. Therefore, the Old Late starters had come from backgrounds that were more similar to those of the psychiatric patients than had the Early, Young Early, or Old Early starters.

With respect to parental problem drinking, findings in the N.Z. study are similar to those of Rosenberg (1969a), who found that significantly more young than older drinkers had alcoholic or heavy drinking fathers (56% and 19% respectively) and Schuckit et al (1970), who found that significantly more early-onset than late-onset drinkers had alcoholic fathers (52% and 23% respectively). In the present study, 55% of Early starters and 25% of Late starters had problem drinking parents.

The literature survey indicated that in the area of parent-child interaction it is not clear that imitation of a problem drinking model, failure of the father to provide a responsible male model for emulation, or failure to identify adequately with a male model because of the father's antagonism or actual physical absence during the formative years, are implicated in a problem drinking outcome in males. The present study, while not designed to offer crucial evidence on these issues, has consistently demonstrated an association of

*Early starters constituted 47% of the drinker group and were not simply the Young Early and Old Early starters combined (31%).

parental problem drinking and parent-child separations with membership in problem drinking rather than in psychiatric patient groups, and with severity of personality disorder as manifested by early onset of problem drinking. Parent-child separation seemed to be implicated for both the conduct disorder groups, though criminals differed in having a lower incidence of parental heavy drinking. Of course, many of the parent-child separations occurring amongst the families of the drinkers might have been direct results of the father's way of life associated with his heavy drinking. Tipping the scales in favour of the importance of separations rather than imitation of a problem drinking model was the finding in the most psychiatrically disturbed group, the Young Early starters, that every one of them had been separated in one way or another from their natural parents, though they did not differ from the whole psychiatric patient group in having had more problem drinking parents. Contemporary theorists have stressed the likelihood of intensification of dependency needs by erratic satisfaction of them, and it would certainly seem unlikely that individuals who had been subjected to so much relationship disruption could possibly have had their normal dependency needs met and satisfied. It would also seem likely that the frequency of separation of the drinkers from their father would have interfered with adequate identification with a male model; this way of looking at the data makes good sense when considered in conjunction with the findings in Hypothesis 2 of diminished heterosexual interest and greater attraction to males - as if, in the pub situation of being "a man amongst men," these drinkers were still trying to achieve, via intoxication, a reflection of themselves as worthwhile males which they did not get from their rejecting or absent fathers. Significantly more drinkers than patients had been exposed to the possibly "femininizing" influence of living alone with the mother, with the father absent either permanently or for long periods (see Appendix, Table 4.244). Studies were cited on p.43 that linked father-absence with increased aggressiveness, field dependence, and short future perspective in boys, all of which characterized the drinkers in this study, and not the patients, which strongly suggests

that the crippled and stunted personalities of the drinkers derived from their depriving early environment.

There certainly appeared to be more evidence of father-failure than mother-failure in the drinker group: (a) Significantly more fathers than mothers were heavy drinkers and significantly more drinkers than other subjects had heavy drinking fathers but not mothers; (b) drinkers rated significantly fewer fathers than mothers as positive (like criminals but unlike patients); (c) drinkers rated significantly fewer fathers than mothers as warm and kind, and only in the drinker group did this differential rating reach significance; (d) significantly fewer fathers than mothers were preferred by the drinkers (while patients did not discriminate between their parents); (e) drinkers had been separated from significantly more fathers than mothers and were the only group in which this differential separation was significant.

Some of the findings presented here may have implications for genetic theories of problem drinking. If susceptibility to problem drinking is transmitted genetically it is difficult to account for its development in the Old Late starters (who constituted 26% of the sample), whose incidence of parental problem drinking was no greater than that in the psychiatric patient group. Again, the Young Early starters had no greater incidence of parental problem drinking than did the patients yet were the most disturbed of all the groups in terms of their drinking and its consequences. While none of these ways of looking at the data are conclusive, they do offer at least tentative support for an environmentally determined rather than a genetically determined susceptibility to problem drinking. To produce more conclusive evidence in this area the study would have needed to be more carefully controlled than proved possible. It was not possible to match the experimental groups on socioeconomic status, and some writers (e.g. Morrison, Hudgens, and Barchha, 1968) have suggested that without such equating of groups, findings are difficult to interpret. However, in Rosenberg's (1969b) Australian study the drinkers and neurotics were equated (on the basis of their fathers' socioeconomic status) yet his findings are in line

with those of the N.Z. study in finding significantly more drinkers than neurotics to have been separated from parents before the age of 16.

A whole volume could be written using clinical material derived from drinkers' spontaneous comments about their parents. In answer to the BDQ item asking subjects to briefly describe their parents, 46% of the drinkers revealed an appalling background of rejection, physical violence, or parents who were simply not interested in their children or were impossible to communicate with. To select just a few of the subjects' verbalizations: No.41 - "Father was a martinet and strict disciplinarian. I took the brunt of it. He strapped me with a quarter-inch rope ... had to call him 'Sir'." No.35 - "I was terrified of Dad knocking Mum around ... I would lie in bed at night dreading his return drunk, knowing Mum would be beaten up." No.34 - "They had no qualifications to bring up a family whatever; Mother was worse, and he didn't take enough notice." These parents forced him to leave school and pocketed all his earnings. When he was nine they deserted the family for a year for an overseas trip. He had never owned a pair of shoes in his life and they promised to bring him a pair back with them. He thought of these shoes all the year, but when the parents returned minus the shoes they told him they had not even had enough money to spend on themselves. He recalls crying for days about this. No.38 - "Dad had a whip to thrash with ... was a perfectionist. He made us children work in the garden late at night and punished us if a weed was found. Mother was always busy." No.43 - "Mother was bossy, hateful, a martinet, terribly strict - it was all work and no play or friends ... I was beaten and belted for not achieving top marks at school ... she killed my favourite dog ... she was mad, I think." This subject, whose real mother (the one referred to being his step-mother) had been a servant on the estate of the father, recalled being taken to see her just once and told he would never see her again. He still remembers clearly the exact details of the spot, the scenery, and his feelings when they met. No.47 - "Father was nasty in drink, not a father to me, not interested in me; he once tried to cut

Mother's throat because she had cut her long hair that he liked." The father of No.59 once chopped up a chair, in a vicious display of drunken fury, because a child had spilled jam on it. Other fathers were simply "absent" - "Father was just not interested," said No.54. "Xmas and Easter were never celebrated in our house." The father was always away starting new billiards saloons over the country. No.80's parents were Salvationists: "They were really always too busy to talk to me; I didn't really 'know' them; Mother used to sulk for weeks, not talking to us." The effects of being raised in an orphanage were vividly demonstrated by No.55, whose parents had abandoned him when he was two. He carefully explained how orphanage life helped one to become really "somebody" because one had to learn to stand on one's own feet, insist on one's rights, and one emerged at the end a real man, and so on, but he suddenly burst into tears and yelled, "We were bundled together like sheep in a pen. If you spoke at meals you didn't get any ... we never knew what the rest of the world was like ... I've never been <u>anybody</u> at all, I'm just nobody." It was so abundantly clear, from the way the drinkers spoke of their childhoods, that these scars inflicted at that time were still operating in their adult lives.

GENERAL DISCUSSION

This study investigated the possibility that problem drinking might be associated with specific personality characteristics making for a vulnerability or predisposition to an addictive rather than a non-addictive pathology. Several models were reviewed, some of which emphasized specific needs - dependence or defences against it, needs for coping with anxieties over sexual identity relating to inadequate masculine identification, calming of anxieties over interpersonal relating, hostility discharge - while others focussed on aspects of personality structure as non-specific predictors, such as limited psychological differentiation, myopic attitudes to future consequences, inadequate personality development leading to self-critical and self-control impairments, and social deviance or sociopathy. Findings of the study were as follows:-

(1) While effect of threat could not be conclusively demonstrated, there was some tentative evidence that both problem drinkers and abstainers reacted with increases in self-sufficiency. However, drinkers were discriminated from patients in that the latter were more willing or able to admit to lack of self-sufficiency and to "softness" while drinkers were not discriminated from abstainers or criminals.

(2) Problem drinkers were less heterosexually orientated, eye-fixating longer on males than did patients and criminals, and eye-fixating longer upon males than females, while patients eye-fixated longer on females than on males, with criminals fixating non-significantly longer on females than males. Discrepancy between covert and overt orientation to males was demonstrable only in drinkers.

(3) Problem drinkers were discriminated from patients and abstainers on indices assessing superficiality, instability, and social isolation and withdrawal, but were discriminated from criminals only on indices of withdrawal and isolation. They were not discriminated from patients on indices assessing interpersonal anxieties and discomfort in relating, while criminals and abstainers seemed to have fewer difficulties in relating.

(4) Problem drinkers were less psychologically differentiated (more field dependent) than all other groups.

(5) Problem drinkers were discriminated from all groups on the inventory assessing hostility, but were not discriminated from criminals on the stereoscope, which possibly is a superior measure of tendency to act out hostility.

(6) Problem drinkers were discriminated from all other groups in having a shorter future perspective.

(7) Problem drinkers were discriminated from patients and abstainers, but not from criminals, in being under-socialized, and this was confirmed not only on the hypothesis measure itself (So scale) but on a variety of indices relating to sociopathic characteristics that were used to further investigate the findings of the hypothesis.

In six of seven hypotheses the null hypothesis was rejected and the directional experimental hypotheses were supported, with the exception of the part of Hypothesis 3 dealing with social anxieties, where drinkers and patients were not distinguished from each other. This was the only hypothesis where patients did not differ from drinkers. The only hypothesis where drinkers were not distinguished from abstainers was on the incidental finding in Hypothesis 1, when threatened and non-threatened groups were combined, abstainers, criminals, and drinkers scoring similarly on self-sufficiency and masculinity. On those hypotheses dealing with poor self-control and under-socialization, differences between drinkers versus patients and abstainers were usually extreme, while drinkers did not differ significantly from criminals (the So scale, indices of sociopathy, and acting-out hostility as assessed from the Stereoscope), suggesting that it is in the area of socialization that drinkers tend to be disturbed while patients are not. Arrests for serious offences, general promiscuity, early school difficulties such as truanting and disciplinary difficulties, childhood thieving, wanderlust, and impulsivity all distinguished drinkers from patients and abstainers, but not from criminals.

There were some slight difficulties in replicating Group 1 results in Group 2 on part of Hypothesis 5 (HDHQ) and Hypothesis 2 (eye-fixation to males) when drinkers were compared with patients and criminals, but in both cases

the Group 2 findings only just fell short of the 5% level of significance. In Hypothesis 3 there was greater similarity between Group 2 and Combined Group findings than in Group 1. Since the patients were much more psychiatrically disturbed than out-patients generally are, and often were not "typical" neurotics but sufferers from personality disorders - and several had been heavy drinkers at one point in their lives - while because of the writer's criteria for selection the criminals were less sociopathic than most, the fact that differentiae between patients and drinkers were isolated, and similarities between drinkers and criminals were found on indices of sociopathy, argues a strong case for the validity of the findings as a whole. It could be argued that variations in age, education, and intelligence influenced differential responding, but the patterning of findings would not support such a contention.

Since problem drinkers, while differing from criminals on most variables in this study, were not discriminated from them on measures of social deviance (the So scale, indices of sociopathy, and acting-out hostility as assessed by the Stereoscope) though differing significantly from patients on these measures, models suggesting that drinkers experience difficulties in the area of socialization would be supported by the N.Z. study. This would include the psychoanalytic model (at least as espoused by Fenichel, 1945, and Yorke, 1970). Glover (cited by Yorke, 1970) referred to a localized defect in reality-testing that linked pathological drinking with both psychoses and the psychopathies though in other respects it resembled a neurosis. Bucklew (1960; 1967; 1968) referred to drinkers as "inadequate personalities" in terms of insufficient development of self-control and self-criticalness, falling somewhere between "typical" neurotics (who internalize deviant impulses and accordingly suffer conflict) and shrewd and cold "typical" psychopaths (who appear to treat deviant impulses as if they were ego-syntonic), with impulses "spilling over" into the social sphere. Findings of the present study can be referred to those on pp.35-36,

where the difficulties in classifying drinkers as neurotics or sociopaths were discussed. Models referring to social deviance as a non-specific predictor of problem drinking (e.g. Hill, 1962; Hill et al, 1962) were endorsed by findings of the N.Z. sample, as were the findings of Guze et al (1962; 1969) that of psychiatric disorders associated with criminality, problem drinking was significantly associated while neurosis was not.

Traits of under-socialization - impulsivity, rashness, non-conformity, and hostility - seem to be emerging from more and more studies as being those most useful in predicting later problem drinking (Calahan and Room, 1974, pp.112-116, Goodwin et al, 1975; Jones, 1968; 1971; Kalin, 1972b; Loper et al, 1973; McCord et al, 1960; Robins, 1966; Robins et al, 1962; Williams et al, 1971). While it is possible only in the longitudinal studies to be certain the traits preceded the drinking, many studies are now available in which the presence of such characteristics has been uncovered in very young drinkers (e.g. Foulds and Hassall, 1969; Hassall and Foulds, 1968; Rosenberg, 1969a; Schuckit et al, 1970; Winokur et al, 1970). The N.Z. study confirmed these findings from U.K., U.S.A., and Australian samples by demonstrating that the 25 youngest drinkers, far from not possessing those under-socialized traits expected in the 25 oldest with their history of alcohol abuse twice as long, were significantly more hostile and under-socialized, while significantly more had been arrested for both inebriety and serious offences, had been habitual school truants and had given teachers lots of trouble, and had multiple de facto relationships, while the difference did not quite reach the 5% level of significance on impulsiveness; more recalled childhood thieving and more were superficial in relationships (were divorced or separated, preferred casual friends, had been unfaithful), but these differences were not significant.

Studies cited in the literature review which found social isolation in problem drinkers, and those emphasizing instability of relationships were supported by findings of the N.Z. study. Koller and Castanos (1969) and Rosenberg (1969b) found

drinkers to be more socially isolated (more lived alone) than neurotics, as was also found in the present study. Those schizoid features elaborated by Machover (1959) and Zwerling and Rosenbaum (1959), such as withdrawal, superficiality, and short-term relating - as well as the shyness and difficulty in relating reported from other studies - were found in the N.Z. sample. Using indices of superficiality and isolation, as well as those of social anxiety, helped resolve some of the ambiguities reported in the literature review in showing that while drinkers give the impression of gregariousness it is in the area of long-term deep emotional committment where their specific difficulties lie.

Contemporary theories of defensive cathexis of ultra-masculinity were not supported as explored in Hypothesis 1, though the findings of intense masculinity on the Fe scale in young drinkers by Blane and Chafetz (1971) and Zucker (1968) were also found in young drinkers in the present study. However, in Hypothesis 2 it was clear that drinkers were the only subjects to eye-fixate longer on males than on females (the opposite holding for patients) while verbalizing greater interest in females, from which it was inferred that their covert and overt sexual orientations were not congruent. In their preference for naked males rather than females the drinkers resembled those of Gibbins and Walters (1960), who fell between homosexuals and normals in preference for phallic rather than vaginal symbols. Old Late starters, however, were much more weakly heterosexual and less defensive about it, suggesting that if the theory of "reactive masculinity" has any validity it is more readily demonstrable in Young Early starters, who obtained very masculine Fe scores and fixated only non-significantly longer on males than females as well as verbalizing fewer preferences for males. Findings from the total drinker group thus supported those reviewed in the literature survey which, with a variety of different techniques, found drinkers to be undermined in the masculine role. In comparison with other subjects the drinkers had certainly been exposed to "femininizing" influences, as the family history revealed. Further research should be directed toward devising a superior method of assessing heterosexual

orientation. Zamansky's (1955-56; 1958) method of observing subjects' eye-movements would seem to pose considerable difficulties in timing, since only fractions of seconds differentiated subjects, while the method used in the present study meant that the writer always knew which picture, male or female, was being looked at since it was impossible to insert them into the apparatus without seeing them, thereby introducing the possibility of bias. Perhaps the stereoscopic method could be adapted for further investigation of this apparently promising area, or some of the later pupillary dilation techiques could be utilized to advantage.

Witkin et als' (1954; 1962) model embodying psychological differentiation as another non-specific predictor of problem drinking was supported by the N.Z. study. Witkin (1965) suggested that the less differentiated person tends to be overly dependent upon external sources for his views and values, which might imply that field dependence renders subjects unduly susceptible to the hortatory norms of the problem drinking sub-culture and its stereotyping of hard drinking as "masculine." Even quite recently it has been contended (e.g. by Roebuck and Kessler, 1972, pp.121-122) that field dependence is a consequence of cognitive impairment and not necessarily a predisposing personality variable at all, but the study demonstrated that this was not the most reasonable interpretation of the findings since many years of inebriety did not influence field dependent scoring.

Models emphasizing hostility and difficulties in handling it were supported, thus confirming findings from the longitudinal and retrospective studies and studies using student heavy drinkers who were not alcoholics, which were reviewed in Sections 3, Part 5, and 5, Part 5. While it was clear from that review that neurotics also have elevated aggression scores (e.g. Buss, 1961, p.210), drinkers would seem to obtain scores nearer to those of personality disorders, beyond neurotics' means, in the present study and Pilot Study at Hanmer and in those referred to under Hypothesis 5. That aggression is dramatized in the drinking bout has always been tacitly accepted by AA and epitomized in

their slogan that "stinking thinking" and "resentments" trigger binges.

Models incorporating defective organization of the self in terms of myopic attitudes to the future (e.g. Becker and Israel, 1961; Gliedman, 1956) were supported. The lack of concern over order and self-control, and needs for immediate satisfactions, found in heavy drinking students (Kalin, 1972b, p.229; Park, 1962; Williams, 1967b), and the poor self-control, impulsiveness, and unmonitored affective reactions reported from many studies of hospitalized problem drinkers (with inventories, projective measures, and check-lists) might be expected to lead to the diminished investment in an extended future that was also found in problem drinkers (see Section 5, Part 6). The short future perspectives reported there for problem drinkers were confirmed in this N.Z. sample. Drinkers were less future-orientated than any other group and, while FTP2 was an age-related measure, even the youngest drinkers were less future-orientated than the youngest members of any other groups. The suggestion was made that anticipatory anxiety related to differential sensitivity to loss may interact with defective structural personality development to contribute toward shortened future perspective.

Studies suggesting that overt parent-child disruption was important in pathogenesis of problem drinking rather than neurotic disorder were supported, and the suggestion was made that separation from parents - especially from the father - was of greater importance than father's problem drinking per se. Identification with a problem drinking father is probably far less important in pathogenesis than is failure to adequately identify with the father because of his antagonism or physical absence. It was suggested that findings indicated that the nidus of the drinker's difficulties might lie in his early experiences of deprivation, in view of studies reviewed in the literature survey linking father's absence with the stunting of personality development revealed by field dependence, short future time perspective, and difficulties in controlling aggression found in boys whose fathers were absent from the home. Studies attempting to

link father's problem drinking with a genetic susceptibility in his sons seem not to have taken account of the possibility that the father's heavy drinking and behaviour associated with it had often led to the father-son separations and that it might be the separations rather than the drinking which had relevance for a problem drinking outcome. Robins et al (1962) reported that the father's sociopathic behaviour rather than his alcoholism was a predictor of alcoholism in his sons. Drinkers were the only subjects to have experienced more separations from the father than from the mother, though this was approaching significance in the other conduct disorder group, the criminals, a finding which argues for the validity of theories stressing aetiological similarities between these groups when compared with neurotic disorders. The relevance of parental behaviour for problem drinking was apparent when the Old Late starters were seen not to differ from the psychiatric patient group in terms of parental problem drinking or separations, while Young Early starters were very different from the patients in that all twelve had been separated from their natural parents. Rosenberg (1969a) found significantly more of his younger than older drinkers to have been separated from the father, and in this study significantly more younger than older drinkers had been separated from a parent. Parenthetically, studies of genetic susceptibility have sometimes involved adoptees, on the grounds that if these subjects were separated from alcoholic parents some months after birth, then the presence of alcoholism in them as adults indicates genetic rather than environmental susceptibility (Goodwin, 1971). However, if separation from a natural parent is related to the development of problem drinking, such studies would be contaminated by this factor. That this may be the case is suggested by the study of Schecter et al (cited on p.44) which reported that adult adoptees developing psychiatric illness show significantly more alcoholism than do non-adopted psychiatric patients.

Theory which was not supported in the present study was that of dependence/independence conflict, possible reasons for which were considered extensively under that hypothesis.

It was felt that the findings were as likely to derive from poor experimental design as from lack of validity of the theory when it was later realized how the allocation of subjects to threatened and non-threatened groups might have mixed Old Late with Young Early starters, whose differential responses to threat could have cancelled out any over-all effects of threat. Further research could be directed toward utilizing a superior techique for threat, with groups divided by some prior method into those likely to respond by hyper-independence and those likely to respond with confession of inadequacy. Whether drinkers as a group were really more self-sufficient and masculine than patients, or reactively so, could not be established in this study; it could be concluded only that patients were more able to admit inadequacy and "softness." However, MacAndrew's (1967) finding that drinkers could be distinguished from patients by having left home at an earlier age, possibly as a demonstration of need to assert early independence, was also found in the N.Z. study.

Theories based on the assumption that differences in personality structure are not required to explicate pathological drinking or any other symptomatology, such as general anxiety-reduction theories or those which hold that if symptoms are learned, any symptom may develop in any person, were not supported by the findings of this study. Kraft (1971) was more specific about the anxieties being reduced by heavy drinking, making social anxieties the pivot of his behaviour modification programme, but it must be noted that social anxiety was the one variable drinkers shared with patients! Needed by any anxiety-reduction theory, specific or non-specific, is some explanatory construct accounting for why some very disturbed people consume alcohol in pathological quantities while others do not.

Hoff (1959) stressed that more studies of problem drinking were required, to outline the extent to which research results were applicable generally or were specific to special populations. The N.Z. study suggests that generalization can probably be safely made in at least a few areas: hostility tending to be overtly expressed, myopic future perspective,

limited psychological differentiation, opting for superficial and unstable interpersonal relationships, and under-socialization. (In the areasof dependence/independence conflict and sexual orientation, better designed research is required, though especially in the latter area results look promising). Although the argument appears ad nauseam that hospitalized problem drinkers cannot be regarded as representative of the drinking population as a whole, results not being generalizable with impunity, there must surely come a time when sufficient research has accumulated to convince even the most vehement sceptic. The onus now would seem to lie on those promulgating this view to demonstrate that characteristics found in hospitalized samples do not appear in incipient problem drinkers; all extant evidence is to the contrary. A sufficient number of longitudinal studies (Jones, 1968; 1971; McCord et al, 1960; Robins, 1966; Robins et al, 1962) and studies of student heavy drinkers who could in no way be regarded as alcoholics (Kalin, 1972b; Loper et al, 1973; Park, 1962; Parker, 1969; Williams, 1965; 1967b; 1968) have accumulated which point to the presence of traits in individuals either before drinking began at all or right at the start of a drinking career, that parallel those found in hospitalized samples. These studies render arguments about non-generalizability of results from hospitalized samples less cogent than was the case some years ago.

Since problem drinkers so closely resembled criminals on variables related to under-socialization, the question arises whether sociopathic traits would be necessary for a problem drinking outcome in a majority of these individuals (see pp.35-36). Foulds and Hassall (1969) speculated that samples containing many Old Late starters would present a more neurotic-like profile while samples containing many Young Early starters would present a more sociopathic profile. The present study confirmed this: Young Early starters differed significantly from patients on 12 of 14 indices of sociopathy (including aggression) in the direction of greater personality disorder in the former group, while Old Late starters differed from patients on only 2 of 14. However, only 26% of the total group

were Old Late starters and 47% were Early starters, the remainder having begun drinking heavily between the ages of 31-39. Since in spite of the presence of this 26% of neurotic-like drinkers the total drinker sample was distinguished from patients on all indices dealing with socialization in Hypothesis 7, it would seem that some tendency toward under-socialization must characterize drinkers in general, though clearly in attenuated form in these older drinkers. While it was not part of the aim of this study to form a typology of drinkers, the Old Late starters would seem to conform in every detail to the reactive end of the essential/reactive dimension proposed by Knight (1938) and extended by Levine and Zigler (1973) and Rudie and McGaughran (1961). According to the criteria underlying this bifurcation, the reactive drinkers should show less "oral" and more homosexual proclivities, less culture-combativeness (lower hostility, fewer arrests, higher socialization scores), superior education and intelligence, later onset of drinking, maintenance of deep emotional relationships (not divorced, preferring casual friends, being unfaithful, or having multiple de factos), and be more occupationally stable (less preference for job and geographical change). On all these criteria the Old Late starters were distinguished from the Young Early starters in the expected direction (though not always reaching the 5% level of significance).

Statements still appear in the literature that even if distinguishing characteristics are found between drinkers and patients there is no certainty that these were antecedents and not consequences of drinking (e.g. Roebuck and Kessler, 1972, p.123). However, it would seem reasonable to draw inferences about predisposition if it could be shown that (a) Subjects recalled evidence of difficulties before problem drinking began, e.g. antisocial difficulties, or interpersonal problems in childhood, (b) If traits discriminating the drinkers from patients and others were still discriminating when youngest drinkers were compared with other young subjects, and (c) If these traits could be demonstrated in drinkers with the shortest number of years of pathological drinking when compared with those with the most years of abuse.

(a) Drinkers recalled evidence of antisocial behaviour in school years and differed significantly from patients and abstainers, but not from criminals, on the following: being suspended from school once or more, habitual truanting, and childhood thieving, and in addition differed significantly from abstainers in having been sent to the Principal for playing up, and giving teachers lots of trouble. It was also shown in Hypothesis 7 that many crimes committed had preceded problem drinking by many years, often starting when the subject was only seven or eight years old. A majority of subjects with adult criminal records admitted to periods of thieving in childhood. In the area of interpersonal difficulties, significantly fewer drinkers than other subjects recalled having many close friends, and falling just short of the 5% significance level more drinkers than criminals and abstainers had no close adolescent friends and the difference between drinkers and patients in the same direction was approaching significance.

(b) Young drinkers eye-fixated (non-significantly) longer on males than did other young subjects; young drinkers were significantly more field dependent than other young subjects; young drinkers were significantly more hostile than young patients and abstainers on the Stereoscope, and compared with all other young subjects on the HDHQ; young drinkers had a shorter future perspective on FTP1 than any other young subjects but only the comparison with young abstainers was significant; young drinkers had a shorter future perspective on FTP2 than other young subjects, but only the comparisons with abstainers and criminals were significant; young drinkers were significantly more under-socialized than other young subjects. (No computations were made for Hypothesis 3, in view of the number that would have been involved, and Hypothesis 1 was, of course, not supported by the findings).

(c) On those characteristics usually held to be consequences of years of chronic inebriation, Young Early relative to Old Early starters had significantly lower socialization scores, significantly higher aggression scores on the HDHQ and identical high scores on the Stereoscope; significantly more

recalled giving the teachers lots of trouble at school, and differences fell just short of the 5% level in that more had been arrested for serious offences. Non-significant but sizeable differences were found on the following: more Young Early starters were divorced or separated, preferred casual friends, had de facto relationships, had illegitimate children, had no close friends, were impulsive, and had been habitual truants and sent to the Principal frequently for playing up.

If years of abuse were relevant to sociopathy, Young Early and Old Early starters should have had many significant differences between them on the indices of Hypothesis 7 and the So scale, but in fact these groups were more similar to each other (only one significant difference and one falling just short of the 5% level) than were the Young Early to the Old Lates (six significant differences) or the Old Early to the Old Late starters (three significant differences and three falling just short of the 5% level). These findings of few differences between Young Early and Old Early starters when compared with Old Late starters parallel those of Foulds and Hassall (1969) on similar indices of sociopathy.

It must be noted, however, that the Young Early/Old Early/Old Late subdivision contained very small numbers of subjects, especially the Young Early group, as did the groups of youngest versus oldest drinkers, and in a few instances cell frequencies were really too small for the chi-square comparisons to be as accurate as would have been the case with larger frequencies, so that findings must be interpreted with caution. Supporting the reliability of the findings, though, is the fact that they were always in the predicted direction, if not always significant, and they were never discrepant with findings from the Early/Middle/Late comparison which involved much larger numbers of subjects; in addition the findings are in line with others reported in the literature (Foulds and Hassall, 1969; Rosenberg, 1969a).

It would seem a reasonable inference that the variables studied here were relatively enduring aspects of drinkers' personalities and were more importantly related to personality

structure and its probable role in predisposition than to the effects of alcohol on personality. This was especially true of variables relating to under-socialization, which were those not distinguishing drinkers from criminals.

Extrapolating from the findings of this study it would seem likely that a problem drinking outcome can develop when many needs are satisfied by alcohol and the personality structure permits it. Some of these needs would be found in the drug's ability to facilitate relationships (Hypothesis 3); since drinkers were found to be extremely shy, self-conscious, found relationships hard to establish, and opted for superficiality and casual encounters, it would be expected that the disinhibiting effects of alcohol would help ease relationships, provide company for the lonely and isolated (especially the company of people with similar difficulties in relating), enabling superficial pub-relationships to develop without deep emotional committment, and facilitating communication usually inhibited by shyness. Again, because of its stereotyped function as "masculine," heavy drinking would satisfy the need for integration as a real male in someone whose covert orientation to males is discrepant with his need to see himself as intensely masculine - "cock" of the walk, a man amongst men - while providing the older weakly heterosexually orientated male with the masculine company he desires (Hypothesis 2). Alcohol also enables dramatization within the alcoholic bout of ossified attitudes toward parent-figures, enabling intense aggressiveness to be discharged (Hypothesis 5); if, by his attack on himself by total intoxication, the drinker is really attacking hated internalized parent-figures, as some of the psychoanalysts (e.g. Glover, cited by Yorke, 1970) have suggested, the apparently self-destructive and persistently punishing nature of habitual intoxication becomes much more understandable, and if this were so it might partially explain why the punishing consequences of terminal-phase drinking seem not to be aversive for the problem drinker. However, this study would seem to have indicated that the personality structure permitting needs to be dramatized in alcoholic bouts is of equal, if not greater,

importance than the needs themselves, supporting the comment of Phillips and Framo (cited on p.38) that psychopathology would profit from being re-written in terms of personality development: diffuse-discrete-integrated, rather than oral-anal-genital. Relevant to this might be the inadequate development of impulse control and self-criticalness, reflected in myopic attitudes toward the future (Hypothesis 6) and under-socialized behaviour with acceptance of aggressive, unconventional, deviant ways of satisfying needs (Hypothesis 7), and the limited differentiation of the personality organization (Hypothesis 4) with its possibly attendant ostrich-like global defences which might make such individuals particularly prone to opt for a substance like alcohol whose narcotizing functions obtund awareness of the very frustrating realities with which all inadequate personalities have to contend. The abstainers, who might well possess some of the problems alcohol could assuage, stood in sharp contrast as being hyper-conventional and conforming, and orientated to long-term goals - a personality structure which would not permit relief to be gained in such a manner or at such a price. Jessor and Jessor (1975) also noted extreme conventionality in student abstainers, while Jones (1968) found over-control in children who later became abstainers. There did seem to be some evidence of a clinical nature that the abstainers were intensely resistant toward expressing dependency and resented it extremely in others; if they did share, with drinkers, anxieties over dependency, they had found a thoroughly conventional and socially acceptable method of solving such problems by becoming part of the church "family" where they were supported both emotionally and, in this particular church, financially.

The real point of research into problem drinking, of course, lies in its implications for treatment and prevention. Those men most at risk would appear to be young, angry, impulsive, "masculine" males with severely damaged personalities manifested by under-socialized traits dating back to school years. Unfortunately, from the prophylactic viewpoint, this group comprises precisely those individuals who are least likely to profit from a treatment situation, and who would be least likely to be enticed into such a situation because they

would obturate themselves against any suggestion that treatment was needed. This failure to realize the presence of illness may well be one of the drinker's major problems for, clinically, he impresses as a naïve personality, barely inchoate as an individual, with very little awareness of his own psychological processes and limited conceptions of his own motivations; he seems to experience greater difficulties than do most persons in evaluating situations in terms of cause-and-effect sequences. The magical and unrealistic thinking documented in the two Pilot Studies, and the arbitrary distortions of reality evidenced by drinkers' reactions in trying to change the geometric configurations on the EFT cards to conform with their personal expectations of where the figures should lie, testify to these difficulties. The findings of Mayfield (1968b), Tamerin et al (1970), and Vannicelli (1972) suggested that drinkers knew little about their drunken selves and the changes occuring during intoxication were not what they had predicted. Basic courses in personality development and motivation in the educational curriculum, while in no way affecting the underlying causes of psychiatric disturbance, might at the very least enlarge awareness of the techniques we all use for coping with difficulties. By the time the drinker has realized there is something pathological about his method of coping it is usually, for him, too late.

So far as treatment is concerned, there is some evidence that prolonged psychotherapy can effect changes in at least one of the variables considered in this thesis (e.g. the findings of Ricks et al, 1964, that future perspective lengthened in psychotherapeutically treated delinquent boys, compared with untreated boys). However, for a variety of reasons it is difficult to imbricate theory and treatment in this area and the writer feels constrained to note, while trying to avoid being tendentious, that in N.Z. there seems little evidence that the problem of pathological drinking is being adequately tackled either at the grass roots level or at its terminal phase. Findings of the study would seem to suggest that treatments aimed mostly at symptom removal, whatever

their theoretical underpinnings may be, are unlikely to affect the severity of the underlying personality disorder the study has revealed. One can only query the wisdom of leaving the treatment of such sick individuals predominantly in the hands of lay organizations.

CONCLUSIONS

A. General:

1. The study has demonstrated the existence of some personality characteristics which distinguished problem drinkers from other subjects. Theories endorsing the view that any personality type is vulnerable to the development of pathological drinking were not supported. The variables isolated were found to characterize problem drinkers, not a general sample of psychiatric patients, abstainers, and in several respects not a sample of criminals.

2. The study supported several models of problem drinking, but those emphasizing social deviance as of particular importance were supported in that findings confirmed those of longitudinal and retrospective studies in suggesting that traits of under-socialization in early years are probably the best predictors of later problem drinking.

3. Evidence that years of alcohol abuse did not influence the appearance of some of the variables investigated has strengthened their plausibility as antecedents of abuse (and therefore possibly predisposing to such abuse) rather than consequences.

4. The study indicated that some personality characteristics reported for drinkers elsewhere - diminished heterosexual orientation, social isolation and superficiality in relationships and social anxiety, field dependence, augmented hostility tending to be overtly expressed, short future perspective, and under-socialization - were generalizable to a N.Z. population of such drinkers.

5. The study utilized an explanatory construct - a personality structure that is poorly differentiated, myopic toward the future, and socially deviant - which might account for a problem drinking outcome in some psychiatrically disturbed individuals but not in others.

B. Specific:

1. Hypothesis 1: The null hypothesis was not rejected; effects of threat on self-sufficiency and masculinity could not be demonstrated conclusively. It could be concluded only that problem drinkers described themselves as more self-sufficient and masculine than did psychiatric patients, while abstainers and criminals did not differ from drinkers.

2. Hypothesis 2: The null hypothesis was rejected. Drinkers were more interested in males than in females while the reverse held for patients and (non-significantly) for criminals. Discrepancy between overt and covert orientation to males in drinkers was inferred from some of the findings.

3. Hypothesis 3: The null hypothesis was rejected. Drinkers were clearly disturbed in the area of interpersonal relating, but the directional hypothesis was supported only on items dealing with superficiality, short-term relating, and social isolation; in terms of feelings of discomfort and social anxieties drinkers did not differ significantly from patients.

4. Hypothesis 4: The null hypothesis was rejected. Drinkers differed from all other groups in being less psychologically differentiated (field dependent).

5. Hypothesis 5: The null hypothesis was rejected. Drinkers were more hostile than all other groups on the inventory measure, while being not significantly distinguished from criminals on the Stereoscope.

6. Hypothesis 6: The null hypothesis was rejected. Drinkers differed from all other groups on both measures in demonstrating a shorter future time perspective.

7. Hypothesis 7: The null hypothesis was rejected. Drinkers were more under-socialized than patients and abstainers, though not differing significantly from criminals.

While no hypothesis was formulated for family background investigations, findings were that significantly more problem drinkers than other subjects had pathologically drinking fathers; only problem drinkers rated significantly fewer fathers than mothers as warm and kind while being similar to criminals in rating fewer fathers than mothers as positive; significantly more problem drinkers had been separated from one or both parents for longer than one year, by age 15, and when separations shorter than one year were included, compared with patients and abstainers, but not differing from criminals; and only problem drinkers had been separated from significantly more fathers than from mothers.

APPENDIX A:

Statistical Material

TABLE 4.1: - Number of Subjects arrested for Inebriety and Serious Offences (percentages parenthesized)

	Hanmer	Carrington	Kingseat
N	29	41	30
Inebriety arrests	10 (34)	29 (71)	23 (77)

X^2 Hanmer/Carrington = 7.63, $p < .01$
Hanmer/Kingseat = 9.00, $p < .01$
Carrington/Kingseat = 0.08, N.S.

Serious Offences	11 (38)	20 (49)	12 (40)

X^2 Hanmer/Carrington = 0.43, N.S.
Hanmer/Kingseat = 0.01, N.S.
Carrington/Kingseat = 0.24, N.S.

Note: For every chi-square table in this study, df = 1.

TABLE 4.2: - Number of Subjects Currently Married (percentages parenthesized)

	PDs	PTs	ABs	CRs
N	100	60	30	30
	30 (30)	31 (52)	28 (93)	9 (30)

X^2 PD/PT = 6.57, $p < .02$
PD/CR = 0.05, N.S.
PD/AB = 34.94, $p < .001$

TABLE 4.3: - Number of Subjects Never Married (percentages parenthesized)

	PDs	PTs	ABs	CRs
N	100	60	30	30
	23 (23)	20 (33)	2 (7)	5 (17)

X^2 PD/PT = 1.54, N.S.
PD/CR = 0.23, N.S.
PD/AB = 2.98, $p < .10$ $p > .05$

TABLE 4.4: - (The material for this Table, dealing with divorce/separation, now appears in Table 4.125)

TABLE 4.5: - Relationships between Verbal Intelligence, Education, and Age of Onset of Alcohol Abuse.

	PDs	PTs	ABs	CRs
N	100	60	30	30
Intelligence/education r =	.39*	.45*	.33	.61*
Intelligence/age onset r =	.06	-	-	-
Education/age of onset r =	.00	-	-	-

*$p < .001$

TABLE 4.6: - Analysis of Variance for Age, Group 1.

Source:	df	ss	ms	F	p
Between groups	3	1015.62	338.54	3.18	<.05
Within groups	136	14460.51	106.32		
Total	139	15476.13			

TABLE 4.7: - Analysis of Variance for Age, Group 2.

Source:	df	ss	ms	F	p
Between groups	3	1307.19	435.73	3.49	<.05
Within groups	136	16943.94	124.58		
Total	139	18251.13			

TABLE 4.8: - Analysis of Variance for Verbal Intelligence, Group 1.

Source:	df	ss	ms	F	p
Between groups	3	692.90	230.96	4.31	<.01
Within groups	136	7279.51	53.52		
Total	139	7972.41			

TABLE 4.9: - Analysis of Variance for Verbal Intelligence, Group 2.

Source:	df	ss	ms	F	p
Between groups	3	1247.58	415.86	6.60	<.001
Within groups	136	8561.63	62.95		
Total	139	9809.21			

TABLE 4.10: - Analysis of Variance for Education, Group 1.

Source:	df	ss	ms	F	p
Between groups	3	140.27	46.75	5.18	<.01
Within groups	136	1226.87	9.02		
Total	139	1367.14			

TABLE 4.11: - Analysis of Variance for Education, Group 2.

Source:	df	ss	ms	F	p
Between groups	3	133.99	44.66	3.49	<.05
Within groups	136	1738.23	12.78		
Total	139	1872.22			

TABLE 4.12: - Analysis of Variance for Weeks Hospitalized, Group 1.

Source:	df	ss	ms	F	p
Between groups	2	5153.66	2576.83	19.47	<.001
Within groups	107	14158.16	132.31		
Total	109	19311.82			

TABLE 4.13: - Analysis of Variance for Weeks Hospitalized, Group 2.

Source:	df	ss	ms	F	p
Between groups	2	5690.77	2845.38	21.40	< .001
Within groups	107	14223.22	132.92		
Total	109	19913.99			

TABLE 4.14: - t-tests for Abstainers and Criminals versus Patients and versus each other on Age, Verbal Intelligence, and Education.

		t	p	
Age	PT/AB	2.235	< .05	
	PT/CR	0.556	N.S.	(Means and S.D.s are given in Tables 3.15, 3.17, and 3.19)
	AB/CR	1.617	N.S.	
Intell.	PT/AB	3.289	< .005	
	PT/CR	1.063	N.S.	
	AB/CR	3.515	< .001	
Educat.	PT/AB	0.942	N.S.	
	PT/CR	1.865	< .10 p > .05	
	AB/CR	2.418	< .02	

TABLE 4.15: - Comparison of Group 1 versus 2 Drinkers on the Massey Verbal Intelligence test.

	Group 1	Group 2	t	p
N	50	50		
Mean	27.32	24.10		
S.D.	7.44	9.47	1.889	< .10 p > .05

TABLE 4.16: - Comparison of Group 1 versus 2 Patients on the Massey Verbal Intelligence test.

	Group 1	Group 2	t	p
N	30	30		
Mean	28.03	26.86		
S.D.	7.46	6.48	0.646	N.S.

TABLE 4.17: - Comparison of Group 1 versus 2 Drinkers on Education, shown in Years.

	Group 1	Group 2	t	p
N	50	50		
Mean	10.54	10.32		
S.D.	2.33	3.61	0.361	N.S.

TABLE 4.18: - Comparison of Group 1 versus 2 Patients on Education, shown in Years.

	Group 1	Group 2	t	p
N	30	30		
Mean	12.36	11.75		
S.D.	3.12	3.80	0.685	N.S.

TABLE 4.19: - Comparison of Group 1 versus 2 Drinkers on Age.

	Group 1	Group 2	t	p
N	50	50		
Mean	44.98	44.82		
S.D.	9.16	12.28	0.073	N.S.

TABLE 4.20: - Comparison of Group 1 versus 2 Patients on Age.

	Group 1	Group 2	t	p
N	30	30		
Mean	38.83	37.40		
S.D.	12.29	11.13	0.473	N.S.

TABLE 4.21: - Comparison of Group 1 versus 2 Drinkers on Number of Weeks Hospitalized.

	Group 1	Group 2	t	p
N	50	50		
Mean	6.51	5.59		
S.D.	3.37	3.13	1.412	N.S.

TABLE 4.22: - Comparison of Group 1 versus 2 Patients on Number of Weeks Hospitalized.

	Group 1	Group 2	t	p
N	30	30		
Mean	5.68	5.10		
S.D.	4.68	5.18	0.456	N.S.

TABLE 4.23: - Comparison of Group 1 versus 2 Drinkers on Years of Alcohol Abuse.

	Group 1	Group 2	t	p
N	50	50		
Mean	13.14	12.46		
S.D.	10.61	9.22	0.344	N.S.

TABLE 4.24: - Comparison of Group 1 versus 2 Drinkers on Age of Onset of Abuse.

	Group 1	Group 2	t	p
N	50	50		
Mean	31.64	31.54		
S.D.	13.00	13.07	0.038	N.S.

TABLE 4.25: - Comparison of Group 1 versus 2 Drinkers, and Group 1 versus 2 Patients, on Arrests for Serious Offences (percentages parenthesized).

	PD1	PD2	PT1	PT2
N	50	50	30	30
Serious arrests	23 (46)	20 (40)	4 (13)	9 (30)

X^2 PD1/PD2 = 0.16, N.S.
PT1/PT2 = 1.57, N.S.

TABLE 4.26: - Analysis of Variance for Age, Early/Middle/Late onset Drinkers.

Source:	df	ss	ms	F	p
Between groups	2	3012.55	1506.27	17.23	<.001
Within groups	97	8477.23	87.39		
Total	99	11489.78			

TABLE 4.27: - Means, Standard Deviations, and t-tests for Age, Early/Middle/Late onset Comparisons.

	N	Mean	S.D.	t	p
Early	47	39.87	10.73	E/L 5.763	<.001
Middle	25	45.28	8.82	E/M 2.157	<.05
Late	28	52.96	6.94	M/L 3.541	<.001

TABLE 4.28: - Analysis of Variance for Age, Young Early/Old Early/Old Late starter Comparisons.

Source:	df	ss	ms	F	p
Between groups	2	7138.07	3569.03	134.64	<.001
Within groups	54	1431.43	26.50		
Total	56	8569.50			

TABLE 4.29: - Means, Standard Deviations, and t-tests for Age, Young Early / Old Early/Old Late starters

	N	Mean	S.D.	t	p
YE	12	25.25	3.62	YE/OE 16.081	<.001
OE	19	49.84	4.43	YE/OL 15.122	<.001
OL	26	54.11	6.10	OE/OL 2.587	<.02

TABLE 4.30: - Analysis of Variance for Age, Youngest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	828.37	276.12	13.65	<.001
Within groups	66	1334.42	20.21		
Total	69	2162.79			

TABLE 4.31: - Means, Standard Deviations, and t-tests for Age, Youngest Subjects.

	N	Mean	S.D.	t	p
PDs	25	30.24	5.66	PD/PT 3.325	<.005
PTs	15	25.13	2.23	PD/AB 3.061	<.005
ABs	15	35.46	4.37	PD/CR 0.932	N.S.
CRs	15	31.80	4.02		

TABLE 4.32: - Analysis of Variance for Age, Oldest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	1084.90	361.63	10.04	<.001
Within groups	66	2375.89	35.99		
Total	69	3460.79			

TABLE 4.33: - Means, Standard Deviations, and t-tests for Age, Oldest Subjects.

	N	Mean	S.D.	t	p
PDs	25	57.64	4.41	PD/PT 1.927	< .10 p>.05
PTs	15	54.86	4.38	PD/AB 3.013	<.005
ABs	15	52.00	7.46	PD/CR 5.411	<.001
CRs	15	47.20	7.83		

TABLE 4.34: - Comparison of Youngest versus Oldest Subjects on Age.

	Youngest	S.D.	Oldest	S.D.	t	p
PDs	30.24	5.66	57.64	4.41	19.072	<.001
PTs	25.13	2.23	54.86	4.38	23.385	<.001
ABs	35.46	4.37	52.00	7.46	7.401	<.001
CRs	31.80	4.02	47.20	7.83	6.775	<.001

TABLE 4.35: - Analysis of Variance for Verbal Intelligence, Early/Middle/Late onset Drinkers.

Source:	df	ss	ms	F	p
Between groups	2	35.77	17.88	.23	N.S.
Within groups	97	7340.81	75.67		
Total	99	7376.58			

TABLE 4.36: - Means and Standard Deviations for Verbal Intelligence, Early/Middle/Late.

	N	Mean	S.D.	t	p
Early	47	25.14	8.84		
Middle	25	25.80	8.65	(N.S. by F-test)	
Late	28	26.57	8.49		

TABLE 4.37: - Analysis of Variance for Verbal Intelligence, Young Early/Old Early/Old Late starters.

Source:	df	ss	ms	F	p
Between groups	2	1448.28	724.14	13.21	<.001
Within groups	54	2957.92	54.77		
Total	56	4406.20			

TABLE 4.38: - Means, Standard Deviations, and t-tests for Verbal Intelligence, YE/OE/OL Starters.

	N	Mean	S.D.	t	p
YE	12	16.25	8.35	YE/OE 5.443	<.001
OE	19	30.10	5.83	YE/OL 3.585	<.001
OL	26	26.34	7.93	OE/OL 1.745	< .10 p>.05

TABLE 4.39: - Analysis of Variance for Verbal Intelligence, Youngest PDs, PTs, ABs, CRs.

Source:	df	ss	ms	F	p
Between groups	3	1287.73	429.24	6.95	<.001
Within groups	66	4072.56	61.70		
Total	69	5360.29			

TABLE 4.40: - Means, Standard Deviations, and t-tests for Verbal Intelligence, Youngest Subjects.

	N	Mean	S.D.	t	p
PDs	25	20.76	9.53	PD/PT 2.460	< .02
PTs	15	27.66	6.69	PD/AB 4.169	< .001
ABs	15	31.73	4.52	PD/CR 0.797	N.S.
CRs	15	23.13	8.35		

TABLE 4.41: - Analysis of Variance for Verbal Intelligence, Oldest PDs, PTs, ABs, CRs.

Source:	df	ss	ms	F	p
Between groups	3	509.22	169.74	2.98	< .05
Within groups	66	3752.56	56.85		
Total	69	4261.78			

TABLE 4.42: - Means, Standard Deviations, and t-tests for Verbal Intelligence, Oldest Subjects.

	N	Mean	S.D.	t	p
PDs	25	26.64	8.41	PD/PT 0.782	N.S.
PTs	15	24.66	6.36	PD/AB 2.418	< .05
ABs	15	32.46	5.13	PD/CR 0.531	N.S.
CRs	15	28.13	8.93		

TABLE 4.43: - Comparison of Youngest versus Oldest Subjects on Verbal Intelligence.

	Youngest	S.D.	Oldest	S.D.	t	p
PDs	20.76	9.53	26.64	8.41	2.312	< .05
PTs	27.66	6.69	24.66	6.36	1.257	N.S.
ABs	31.73	4.52	32.46	5.13	0.414	N.S.
CRs	23.13	8.35	28.13	8.93	1.582	N.S.

TABLE 4.44: - Analysis of Variance for Education, Early/Middle/Late onset Drinkers.

Source:	df	ss	ms	F	p
Between groups	2	18.40	9.20	1.00	N.S.
Within groups	97	890.60	9.18		
Total	99	909.00			

TABLE 4.45: - Means and Standard Deviations for Education, in Years, Early/Middle/Late onset Drinkers.

	N	Mean	S.D.	t	p
Early	47	10.74	3.41		
Middle	25	9.70	1.83	(N.S. by F-test)	
Late	28	10.55	3.18		

TABLE 4.46: - Analysis of Variance for Education, Young Early/Old Early/Old Late Starters.

Source:	df	ss	ms	F	p
Between groups	2	34.99	17.49	1.34	N.S.
Within groups	54	703.57	13.02		
Total	56	738.56			

TABLE 4.47: - Means and Standard Deviations for Education, in years, Young Early/Old Early/Old Late starters.

	N	Mean	S.D.	t	p
YE	12	9.75	1.65		
OE	19	11.78	4.68	(N.S. by F-test)	
OL	26	10.44	3.33		

TABLE 4.48: - Analysis of Variance for Education, Youngest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	171.26	57.08	6.44	<.001
Within groups	66	584.60	8.85		
Total	69	755.86			

TABLE 4.49: - Means, Standard Deviations, and t-tests for Education, in years, Youngest Subjects

	N	Mean	S.D.	t	p
PDs	25	10.28	2.03	PD/PT 2.964	<.01
PTs	15	12.80	3.36	PD/AB 3.928	<.001
ABs	15	14.13	4.17	PD/CR 0.633	N.S.
CRs	15	10.73	2.44		

TABLE 4.50: - Analysis of Variance for Education, Oldest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	11.70	3.90	.33	N.S.
Within groups	66	767.47	11.62		
Total	69	779.17			

TABLE 4.51: - Means and Standard Deviations for Education, in years, Oldest Subjects.

	N	Mean	S.D.	t	p
PDs	25	10.92	3.62		
PTs	15	11.70	3.31	(N.S. by F-test)	
ABs	15	11.50	3.09		
CRs	15	10.63	3.41		

TABLE 4.52: - Comparison of Youngest versus Oldest Subjects in Years of Education.

	Youngest	S.D.	Oldest	S.D.	t	p
PDs	10.28	2.03	10.92	3.62	0.769	N.S.
PTs	12.80	3.36	11.70	3.31	0.902	N.S.
ABs	14.13	4.17	11.50	3.09	1.962	<.10 p> .05
CRs	10.73	2.44	10.63	3.41	0.092	N.S.

TABLE 4.53: - Analysis of Variance for Years of Alcohol Abuse, Early/Middle/Late starters.

Source:	df	ss	ms	F	p
Between groups	2	3307.99	1653.99	25.09	< .001
Within groups	97	6393.78	65.91		
Total	99	9701.77			

TABLE 4.54: - Means, Standard Deviations, and t-tests for Years of Alcohol Abuse, Early/Middle/Late starters.

	N	Mean	S.D.	t	p
Early	47	18.62	9.83	E/L 6.687	< .001
Middle	25	10.15	7.57	E/M 3.752	< .001
Late	28	5.39	4.56	M/L 2.803	< .01

TABLE 4.55: - Analysis of Variance for Years of Alcohol Abuse, Young Early/Old Early/Old Late starters

Source:	df	ss	ms	F	p
Between groups	2	5163.45	2581.72	112.40	<.001
Within groups	54	1240.23	22.96		
Total	56	6403.68			

TABLE 4.56: - Means, Standard Deviations, and t-tests for Years of Abuse, Young Early/Old Early/Old Late starters.

	N	Mean	S.D.	t	p
YE	12	8.62	3.99	YE/OE 9.854	< .001
OE	19	26.78	5.52	YE/OL 1.817	< .10 p>.05
OL	26	5.84	4.54	OE/OL 13.945	< .001

TABLE 4.57: - Comparison of Youngest versus Oldest Drinkers on Years of Alcohol Abuse.

	Youngest	S.D.	Oldest	S.D.	t	p
Mean	8.84	6.48	16.18	10.63	2.946	< .005

TABLE 4.58: - Analysis of Variance for Age of Onset of Abuse, Early/Middle/Late starters.

Source:	df	ss	ms	F	p
Between groups	2	13121.35	6560.67	179.24	<.001
Within groups	97	3550.33	36.60		
Total	99	16671.68			

TABLE 4.59: - Means, Standard Deviations, and t-tests for Age of Onset of Abuse, Early/Middle/Late Starters.

	N	Mean	S.D.	t	p
Early	47	20.52	6.80	E/L 16.750	< .001
Middle	25	34.50	2.95	E/M 9.761	< .001
Late	28	47.57	6.68	M/L 9.009	< .001

TABLE 4.60: - Analysis of Variance for Age of Onset of Abuse, Young Early/Old Early/Old Late Starters.

Source:	df	ss	ms	F	p
Between groups	2	11834.08	5917.04	206.57	< .001
Within groups	54	1546.78	28.64		
Total	56	13380.86			

TABLE 4.61: - Means, Standard Deviations, and t-tests for Age of Onset of Alcohol Abuse, Young Early/Old Early/Old Late Starters.

	N	Mean	S.D.	t	p
YE	72	16.62	3.40	YE/OE 3.108	< .005
OE	19	21.31	4.46	YE/OL 15.760	< .001
OL	26	48.23	6.51	OE/OL 15.522	< .001

TABLE 4.62: - Comparison of Youngest versus Oldest Drinkers on Age of Onset of Alcohol Abuse.

	Youngest	S.D.	Oldest	S.D.	t	p
Mean	21.32	7.74	40.74	13.30	6.308	< .001

Hypothesis 1:

TABLE 4.63: - Analysis of Variance for the BSS scale, Group 1.

Source:	df	ss	ms	F	p
Between groups	3	1467.54	489.18	9.73	<.001
Within groups	136	6831.44	50.23		
Total	139	8298.98			

TABLE 4.64: - Analysis of Variance for the BSS scale, Group 2.

Source:	df	ss	ms	F	p
Between groups	3	1398.69	466.23	8.94	<.001
Within groups	136	7089.15	52.12		
Total	139	8487.84			

TABLE 4.65: - Analysis of Variance for the Fe scale, Group 1.

Source:	df	ss	ms	F	p
Between groups	3	264.62	88.20	5.94	<.001
Within groups	136	2016.94	14.83		
Total	139	2281.56			

TABLE 4.66: - Analysis of Variance for the Fe scale, Group 2.

Source:	df	ss	ms	F	p
Between groups	3	184.90	61.63	3.64	<.05
Within groups	136	2298.31	16.89		
Total	139	2483.21			

TABLE 4.67: - Comparison of Group 1 versus 2 Drinkers on BSS and Fe scales.

	Group 1	Group 2	t	p
N	50	50		
BSS mean	35.02	32.86		
S.D.	7.32	8.29	1.379	N.S.
Fe mean	17.72	17.92		
S.D.	3.89	4.28	0.244	N.S.

TABLE 4.68: - Comparison of Group 1 versus 2 Patients on BSS and Fe scales.

	Group 1	Group 2	t	p
N	30	30		
BSS mean	27.30	26.96		
S.D.	7.87	6.72	0.176	N.S.
Fe mean	20.60	20.03		
S.D.	3.69	4.23	0.552	N.S.

TABLE 4.69: - Comparison of Group 1 Drinkers versus Group 2 Patients on BSS and Fe scales.

	Group 1 PDs	Group 2 PTs	t	p
N	50	30		
BSS mean	35.02	26.96		
S.D.	7.32	6.72	4.904	<.001
Fe mean	17.72	20.03		
S.D.	3.89	4.23	2.489	<.01

(One-tailed test)

TABLE 4.70: - Comparison of Group 2 Drinkers versus Group 1 Patients on BSS and Fe scales.

	Group 2 PDs	Group 1 PTs	t	p
N	50	30		
BSS mean	32.86	27.30		
S.D.	8.29	7.87	2.956	<.005
Fe mean	17.92	20.60		
S.D.	4.28	3.69	2.850	<.005

(One-tailed test)

TABLE 4.71: - Analysis of Variance for BSS scale, Early/Middle/Late onset Drinkers.

Source:	df	ss	ms	F	p
Between groups	2	194.53	97.26	1.59	N.S.
Within groups	97	5927.10	61.10		
Total	99	6121.63			

TABLE 4.72: - Analysis of Variance for Fe scale, Early/Middle/Late onset Drinkers.

Source:	df	ss	ms	F	p
Between groups	2	74.63	37.31	2.31	N.S.
Within groups	97	1566.12	16.14		
Total	99	1640.75			

TABLE 4.73: - Means and Standard Deviations for BSS and Fe scales, Early/Middle/Late onset Drinkers.

		N	Mean	S.D.	t	p
BSS,	E	47	32.85	8.54		
	M	25	36.28	7.22		
	L	28	33.67	6.97	(N.S. by F-test)	
Fe,	E	47	17.08	4.41		
	M	25	17.72	3.37		
	L	28	19.14	3.83		

TABLE 4.74: - Analysis of Variance for BSS scale, Youngest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	1033.03	344.34	6.64	< .001
Within groups	66	3421.04	51.83		
Total	69	4454.07			

TABLE 4.75: - Analysis of Variance for Fe scale, Youngest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	300.31	100.10	5.83	< .01
Within groups	66	1132.77	17.16		
Total	69	1433.08			

TABLE 4.76: - Means, Standard Deviations, and t-tests on BSS and Fe scales for Youngest Subjects.

		N	Mean	S.D.	t	p
BSS,	PDs	25	32.12	8.07	PD/PT 2.947	< .005
	PTs	15	24.66	7.13	PD/AB 1.275	N.S.
	ABs	15	35.33	7.05	PD/CR 0.847	N.S.
	CRs	15	34.13	5.64		
Fe,	PDs	25	16.72	4.79	PD/PT 3.060	< .005
	PTs	15	21.20	3.89	PD/AB 1.092	N.S.
	ABs	15	18.20	2.70	PD/CR 0.959	N.S.
	CRs	15	15.26	4.36		

(One-tailed tests)

TABLE 4.77: - Analysis of Variance for BSS scale, Oldest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	723.03	241.01	4.71	< .01
Within groups	66	3371.84	51.08		
Total	69	4094.87			

TABLE 4.78: - Analysis of Variance for Fe scale, Oldest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	86.99	28.99	1.87	N.S.
Within groups	66	1020.77	15.46		
Total	69	1107.76			

TABLE 4.79: - Means, Standard Deviations, and t-tests for BSS and Fe scales, Oldest Subjects.

		N	Mean	S.D.	t	p
BSS,	PDs	25	33.48	7.61	PD/PT 2.412	< .025
	PTs	15	27.53	7.42	PD/AB 0.680	N.S.
	ABs	15	35.06	6.25	PD/CR 1.355	< .10 p> .05
	CRs	15	36.73	6.87		
Fe,	PDs	25	18.68	3.26		
	PTs	15	21.00	4.67	(N.S. by F-test)	
	ABs	15	18.40	4.01		
	CRs	15	17.86	4.08		

(One-tailed tests)

TABLE 4.80: - Comparison of Youngest versus Oldest Subjects on BSS and Fe scales.

		Youngest	S.D.	Oldest	S.D.	t	p
BSS,	PDs	32.12	8.07	33.48	7.61	0.612	N.S.
	PTs	24.66	7.13	27.53	7.42	1.077	N.S.
	ABs	35.33	7.05	35.06	6.25	0.109	N.S.
	CRs	34.13	5.64	36.73	6.87	1.132	N.S.
Fe,	PDs	16.72	4.79	18.68	3.26	1.690	<.10 p> .05
	PTs	21.20	3.89	21.00	4.67	0.127	N.S.
	ABs	18.20	2.70	18.40	4.01	0.160	N.S.
	CRs	15.26	4.36	17.86	4.08	1.683	N.S.

TABLE 4.81: - Analysis of Variance for BSS scale, Young Early/Old Early/Old Late starters.

Source:	df	ss	ms	F	p
Between groups	2	89.42	44.71	.64	N.S.
Within groups	54	3762.13	69.66		
Total	56	3851.55			

TABLE 4.82: - Analysis of Variance for Fe scale, Young Early/Old Early/Old Late starters.

Source:	df	ss	ms	F	p
Between groups	2	143.09	71.54	5.34	<.01
Within groups	54	723.15	13.39		
Total	56	866.24			

TABLE 4.83: - Means, Standard Deviations, and t-tests for BSS and Fe scales, Young Early/Old Early/Old Late.

		N	Mean	S.D.	t	p
BSS,	YE	12	31.41	8.92		
	OE	19	34.47	8.59	(N.S. by F-test)	
	OL	26	34.50	7.88		
Fe,	YE	12	14.83	4.52	YE/OE 1.783	< .10 p>.05
	OE	19	17.15	2.75	YE/OL 2.930	.01
	OL	26	18.96	3.79	OE/OL 1.756	< .10 p>.05

TABLE 4.84: - Analysis of Variance for Age of Leaving Parental Home, Combined Groups

Source:	df	ss	ms	F	p
Between groups	3	600.73	200.24	9.13	<.001
Within groups	216	4734.70	21.91		
Total	219	5335.43			

TABLE 4.85: - Means, Standard Deviations, and t-tests for Age of Leaving Parental Home, Combined Groups.

	N	Mean	S.D.	t	p
PDs	100	18.50	5.00	PD/PT 4.050	< .001
PTs	60	21.76	4.82	PD/AB 2.812	< .01
ABs	30	21.30	3.93	PD/CR 0.839	N.S.
CRs	30	17.66	3.87		

TABLE 4.86: - Numbers of Subjects smoking Cigarettes or Pipes (percentages parenthesized).

	PDs	PTs	ABs	CRs
N	100	60	30	30
	88 (88)	41 (68)	0	18 (60)

X^2 PD/PT = 8.06, p< .01
PD/CR = 10.23, p < .01

TABLE 4.87: - Means, Standard Deviations, and t-tests for Numbers of Cigarettes smoked Daily, Groups 1 and 2.

		N	Mean	S.D.	t	p
Group 1	PDs	44	34.31	17.21	PD/PT 3.720	< .001
	PTs	19	18.94	7.74	PD/CR 0.720	N.S.
	ABs	Nil	-	-		
	CRs	18	30.50	22.58		
Group 2	PDs	44	31.15	14.85	PD/PT 2.155	<.05
	PTs	19	23.05	10.40	PD/CR 0.133	N.S.
	ABs	Nil	-	-		
	CRs	18	30.50	22.58		

TABLE 4.88: - Relationships between BSS scale and Other Variables.

		PDs	PTs	ABs	CRs
N		100	60	30	30
BSS/verbal intelligence	r =	.08	.05	-.17	.03
BSS/education	r =	.24*	-.18	.08	.09
BSS/age	r =	.09	.10	-.11	.19
BSS/years of abuse	r =	-.09	-	-	-
BSS/hospitalization	r =	-.08	-.04	-	-
BSS/imprisonment	r =	-	-	-	-.13
BSS/Fe	r =	-.19	-.03	-.10	.11

*p <.02

TABLE 4.89: - Relationships between Fe scale and Other Variables.

		PDs	PTs	ABs	CRs
N		100	60	30	30
Fe/verbal intelligence	r =	.25**	-.02	.19	.45**
Fe/education	r =	-.06	-.00	-.18	.31
Fe/age	r =	.21*	-.01	-.01	.32
Fe/years of abuse	r =	.02	-	-	-
Fe/imprisonment	r =	-	-	-	.40*

*p< .05 ** p < .02

Hypothesis 2:

TABLE 4.90: - Analysis of Variance for Eye-fixation to Males, Group 1.

Source:	df	ss	ms	F	p
Between groups	2	13.21	6.60	8.89	<.001
Within groups	107	79.53	.74		
Total	109	92.74			

TABLE 4.91: - Analysis of Variance for Eye-fixation to Males, Group 2.

Source:	df	ss	ms	F	p
Between groups	2	8.39	4.19	2.21	N.S.
Within groups	107	202.60	1.89		
Total	109	210.99			

TABLE 4.92: - Analysis of Variance for Number of Male Pictures Preferred, Group 1.

Source:	df	ss	ms	F	p
Between groups	2	5.03	2.51	2.02	N.S.
Within groups	107	132.83	1.24		
Total	109	137.86			

TABLE 4.93: - Analysis of Variance for Number of Male Pictures Preferred, Group 2.

Source:	df	ss	ms	F	p
Between groups	2	8.84	4.42	2.65	N.S.
Within groups	107	178.21	1.66		
Total	109	187.05			

TABLE 4.94: - Comparison of Group 1 versus 2 Drinkers on Eye-fixation to Male Pictures, in Seconds.

	Group 1	Group 2	t	p
N	50	50		
Mean	0.94	0.93		
S.D.	1.05	1.88	0.060	N.S.

TABLE 4.95: - Comparison of Group 1 versus 2 Patients on Eye-fixation to Male Pictures, in Seconds.

	Group 1	Group 2	t	p
N	30	30		
Mean	0.15	0.36		
S.D.	0.57	0.65	1.277	N.S.

TABLE 4.96: - Comparison of Group 1 Drinkers versus Group 2 Patients on Eye-fixation to Males, in Seconds.

	Group 1 PDs	Group 2 PTs	t	p
N	50	30		
Mean	0.94	0.36		
S.D.	1.05	0.65	2.752	< .005

(One-tailed test)

TABLE 4.97: - Comparison of Group 2 Drinkers versus Group 1 Patients on Eye-fixation to Males, in Seconds.

	Group 2 PDs	Group 1 PTs	t	p
N	50	30		
Mean	0.93	0.15		
S.D.	1.88	0.57	2.179	< .025

(One-tailed test)

TABLE 4.98: - Numbers of Drinkers and Patients who fixated Longer on Males than Females (percentages parenthesized)

	PD1	PD2	PT1	PT2
N	50	50	30	30
	34 (68)	25 (50)	5 (17)	14 (47)

X^2 PD1/PD2 = 2.64, N.S.
PT1/PT2 = 4.92, $p < .05$
PD1/PT2 = 2.72, $p < .10$ $p > .05$
PD2/PT1 = 7.52, $p < .01$

TABLE 4.99: - Relationships between Eye-fixation scores to Males and Other Variables.

		PDs	PTs	ABs	CRs
N		100	60	30	30
Males/verbal intellig.	r =	-.14	-.18	-	-.04
Males/education	r =	-.12	-.15	-	.02
Males/age	r =	.13	.05	-	-.18
Males/years of abuse	r =	-.09	-	-	-
Males/age of onset	r =	.19	-	-	-
Males/imprisonment	r =	-	-	-	.02

All N.S.

TABLE 4.100: - Analysis of Variance for Eye-fixation to Males, Early/Middle/Late starters

Source:	df	ss	ms	F	p
Between groups	2	9.25	4.62	2.04	N.S.
Within groups	97	219.64	2.26		
Total	99	228.89			

TABLE 4.101: - Analysis of Variance for Number of Male Pictures preferred, Early/Middle/Late.

Source:	df	ss	ms	F	p
Between groups	2	10.33	5.16	3.75	<.05
Within groups	97	133.45	1.37		
Total	99	143.78			

TABLE 4.102: - Means and Standard Deviations for Eye-fixation to Males, Early/Middle/Late, in seconds.

	N	Mean	S.D.	t	p
Early	47	0.79	0.95		
Middle	25	0.67	0.92	(N.S. by F-test)	
Late	28	1.42	2.40		

TABLE 4.103: - Means, Standard Deviations, and t-tests for Eye-fixation to Male versus Female Pictures, Early/Middle/Late starters, in seconds.

	N	Males	S.D.	Females	S.D.	t	p
Early	47	0.79	0.95	0.32	0.73	2.680	< .02
Middle	25	0.67	0.92	0.36	0.84	1.241	N.S.
Late	28	1.42	2.40	0.36	0.65	2.246	< .05

TABLE 4.104: - Means, Standard Deviations, and t-tests for Number of Male Pictures preferred, Early/Middle/Late.

	N	Mean	S.D.	t	p
Early	47	1.25	1.15	E/L 2.383	< .02
Middle	25	1.08	1.32	E/M 0.584	N.S.
Late	28	1.89	1.06	M/L 2.477	< .02

TABLE 4.105: - Numbers of Early/Middle / and Late starters Eye-fixating longer on Males than Females (percentages parenthesized)

	Early	Middle	Late
N	47	25	28
	28 (60)	13 (52)	18 (64)

X^2 E/M = 0.13, N.S.
E/L = 0.02, N.S.
M/L = 0.40, N.S.

TABLE 4.106: - Analysis of Variance for Eye-fixation to Males, Youngest PDs, PTs, and CRs.

Source:	df	ss	ms	F	p
Between groups	2	2.15	1.07	1.51	N.S.
Within groups	52	37.05	.71		
Total	54	39.20			

TABLE 4.107: - Means and Standard Deviations for Eye-fixation to Males, Youngest Subjects, in seconds.

	N	Mean	S.D.	t	p
PDs	25	0.61	0.93		
PTs	15	0.16	0.42	(N.S. by F-test)	
CRs	15	0.60	0.97		

TABLE 4.108: - Means, Standard Deviations, and t-tests for Eye-fixation to Males versus Females, Youngest Subjects.

	N	Males	S.D.	Females	S.D.	t	p
PDs	25	0.61	0.93	0.48	1.05	0.472	N.S.
PTs	15	0.16	0.42	0.73	0.94	2.102	< .05
CRs	15	0.60	0.97	0.36	0.56	0.824	N.S.

(One-tailed tests)

TABLE 4.109: - Analysis of Variance for Number of Male Pictures preferred, Youngest Subjects

Source:	df	ss	ms	F	p
Between groups	2	19.41	9.70	7.14	< .01
Within groups	52	70.69	1.35		
Total	54	90.10			

TABLE 4.110: - Means, Standard Deviations, and t-tests for Number of Male Pictures preferred, Youngest Subjects.

	N	Mean	S.D.	t	p
PDs	25	0.64	0.90	PD/PT 3.347	< .002
PTs	15	2.06	1.79	PD/CR 1.338	N.S.
CRs	15	1.00	0.65		

TABLE 4.111: - Analysis of Variance for Eye-fixation to Males, Oldest PDs, PTs, and CRs.

Source:	df	ss	ms	F	p
Between groups	2	18.61	9.30	3.08	N.S.
Within groups	52	156.75	3.01		
Total	54	175.36			

TABLE 4.112: - Means and Standard Deviations for Eye-fixation to Males, Oldest Subjects, in seconds.

	N	Mean	S.D.	t	p
PDs	25	1.38	2.48		
PTs	15	0.25	0.76	(N.S. by F-test)	
CRs	15	0.17	0.25		

TABLE 4.113: - Means, Standard Deviations, and t-tests for Eye-fixation to Males versus Females, Oldest Subjects, shown in seconds.

	N	Males	S.D.	Females	S.D.	t	p
PDs	25	1.38	2.48	0.41	0.80	1.867	< .05
PTs	15	0.25	0.76	0.81	0.75	1.992	< .05
CRs	15	0.17	0.25	0.49	0.71	1.605	< .10 p> .05

(One-tailed tests)

TABLE 4.114: - Analysis of Variance for Number of Male Pictures Preferred, Oldest Subjects.

Source:	df	ss	ms	F	p
Between groups	2	6.91	3.45	2.37	N.S.
Within groups	52	75.62	1.45		
Total	54	82.53			

TABLE 4.115: - Means and Standard Deviations for Number of Male Pictures Preferred, Oldest Subjects.

	N	Mean	S.D.	t	p
PDs	25	2.16	1.06		
PTs	15	2.06	1.66	(N.S. by F-test)	
CRs	15	1.33	0.81		

TABLE 4.116: - Means, Standard Deviations, and t-tests for Eye-fixation to Males, Youngest versus Oldest Subjects, Shown in seconds.

	Youngest	S.D.	Oldest	S.D.	t	p
PDs	0.61	0.93	1.38	2.48	1.450	N.S.
PTs	0.16	0.42	0.25	0.76	0.397	N.S.
CRs	0.60	0.97	0.17	0.25	1.648	N.S.

TABLE 4.117: - Means, Standard Deviations, and t-tests for Number of Male Pictures preferred, Youngest versus Oldest Subjects.

	Youngest	S.D.	Oldest	S.D.	t	p
PDs	0.64	0.90	2.16	1.06	5.423	< .001
PTs	2.06	1.79	2.06	1.66	0.000	N.S.
CRs	1.00	0.65	1.33	0.81	1.233	N.S.

TABLE 4.118: - Numbers of Youngest versus Oldest Subjects Eye-fixating longer on Males than Females (percentages parenthesized)

	N	Youngest	Oldest	X^2	p
PDs	25+25	13 (52)	16 (64)	0.32	N.S.
PTs	15+15	5 (33)	3 (20)	0.17	N.S.
CRs	15+15	8 (53)	7 (47)	0.00	N.S.

TABLE 4.119: - Analysis of Variance for Eye-fixation on Males, Young Early/Old Early/Old Late starters.

Source:	df	ss	ms	F	p
Between groups	2	7.94	3.97	1.20	N.S.
Within groups	54	177.94	3.29		
Total	56	185.88			

TABLE 4.120: - Means and Standard Deviations for Eye-fixation on Males, Young Early/Old Early/ Old Late starters, shown in Seconds.

	N	Mean	S.D.	t	p
YE	12	0.72	1.04		
OE	19	0.79	0.83	(N.S. by F-test)	
OL	26	1.51	2.47		

TABLE 4.121: - Analysis of Variance for Number of Male Pictures preferred, Young Early/Old Early/Old Late.

Source:	df	ss	ms	F	p
Between groups	2	17.22	8.61	7.64	< .01
Within groups	54	60.81	1.12		
Total	56	78.03			

TABLE 4.122: - Means, Standard Deviations, and t-tests for Number of Male Pictures preferred, Young Early/ Old Early/Old Late starters.

	N	Mean	S.D.	t	p
YE	12	0.50	0.67	YE/OE 3.548	< .005
OE	19	1.78	1.13	YE/OL 3.879	< .001
OL	26	1.88	1.14	OE/OL 0.276	N.S.

TABLE 4.123: - Means, Standard Deviations, and t-tests for Eye-fixation on Male versus Female Pictures, shown in Seconds, Young Early/ Old Early/Old Late starters.

	N	Males	S.D.	Females	S.D.	t	p
YE	12	0.72	1.04	0.51	1.00	0.507	N.S.
OE	19	0.79	0.83	0.30	0.69	1.976	<.10 p> .05
OL	26	1.51	2.47	0.37	0.67	2.262	< .05

TABLE 4.124: - Number of Young Early/Old Early/Old Late starters Eye-fixating longer on Males than on Females (percentages parenthesized).

	Young Early	Old Early	Old Late
N	12	19	26
	6 (50)	12 (63)	17 (65)

X^2 YE/OE = 0.13, N.S.
YE/OL = 0.29, N.S.
OE/OL = 0.02, N.S.

Hypothesis 3:

TABLE 4.125: - Subjects' Self-descriptions of Isolation, Superficiality, and Instability - this material refers to Table 3.39 (percentages parenthesized).

Group 1:	PDs	PTs	ABs	CRs
N	50	30	30	30
Living alone	20 (40)	4 (13)	1 (3)	4 (13)
X^2 PD/PT = 5.14, p <.05 PD/CR = 5.14, p <.05 PD/AB = 11.20, p <.001				
Prefers casuals	25 (50)	6 (20)	1 (3)	9 (30)
X^2 PD/PT = 5.90, p <.02 PD/CR = 2.30, N.S. PD/AB = 16.55, p <.001				
Divorced/separated	23 (56)	5 (26)	0	13 (52)
X^2 PD/PT = 3.50, p <.10 p >.05 PD/CR = 0.00, N.S.				
Unfaithful	22 (54)	6 (32)	3 (11)	12 (48)
X^2 PD/PT = 1.73, N.S. PD/CR = 0.03, N.S. PD/AB = 11.51, p <.001				
De factos	25 (50)	7 (23)	0	15 (50)
X^2 PD/PT = 4.50, p <.05 PD/CR = 0.05, N.S.				

TABLE 4.125 Cont:-

Group 2:	PDs	PTs	ABs	CRs
N	50	30	30	30
Living alone	21 (42)	4 (13)	1 (3)	4 (13)
X^2 PD/PT = 5.90, p < .02 PD/CR = 5.90, p < .02 PD/AB = 12.19, p < .001				
Prefers casuals	31 (62)	1 (3)	1 (3)	9 (30)
X^2 PD/PT = 24.50, p < .001 PD/CR = 6.45, p < .02 PD/AB = 24.50, p < .001				
Divorced/separated	19 (53)	3 (14)	0	13 (52)
X^2 PD/PT = 6.77, p < .01 PD/CR = 0.03, N.S.				
Unfaithful	22 (61)	4 (19)	3 (11)	12 (48)
X^2 PD/PT = 7.86, p < .01 PD/CR = 0.57, N.S. PD/AB = 14.75, p < .001				
De factos	26 (52)	3 (10)	0	15 (50)
X^2 PD/PT = 12.55, p < .001 PD/CR = 0.00, N.S.				
Combined Groups:				
N	100	60	30	30
Living alone	41 (41)	8 (13)	1 (3)	4 (13)
X^2 PD/PT = 12.24, p < .001 PD/CR = 6.63, p < .01 PD/AB = 13.30, p < .001				
Prefers casuals	56 (56)	7 (12)	1 (3)	9 (30)
X^2 PD/PT = 29.04, p < .001 PD/CR = 5.24, p < .05 PD/AB = 23.90, p < .001				
Divorced/Separated	42 (55)	8 (20)	0	13 (52)
X^2 PD/PT = 11.47, p < .001 PD/CR = 0.00, N.S.				
Unfaithful	44 (57)	10 (25)	3 (11)	12 (48)
X^2 PD/PT = 9.69, p < .01 PD/CR = 0.32, N.S. PD/AB = 16.09, p < .001				
De factos	51 (51)	10 (17)	0	15 (50)
X^2 PD/PT = 17.31, p < .001 PD/CR = 0.01, N.S.				

TABLE 4.126: - Subjects' Self-descriptions of Interpersonal Discomfort and Difficulties in Establishing Relationships - this material refers to Table 3.40 (percentages parenthesized)

Group 1:	PDs	PTs	ABs	CRs
N	50	30	30	30
Shy, self-consc.	31 (62)	17 (57)	15 (50)	13 (43)
X^2 PD/PT = 0.05, N.S. PD/CR = 1.93, N.S. PD/AB = 0.66, N.S.				
Relationships hard	26 (52)	18 (60)	9 (30)	14 (47)
X^2 PD/PT = 0.21, N.S. PD/CR = 0.05, N.S. PD/AB = 2.84, $p < .10$ $p > .05$				
Many close friends	4 (8)	6 (20)	20 (67)	7 (23)
X^2 PD/PT = 1.49, N.S. PD/CR = 2.53, N.S. PD/AB = 28.00, $p < .001$				
No close friends	18 (36)	8 (27)	0	5 (17)
X^2 PD/PT = 0.38, N.S. PD/CR = 2.54, N.S.				
Group 2:				
N	50	30	30	30
Shy, self-consc.	37 (74)	15 (50)	15 (50)	13 (43)
X^2 PD/PT = 3.75, $p < .10$ $p > .05$ PD/CR = 6.27, $p < .02$ PD/AB = 3.75, $p < .10$ $p > .05$				
Relationships hard	31 (62)	16 (53)	9 (30)	14 (47)
X^2 PD/PT = 0.27, N.S. PD/CR = 1.22, N.S. PD/AB = 6.45, $p < .02$				
Many close friends	4 (8)	8 (27)	20 (67)	7 (23)
X^2 PD/PT = 3.76, $p < .10$ $p > .05$ PD/CR = 2.53, N.S. PD/AB = 28.00, $p < .001$				
No close friends	25 (50)	9 (30)	0	5 (17)
X^2 PD/PT = 2.30, N.S. PD/CR = 7.52, $p < .01$				
Combined Groups:				
N	100	60	30	30
Shy, self-consc.	68 (68)	32 (53)	15 (50)	13 (43)
X^2 PD/PT = 2.84, $p < .10$ $p > .05$ PD/CR = 4.97, $p < .05$ PD/AB = 2.50, N.S.				
Relationships hard	57 (57)	34 (57)	9 (30)	14 (47)
X^2 PD/PT = 0.01, N.S. PD/CR = 0.62, N.S. PD/AB = 5.69, $p < .02$				

TABLE 4.126 Cont:-

	PDs	PTs	ABs	CRs
Many close friends	8 (8)	14 (23)	20 (67)	7 (23)
X^2 PD/PT = 6.19, p< .02 PD/CR = 3.91, p <.05 PD/AB = 43.59, p< .001				
No close friends	43 (43)	17 (28)	0	5 (17)
X^2 PD/PT = 2.84, p< .10 p > .05 PD/CR = 5.78, p< .02				

TABLE 4.127: - Comparisons of Group 1 versus 2 Drinkers, Group 1 versus 2 Patients, and Intergroup Comparisons, on Isolation and Superficiality (percentages parenthesized)

N	PD1 50	PD2 50	PT1 30	PT2 30
Living alone	20 (40)	21 (42)	4 (13)	4 (13)
X^2 PD1/PD2 = 0.00, N.S. PD1/PT2 = 5.14, p < .05			X^2 PT1/PT2 = 0.14, N.S. PD2/PT1 = 5.90, p< .02	
Prefers casuals	25 (50)	31 (62)	6 (20)	1 (3)
X^2 PD1/PD2 = 1.01, N.S. PD1/PT2 = 16.55, p< .001			X^2 PT1/PT2 = 2.59, N.S. PD2/PT1 = 11.66, p <.001	
Divorced/separated	23 (56)	19 (53)	5 (26)	3 (14)
X^2 PD1/PD2 = 0.00, N.S. PD1/PT2 = 8.32, p < .01			X^2 PT1/PT2 = 0.26, N.S. PD2/PT1 = 2.56, N.S.	
Unfaithful	22 (54)	22 (61)	6 (32)	4 (19)
X^2 PD1/PD2 = 0.18, N.S. PD1/PT2 = 5.48, p < .02			X^2 PT1/PT2 = 0.30, N.S. PD2/PT1 = 3.25, p< .10 p>.05	
De factos	25 (50)	26 (52)	7 (23)	3 (10)
X^2 PD1/PD2 = 0.00, N.S. PD1/PT2 = 11.48, p< .001			X^2 PT1/PT2 = 1.08, N.S. PD2/PT1 = 5.23, p< .05	

TABLE 4.128: - Comparisons of Group 1 versus 2 Drinkers, Group 1 versus 2 Patients, and Intergroup Comparisons, on Interpersonal Discomfort (percentages parenthesized)

N	PD1 50	PD2 50	PT1 30	PT2 30
Shy, self-consc.	31 (62)	37 (74)	17 (57)	15 (50)
X^2 PD1/PD2 = 1.14, N.S. PD1/PT2 = 0.66, N.S.			X^2 PT1/PT2 = 0.06, N.S. PD2/PT1 = 1.83, N.S.	
Relationships hard	26 (52)	31 (62)	18 (60)	16 (53)
X^2 PD1/PD2 = 0.65, N.S. PD1/PT2 = 0.01, N.S.			X^2 PT1/PT2 = 0.06, N.S. PD2/PT1 = 0.00, N.S.	
Many close friends	4 (8)	4 (8)	6 (20)	8 (27)
X^2 PD1/PD2 = 0.13, N.S. PD1/PT2 = 3.76, p< .10 p >.05			X^2 PT1/PT2 = 0.09, N.S. PD2/PT1 = 1.49, N.S.	
No close friends	18 (36)	25 (50)	8 (27)	9 (30)
X^2 PD1/PD2 = 1.46, N.S. PD1/PT2 = 0.09, N.S.			X^2 PT1/PT2 = 0.00, N.S. PD2/PT1 = 3.30, p<.10 p> .05	

TABLE 4.129: - Subjects' Reports of Childhood Interpersonal Difficulties (percentages parenthesized).

	PDs	PTs	ABs	CRs
N	100	60	30	30
Childhood shyness	71 (71)	37 (62)	18 (60)	16 (53)
X^2 PD/PT = 1.09, N.S.				
PD/CR = 2.50, N.S,				
PD/AB = 0.83, N.S.				
Many close friends	12 (12)	22 (37)	9 (30)	12 (40)
X^2 PD/PT = 12.20, $p < .001$				
PD/CR = 10.23, $p < .01$				
PD/AB = 4.27, $p < .05$				
No close friends	39 (39)	15 (25)	6 (20)	6 (20)
X^2 PD/PT = 2.69, N.S.				
PD/CR = 2.88, $p < .10$ $p > .05$				
PD/AB = 2.88, $p < .10$ $p > .05$				

TABLE 4.130: - Subjects' Report of Isolation, Superficiality, and Instability, Early/Middle/Late onset starters (percentages parenthesized).

	Early	Middle	Late
N	47	25	28
Living alone	19 (40)	8 (32)	14 (50)
X^2 E/M = 0.20, N.S.			
E/L = 0.32, N.S.			
M/L = 1.11, N.S.			
Prefers casuals	28 (60)	16 (64)	12 (43)
X^2 E/M = 0.01, N.S.			
E/L = 1.36, N.S.			
M/L = 1.61, N.S.			
Divorced/separated	20 (59)	12 (60)	10 (43)
X^2 E/M = 0.04, N.S.			
E/L = 0.76, N.S.			
M/L = 0.61, N.S.			
Unfaithful	22 (65)	13 (65)	9 (39)
X^2 E/M = 0.07. N.S.			
E/L = 2.67, N.S.			
M/L = 1.94, N.S.			
De factos	31 (66)	12 (48)	8 (29)
X^2 E/M = 1.50, N.S.			
E/L = 8.40, $p < .01$			
M/L = 1.38, N.S.			

TABLE 4.131: - Subjects' Report of Interpersonal Discomfort and Difficulties in Establishing Relationships, Early/Middle/Late starters (percentages parenthesized).

	Early	Middle	Late
N	47	25	28
Shy, self-conscious	35 (74)	14 (56)	19 (68)
X^2 E/M = 1.78, N.S. E/L = 0.12, N.S. M/L = 0.37, N.S.			
Relationships hard	33 (70)	10 (40)	14 (50)
X^2 E/M = 5.00, $p < .05$ E/L = 2.27, N.S. M/L = 0.21, N.S.			
Many close friends	2 (4)	2 (8)	4 (14)
X^2 E/M = 0.01, N.S. E/L = 1.24, N.S. M/L = 0.09, N.S.			
No close friends	20 (43)	11 (44)	12 (43)
X^2 E/M = 0.01, N.S. E/L = 0.04, N.S. M/L = 0.03, N.S.			

TABLE 4.132: - Comparison of Youngest versus Oldest Drinkers on Self-report of Isolation, Superficiality, and Interpersonal Discomfort (percentages parenthesized)

	Youngest	Oldest	X^2	p
N	25	25		
Living alone	6 (24)	12 (48)	2.17	N.S.
Prefers casuals	16 (64)	12 (48)	0.73	N.S.
Many close friends	3 (12)	0	-	-
No close friends	11 (44)	14 (56)	0.32	N.S.
Divorced/separated	11 (69)	10 (48)	0.92	N.S.
Unfaithful	12 (75)	12 (57)	0.62	N.S.
De factos	19 (76)	9 (36)	6.57	< .02
Shy, self-conscious	18 (72)	20 (80)	0.11	N.S.
Relationships hard	15 (60)	14 (56)	0.00	N.S.
Childhood shyness	20 (80)	20 (80)	0.12	N.S.

TABLE 4.133: - Subjects' Report of Isolation, Superficiality, and Instability, Young Early/Old Early/Old Late starters (percentages parenthesized).

	Young Early	Old Early	Old Late
N	12	19	26
Living alone	3 (25)	8 (42)	14 (54)
X^2 YE/OE = 0.35, N.S. YE/OL = 1.72, N.S. OE/OL = 0.23, N.S.			
Prefers casuals	8 (67)	7 (37)	11 (42)
X^2 YE/OE = 1.59, N.S. YE/OL = 1.09, N.S. OE/OL = 0.00, N.S.			
Divorced/separated	5 (83)	8 (40)	11 (48)
X^2 YE/OE = 0.86, N.S. YE/OL = 1.24, N.S. OE/OL = 0.03, N.S.			
Unfaithful	4 (67)	11 (69)	8 (35)
X^2 YE/OE = 0.17, N.S. YE/OL = 0.92, N.S. OE/OL = 3.13, $p < .10$ $p > .05$			
De factos	9 (75)	9 (47)	8 (31)
X^2 YE/OE = 1.33, N.S. YE/OL = 4.83, $p < .05$ OE/OL = 0.68, N.S.			

TABLE 4.134: - Subjects' Reports of Interpersonal Discomfort, and Difficulties in Establishing Relationships, Young Early/Old Early/Old Late (percentages parenthesized).

	Young Early	Old Early	Old Late
N	12	19	26
Shy, self-conscious	8 (67)	15 (79)	15 (58)
X^2 YE/OE = 0.12, N.S. YE/OL = 0.03, N.S. OE/OL = 1.39, N.S.			
Relationships hard	8 (67)	13 (68)	12 (46)
X^2 YE/OE = 0.07, N.S. YE/OL = 0.68, N.S. OE/OL = 1.41, N.S.			
Many close friends	2 (17)	0	4 (15)
X^2 YE/OL = 0.14, N.S.			
No close friends	6 (50)	6 (32)	11 (42)
X^2 YE/OE = 0.43, N.S. YE/OL = 0.00, N.S. OE/OL = 0.18, N.S.			

Hypothesis 4:

TABLE 4.135: - Analysis of Variance for the EFT, Group 1.

Source:	df	ss	ms	F	p
Between groups	3	6824442.67	2274814.22	13.92	< .001
Within groups	136	22213073.77	163331.42		
Total	139	29037516.44			

TABLE 4.136: - Analysis of Variance for the EFT, Group 2.

Source:	df	ss	ms	F	p
Between groups	3	9059457.64	3019819.21	16.05	<.001
Within groups	136	25577726.06	188071.51		
Total	139	34637183.70			

TABLE 4.137: - Comparison of Group 1 versus 2 Drinkers on the EFT, shown in Seconds.

	Group 1	Group 2	t	p
N	50	50		
Mean	922.12	1056.71		
S.D.	506.41	504.80	1.330	N.S.

TABLE 4.138: - Comparison of Group 1 versus 2 Patients on the EFT, shown in Seconds.

	Group 1	Group 2	t	p
N	30	30		
Mean	470.25	714.73		
S.D.	300.69	457.38	2.446	< .02

TABLE 4.139: - Comparison of Group 1 Drinkers Versus Group 2 Patients on the EFT, shown in Seconds.

	Group 1 PDs	Group 2 PTs	t	p
N	50	30		
Mean	922.12	714.73		
S.D.	506.41	457.38	1.837	<.05

(One-tailed test)

TABLE 4.140: - Comparison of Group 2 Drinkers versus Group 1 Patients on the EFT, shown in Seconds.

	Group 2 PDs	Group 1 PTs	t	p
N	50	30		
Mean	1056.71	470.25		
S.D.	504.80	300.69	5.770	<.001

(One-tailed test)

TABLE 4.141: - Relationships between EFT scores and Other Variables.

		PDs	PTs	ABs	CRs
N		100	60	30	30
EFT/intelligence	r =	-.32***	-.41***	.01	-.25
EFT/education	r =	-.14	-.34**	-.49***	-.26
EFT/age	r =	.25**	.31*	.51***	.32
EFT/years of abuse	r =	.06	-	-	-
EFT/age of onset	r =	.18	-	-	-
EFT/imprisonment	r =	-	-	-	.04

*p <.05 **p <.02 ***p <.01

TABLE 4.142: - Analysis of Variance for EFT scores, Early/Middle/Late onset Drinkers.

Source:	df	ss	ms	F	p
Between groups	2	656833.77	328416.88	1.28	N.S.
Within groups	97	24848767.15	256172.85		
Total	99	25505600.92			

TABLE 4.143: - Means and Standard Deviations for EFT scores, in seconds, Early/Middle/Late.

	N	Mean	S.D.	t	p
Early	47	910.65	472.97		
Middle	25	1011.76	517.49	(N.S. by F-test)	
Late	28	1101.66	548.77		

TABLE 4.144: - Analysis of Variance for EFT scores, Youngest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	3528825.77	1176275.25	6.82	<.001
Within groups	66	11367641.40	172236.99		
Total	69	14896467.17			

TABLE 4.145: - Means, Standard Deviations and t-tests for the EFT, in seconds, Youngest Subjects.

	N	Mean	S.D.	t	p
PDs	25	875.66	490.46	PD/PT 1.977	<.05
PTs	15	551.26	521.59	PD/AB 4.559	<.001
ABs	15	280.14	147.12	PD/CR 2.379	<.025
CRs	15	536.13	325.39		

(One-tailed tests)

TABLE 4.146: - Analysis of Variance for EFT scores, Oldest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	6400263.11	2133421.03	10.30	<.001
Within groups	66	13666734.37	207071.73		
Total	69	20066997.48			

TABLE 4.147: - Means, Standard Deviations, and t-tests for the EFT, in seconds, Oldest Subjects.

	N	Mean	S.D.	t	p
PDs	25	1266.32	556.84	PD/PT 3.062	< .005
PTs	15	774.74	352.00	PD/AB 5.140	< .001
ABs	15	484.14	239.98	PD/CR 2.766	< .005
CRs	15	777.50	512.96		

(One-tailed tests)

TABLE 4.148: - Means, Standard Deviations, and t-tests for Youngest versus Oldest Subjects on the EFT, scores shown in Seconds.

	Youngest	S.D.	Oldest	S.D.	t	p
PDs	875.66	490.46	1266.32	556.84	2.632	< .02
PTs	551.26	521.59	774.74	352.00	1.375	N.S.
ABs	280.14	147.12	484.14	239.98	2.806	< .01
CRs	536.13	325.39	777.50	512.96	1.538	N.S.

TABLE 4.149: - Analysis of Variance for EFT scores Young Early/Old Early/Old Late starters.

Source:	df	ss	ms	F	p
Between groups	2	551125.33	275562.66	1.07	N.S.
Within groups	54	13820596.66	255936.97		
Total	56	14371721.99			

TABLE 4.150: - Means and Standard Deviations for EFT scores, in seconds, Young Early/Old Early/ Old Late starters.

	N	Mean	S.D.	t	p
YE	12	923.31	394.57		
OE	19	912.89	505.91	(N.S. by F_test)	
OL	26	1114.20	547.75		

Hypothesis 5:

TABLE 4.151: - Analysis of Variance for HDHQ scores, Group 1.

Source:	df	ss	ms	F	p
Between groups	3	2333.95	777.98	14.16	< .001
Within groups	136	7468.58	54.91		
Total	139	9802.53			

TABLE 4.152: - Analysis of Variance for HDHQ scores, Group 2.

Source:	df	ss	ms	F	p
Between groups	3	2006.42	668.80	12.03	< .001
Within groups	136	7557.36	55.56		
Total	139	9563.78			

TABLE 4.153: - Analysis of Variance for Stereoscope scores, Group 1.

Source:	df	ss	ms	F	p
Between groups	3	853.75	284.58	10.44	<.001
Within groups	136	3706.41	27.25		
Total	139	4560.16			

TABLE 4.154: - Analysis of Variance for Stereoscope scores, Group 2.

Source:	df	ss	ms	F	p
Between groups	3	512.27	170.75	6.56	<.001
Within groups	136	3538.01	26.01		
Total	139	4050.28			

TABLE 4.155: - Comparison of Group 1 versus 2 Drinkers on HDHQ and Stereoscope.

	Group 1	Group 2	t	p
N	50	50		
HDHQ	23.14	22.20		
S.D.	8.32	8.23	0.567	N.S.
Stereoscope	13.18	11.92		
S.D.	6.49	5.88	1.016	N.S.

TABLE 4.156: - Comparison of Group 1 versus 2 Patients on HDHQ and Stereoscope.

	Group 1	Group 2	t	p
N	30	30		
HDHQ	19.43	19.83		
S.D.	6.39	6.82	0.234	N.S.
Stereoscope	8.43	9.33		
S.D.	3.42	4.32	0.893	N.S.

TABLE 4.157: - Comparison of Group 1 Drinkers versus Group 2 Patients on HDHQ and Stereoscope.

	Group 1 PDs	Group 2 PTs	t	p
N	50	30		
HDHQ	23.14	19.83		
S.D.	8.32	6.82	1.834	< .05
Stereoscope	13.18	9.33		
S.D.	6.49	4.32	2.879	< .005

(One-tailed tests)

TABLE 4.158: - Comparison of Group 2 Drinkers versus Group 1 Patients on HDHQ and Stereoscope.

	Group 2 PDs	Group 1 PTs	t	p
N	50	30		
HDHQ	22.20	19.43		
S.D.	8.23	6.39	1.575	< .10 p> .05
Stereoscope	11.92	8.43		
S.D.	5.88	3.42	2.955	< .005

(One-tailed tests)

TABLE 4.159: - Comparison of Arrested versus Never Arrested Drinkers on HDHQ and Stereoscope.

	Arrested PDs	Never Arrest.PDs	t	p
N	43	57		
HDHQ	26.18	20.01		
S.D.	7.76	7.64	3.966	< .001
Stereoscope	15.18	10.56		
S.D.	6.44	5.23	3.958	< .001

TABLE 4.160: - Comparison of Arrested versus Never Arrested Patients on HDHQ and Stereoscope.

	Arrested PTs	Never Arrest.PTs	t	p
N	13	47		
HDHQ	23.61	18.53		
S.D.	9.08	5.29	2.588	< .02
Stereoscope	9.07	8.82		
S.D.	3.12	4.10	0.200	N.S.

TABLE 4.161: - Comparison of Arrested Drinkers versus Arrested Patients, HDHQ and Stereoscope.

	Arrested PDs	Arrested PTs	t	p
N	43	13		
HDHQ	26.18	23.61		
S.D.	7.76	9.08	1.005	N.S.
Stereoscope	15.18	9.07		
S.D.	6.44	3.12	3.285	< .005

(One-tailed tests)

TABLE 4.162: - Comparison of Never Arrested Drinkers versus Never Arrested Patients, HDHQ and Stereoscope.

	Never Arrest.PDs	Never Arrest.PTs	t	p
N	57	47		
HDHQ	20.01	18.53		
S.D.	7.64	5.29	1.127	N.S.
Stereoscope	10.56	8.82		
S.D.	5.23	4.10	1.847	<.05

(One-tailed tests)

TABLE 4.163: - Relationships between HDHQ scores and Other Variables.

	PDs	PTs	ABs	CRs
N	100	60	30	30
HDHQ/intelligence	r = -.22*	.06	-.22	-.60***
HDHQ/education	r = -.02	.04	-.26	-.27
HDHQ/age	r = -.29**	-.19	-.02	-.44**
HDHQ/age of onset	r = -.37***	-	-	-
HDHQ/years of abuse	r = .18	-	-	-
HDHQ/serious arrests	r = .23*	.25	-	.18
HDHQ/imprisonment	r = -	-	-	-.38*
HDHQ/So scale	r = -.73***	-.46***	-.21	-.66***

*p< .05 **p < .02 ***p < .001

TABLE 4.164: - Relationships between Stereoscope scores and Other Variables.

		PDs	PTs	ABs	CRs
N		100	60	30	30
Stereoscope/intell.	r =	.09	-.01	.10	-.06
Stereoscope/educat.	r =	.02	-.10	.30	.01
Stereoscope/age	r =	-.30**	-.20	-.41*	-.48**
Stereosc./age onset	r =	-.42***	-	-	-
Stereosc./years abuse	r =	.18	-	-	-
Stereo./serious arrest	r =	.19	-.00	-	.41*
Stereo./So scale	r =	-.29**	.17	.35	-.23
Stereo./imprisonment	r =	-	-	-	-.13
Stereo./HDHQ	r =	.18	-.07	.10	.26

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

TABLE 4.165: - Analysis of Variance for HDHQ scores, Early/Middle/Late onset drinkers.

Source:	df	ss	ms	F	p
Between groups	2	885.90	442.95	7.33	<.001
Within groups	97	5856.20	60.37		
Total	99	6742.10			

TABLE 4.166: - Analysis of Variance for Stereoscope scores, Early/Middle/Late onset drinkers.

Source:	df	ss	ms	F	p
Between groups	2	603.39	301.69	9.14	<.001
Within groups	97	3199.35	32.98		
Total	99	3802.74			

TABLE 4.167: - Means, Standard Deviations, and t-tests for HDHQ and Stereoscope, Early/Middle/Late.

HDHQ	N	Mean	S.D.	t	p
Early	47	25.72	8.15	E/L 3.482	<.001
Middle	25	21.08	6.55	E/M 2.454	<.02
Late	28	18.96	8.09	M/L 1.037	N.S.
Stereo.					
Early	47	14.68	5.90	E/L 4.374	<.001
Middle	25	12.72	6.12	E/M 1.323	N.S.
Late	28	8.82	5.06	M/L 2.534	<.02

TABLE 4.168: - Analysis of Variance for HDHQ scores, Youngest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	1980.26	660.08	11.47	<.001
Within groups	66	3797.17	57.53		
Total	69	5777.43			

TABLE 4.169: - Analysis of Variance for Stereoscope scores, Youngest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	323.03	107.67	4.48	< .01
Within groups	66	1584.90	24.01		
Total	69	1907.93			

TABLE 4.170: - Means, Standard Deviations, and t-tests on HDHQ and Stereoscope, Youngest Subjects.

	N	Mean	S.D.	t	p
HDHQ, PDs	25	26.72	8.72	PD/PT 1.862	< .05
PTs	15	21.66	7.53	PD/AB 6.135	< .001
ABs	15	12.20	3.46	PD/CR 1.744	< .05
CRs	15	21.80	8.47		
Ster. PDs	25	14.12	6.20	PD/PT 2.244	< .025
PTs	15	10.13	3.79	PD/AB 2.813	< .005
ABs	15	9.06	4.02	PD/CR 0.399	N.S.
CRs	15	13.40	4.08		

(One-tailed tests)

TABLE 4.171: - Analysis of Variance for HDHQ scores, Oldest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	787.44	262.48	4.11	<.05
Within groups	66	4209.36	63.77		
Total	69	4996.80			

TABLE 4.172: - Analysis of Variance for Stereoscope scores, Oldest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	209.74	69.91	2.75	<.05
Within groups	66	1676.02	25.39		
Total	69	1885.76			

TABLE 4.173: - Means, Standard Deviations, and t-tests for HDHQ and Stereoscope, Oldest Subjects.

	N	Mean	S.D.	t	p
HDHQ, PDs	25	20.84	9.13	PD/PT 0.817	N.S.
PTs	15	18.60	6.93	PD/AB 3.438	<.001
ABs	15	11.80	5.73	PD/CR 1.306	<.10 p> .05
CRs	15	17.00	8.75		
Ster. PDs	25	8.84	5.25	PD/PT 0.669	N.S.
PTs	15	7.73	4.71	PD/AB 2.119	<.025
ABs	15	5.66	3.10	PD/CR 1.054	N.S.
CRs	15	10.80	6.36		

(One-tailed tests)

TABLE 4.174: - Means, Standard Deviations, and t-tests for HDHQ and Stereoscope, Youngest versus Oldest Subjects.

HDHQ	Youngest	S.D.	Oldest	S.D.	t	p
PDs	26.72	8.72	20.84	9.13	2.327	< .05
Pts	21.66	7.53	18.60	6.93	1.159	N.S.
ABs	12.20	3.46	11.80	5.73	0.231	N.S.
CRs	21.80	8.47	17.00	8.75	1.525	N.S.
Stereo.						
PDs	14.12	6.20	8.84	5.25	3.247	<.005
PTs	10.13	3.79	7.73	4.71	1.536	N.S.
ABs	9.06	4.02	5.66	3.10	2.588	<.02
CRs	13.40	4.08	10.80	6.36	1.332	N.S.

TABLE 4.175: - Analysis of Variance for HDHQ scores, Young Early/Old Early/Old Late starters.

Source:	df	ss	ms	F	p
Between groups	2	1007.08	503.54	7.38	< .01
Within groups	54	3683.89	68.22		
Total	56	4690.97			

TABLE 4.176: - Analysis of Variance for Stereoscope scores, Young Early/Old Early/Old Late starters.

Source:	df	ss	ms	F	p
Between groups	2	492.48	246.24	9.28	< .001
Within groups	54	1432.56	26.52		
Total	56	1925.04			

TABLE 4.177: - Means, Standard Deviations, and t-tests for HDHQ & Stereoscope, Young Early/Old Early/Old Late.

	N	Mean	S.D.	t	p
HDHQ,	YE 12	29.75	9.25	YE/OE 2.259	< .05
	OE 19	22.68	7.97	YE/OL 3.772	< .001
	OL 26	18.69	7.99	OE/OL 1.656	N.S.
Ster.,	YE 12	14.00	3.90	YE/OE 0.340	N.S.
	OE 19	14.68	6.20	YE/OL 3.455	< .005
	OL 26	8.53	4.77	OE/OL 3.754	< .001

TABLE 4.178: - Numbers of Subjects arrested for Assaults (percentages parenthesized)

	PDs	PTs	ABs	CRs
N	100	60	30	30
	15 (15)	2 (3)	0	10 (33)

X^2 PD/PT = 4.22, p <.05
PD/CR = 3.88, p <.05

Hypothesis 6:

TABLE 4.179: - Analysis of Variance for FTP1, Group 1.

Source:	df	ss	ms	F	p
Between groups	3	453.03	151.01	9.77	< .001
Within groups	136	2100.48	15.44		
Total	139	2553.51			

TABLE 4.180: - Analysis of Variance for FTP1, Group 2.

Source:	df	ss	ms	F	p
Between groups	3	470.97	156.99	8.67	<.001
Within groups	136	2460.33	18.09		
Total	139	2931.30			

TABLE 4.181: - Analysis of Variance for FTP2, Group 1.

Source:	df	ss	ms	F	p
Between groups	3	668.52	222.84	7.39	<.001
Within groups	136	4095.55	30.11		
Total	139	4764.07			

TABLE 4.182: - Analysis of Variance for FTP2, Group 2.

Source:	df	ss	ms	F	p
Between groups	3	588.27	196.09	5.52	<.01
Within groups	136	4825.26	35.47		
Total	139	5413.53			

TABLE 4.183: - Analysis of Variance for FTP1 Responses, Group 1.

Source:	df	ss	ms	F	p
Between groups	3	52.60	17.53	3.69	<.05
Within groups	136	644.62	4.73		
Total	139	697.22			

TABLE 4.184 : - Analysis of Variance for FTP1 Responses, Group 2.

Source:	df	ss	ms	F	p
Between groups	3	102.31	34.10	7.77	<.001
Within groups	136	596.62	4.38		
Total	139	698.93			

TABLE 4.185: - Comparison of Group 1 versus 2 Drinkers on FTP1 and FTP2, Shown in Years.

	Group 1	Group 2	t	p
N	50	50		
Mean, FTP1	2.51	2.85		
S.D.	3.31	3.10	0.531	N.S.
Mean, FTP2	5.61	6.10		
S.D.	4.67	5.43	0.483	N.S.

TABLE 4.186: - Comparison of Group 1 versus 2 Patients on FTP1 and FTP2, shown in Years.

	Group 1	Group 2	t	p
N	30	30		
Mean, FTP1	4.30	6.46		
S.D.	3.37	5.09	1.929	< .10 p> .05
Mean, FTP2	8.15	9.26		
S.D.	4.70	5.84	0.813	N.S.

TABLE 4.187: - Comparison of Group 1 Drinkers versus Group 2 Patients, on FTP1 and FTP2, in Years.

	Group 1 PDs	Group 2 PTs	t	p
N	50	30		
Mean, FTP1	2.51	6.46		
S.D.	3.31	5.09	4.205	<.001
Mean, FTP2	5.61	9.26		
S.D.	4.67	5.84	3.071	<.005

(One-tailed tests)

TABLE 4.188: - Comparison of Group 2 Drinkers versus Group 1 Patients on FTP1 and FTP2, in Years.

	Group 2 PDs	Group 1 PTs	t	p
N	50	30		
Mean, FTP1	2.85	4.30		
S.D.	3.10	3.37	1.962	<.05
Mean, FTP2	6.10	8.15		
S.D.	5.43	4.70	1.708	<.05

(One-tailed tests)

TABLE 4.189: - Relationships between Number of FTP1 Responses and Other Variables.

		PDs	PTs	ABs	CRs
N		100	60	30	30
No.responses/intellig.	r =	.32*	.24	.21	.24
No.responses/education	r =	.05	.16	.34	.12
No.responses/age	r =	-.15	-.12	-.15	-.08
No.responses/imprison.	r =	-	-	-	.18

*p <.01

TABLE 4.190: - Relationships between FTP1 and Other Variables.

		PDs	PTs	ABs	CRs
N		100	60	30	30
FTP1/intelligence	r =	.08	-.06	-.10	.27
FTP1/education	r =	.03	-.05	.21	.53**
FTP1/age	r =	-.21*	-.03	-.49**	-.23
FTP1/age of onset	r =	-.09	-	-	-
FTP1/years of abuse	r =	-.09	-	-	-
FTP1/imprisonment	r =	-	-	-	-.06

*p< .05 **p < .01

TABLE 4.191: - Relationships between FTP2 and Other Variables.

		PDs	PTs	ABs	CRs
N		100	60	30	30
FTP2/intelligence	r =	.04	-.23	-.02	-.01
FTP2/education	r =	-.01	.04	.34	.19
FTP2/age	r =	-.35***	-.04	-.38*	-.48**
FTP2/age of onset	r =	.00	-	-	-
FTP2/years of abuse	r =	-.35***	-	-	-
FTP2/imprisonment	r =	-	-	-	-.32
FTP2/FTP1	r =	.44***	.41**	.08	.47**

*p < .05 **p < .02 ***p <.001

TABLE 4.192: - Analysis of Variance for FTP1 scores, Early/Middle/Late onset drinkers.

Source:	df	ss	ms	F	p
Between groups	2	11.42	5.71	.55	N.S.
Within groups	97	1002.18	10.33		
Total	99	1013.60			

TABLE 4.193: - Analysis of Variance for FTP2 scores, Early/Middle/Late onset drinkers.

Source:	df	ss	ms	F	p
Between groups	2	38.99	19.49	.76	N.S.
Within groups	97	2484.35	25.61		
Total	99	2523.34			

TABLE 4.194: - Means and Standard Deviations for FTP1 and FTP2, in Years, Early/Middle/Late starters.

FTP1	N	Mean	S.D.	t	p
Early	47	3.03	3.77		
Middle	25	2.32	2.80		
Late	28	2.40	2.43	(N.S. by F-test)	
FTP2					
Early	47	5.26	4.43		
Middle	25	6.77	5.21		
Late	28	6.06	5.86		

TABLE 4.195: - Analysis of Variance for FTP1, Youngest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	332.41	110.80	4.86	< .01
Within groups	66	1504.43	22.79		
Total	69	1836.84			

TABLE 4.196: - Analysis of Variance for FTP2, Youngest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	361.94	120.64	3.24	< .05
Within groups	66	2456.64	37.22		
Total	69	2818.58			

TABLE 4.197: - Means, Standard Deviations, and t-tests for FTP1 and FTP2, in Years, Youngest Subjects.

FTP1	N	Mean	S.D.	t	p
PDs	25	3.64	4.16	PD/PT 0.857	N.S.
PTs	15	4.84	4.43	PD/AB 4.369	< .001
ABs	15	9.50	3.99	PD/CR 1.208	N.S.
CRs	15	5.67	6.49		
FTP2					
PDs	25	7.51	5.16	PD/PT 0.783	N.S.
PTs	15	8.97	6.52	PD/AB 2.994	< .005
ABs	15	13.46	7.40	PD/CR 1.951	< .05
CRs	15	10.93	5.69		

(One-tailed tests)

TABLE 4.198: - Analysis of Variance for FTP1 scores, Oldest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	143.25	47.75	4.93	< .01
Within groups	66	638.76	9.67		
Total	69	782.01			

TABLE 4.199: - Analysis of Variance for FTP2 scores, Oldest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	401.32	133.77	6.32	< .001
Within groups	66	1395.14	21.13		
Total	69	1796.46			

TABLE 4.200: - Means, Standard Deviations, and t-tests for FTP1 and FTP2, in Years, Oldest Subjects.

FTP1	N	Mean	S.D.	t	p
PDs	25	1.82	2.56	PD/PT 2.839	< .005
PTs	15	4.74	3.96	PD/AB 4.144	< .001
ABs	15	5.31	2.60	PD/CR 2.040	< .025
CRs	15	3.76	3.43		
FTP2					
PDs	25	3.26	4.17	PD/PT 2.760	< .005
PTs	15	6.73	3.22	PD/AB 3.868	< .001
ABs	15	9.67	6.34	PD/CR 1.585	< .10 p > .05
CRs	15	5.46	4.38		

(One-tailed tests)

TABLE 4.201: - Means, Standard Deviations, and t-tests for Youngest versus Oldest Subjects, on FTP1 and FTP2, shown in Years.

FTP1	Youngest	S.D.	Oldest	S.D.	t	p
PDs	3.64	4.16	1.82	2.56	1.864	$<.10$ $p>.05$
PTs	4.84	4.43	4.74	3.96	0.159	N.S.
ABs	9.50	3.99	5.31	2.60	3.399	$<.005$
CRs	5.67	6.49	3.76	3.43	1.007	N.S.
FTP2						
PDs	7.51	5.16	3.26	4.17	3.202	$<.005$
PTs	8.97	6.52	6.73	3.22	1.194	N.S.
ABs	13.46	7.40	9.67	6.34	1.505	N.S.
CRs	10.93	5.69	5.46	4.38	2.949	$<.01$

TABLE 4.202: - Analysis of Variance for FTP1 scores, Young Early/Old Early/Old Late starters.

Source:	df	ss	ms	F	p
Between groups	2	9.66	4.83	.64	N.S.
Within groups	54	404.63	7.49		
Total	56	414.29			

TABLE 4.203: - Analysis of Variance for FTP2 scores, Young Early/Old Early/Old Late starters.

Source:	df	ss	ms	F	p
Between groups	2	179.29	89.64	3.70	$<.05$
Within groups	54	1308.24	24.22		
Total	56	1487.53			

TABLE 4.204: - Means, Standard Deviations, and t-tests for FTP1 and FTP2, in Years, Young Early/Old Early/Old Late starters.

FTP1	N	Mean	S.D.	t	p
YE	12	3.14	3.54		
OE	19	2.66	2.92	(N.S. by F-test)	
OL	26	2.10	2.12		
FTP2					
YE	12	8.68	5.51	YE/OE 3.246	$<.005$
OE	19	3.74	2.96	YE/OL 1.627	N.S.
OL	26	5.47	5.71	OE/OL 1.197	N.S.

Hypothesis 7:

TABLE 4.205: - Analysis of Variance for the So scale, Group 1.

Source:	df	ss	ms	F	p
Between groups	3	3198.88	1066.29	28.92	$<.001$
Within groups	136	5014.00	36.86		
Total	139	8212.88			

TABLE 4.206: - Analysis of Variance for the So scale, Group 2.

Source:	df	ss	ms	F	p
Between groups	3	2765.87	922.29	24.86	<.001
Within groups	136	5043.81	37.08		
Total	139	7810.68			

TABLE 4.207: - Comparison of Group 1 versus 2 Drinkers on the So scale.

	Group 1	Group 2	t	p
N	50	50		
Mean	26.80	27.78		
S.D.	6.57	6.82	0.731	N.S.

TABLE 4.208: - Comparison of Group 1 versus 2 Patients on the So scale.

	Group 1	Group 2	t	p
N	30	30		
Mean	33.13	32.90		
S.D.	6.04	5.65	0.154	N.S.

TABLE 4.209: - Comparison of Group 1 Drinkers versus Group 2 Patients on the So scale.

	Group 1 PDs	Group 2 PTs	t	p
N	50	30		
Mean	26.80	32.90		
S.D.	6.57	5.65	4.227	<.001

(One-tailed test)

TABLE 4.210: - Comparison of Group 2 Drinkers versus Group 1 Patients on the So scale.

	Group 2 PDs	Group 1 PTs	t	p
N	50	30		
Mean	27.78	33.13		
S.D.	6.82	6.04	3.540	<.001

(One-tailed test)

TABLE 4.211: - Relationships between the So scale and Other Variables.

		PDs	PTs	ABs	CRs
N		100	60	30	30
So/intelligence	r =	.18	-.07	.17	.48**
So/education	r =	.04	.06	.48**	.45**
So/age	r =	.45***	.02	-.17	.38*
So/age of onset	r =	.43***	-	-	-
So/years of abuse	r =	-.08	-	-	-
So/imprisonment	r =	-	-	-	.39*

*p <.05 **p <.02 ***p <.001

TABLE 4.212: - Analysis of Variance for the So scale, Early/Middle/Late onset drinkers.

Source:	df	ss	ms	F	p
Between groups	2	780.47	390.23	10.38	< .001
Within groups	97	3644.11	37.56		
Total	99	4424.58			

TABLE 4.213: - Means, Standard Deviations, and t-tests for the So scale, Early/Middle/Late starters.

	N	Mean	S.D.	t	p
Early	47	24.53	6.58	E/L 4.263	< .001
Middle	25	28.24	5.12	E/M 2.445	< .02
Late	28	31.07	6.13	M/L 1.809	<.10 p >.05

TABLE 4.214: - Analysis of Variance for the So scale, Youngest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	3053.24	1017.74	24.81	< .001
Within groups	66	2707.09	41.01		
Total	69	5760.33			

TABLE 4.215: - Means, Standard Deviations, and t-tests for the So scale, Youngest Subjects.

	N	Mean	S.D.	t	p
PDs	25	22.24	6.71	PD/PT 4.990	< .001
PTs	15	32.93	6.28	PD/AB 8.693	< .001
ABs	15	39.40	4.67	PD/CR 2.089	< .025
CRs	15	27.00	7.39		

(One-tailed tests)

TABLE 4.216: - Analysis of Variance for the So scale, Oldest PDs, PTs, ABs, and CRs.

Source:	df	ss	ms	F	p
Between groups	3	916.50	305.50	8.66	< .001
Within groups	66	2327.44	35.26		
Total	69	3243.94			

TABLE 4.217: - Means, Standard Deviations, and t-tests for the So scale, Oldest Subjects.

	N	Mean	S.D.	t	p
PDs	25	29.68	6.70	PD/PT 1.675	<.10 p > .05
PTs	15	33.33	6.62	PD/AB 5.183	< .001
ABs	15	39.26	3.17	PD/CR 0.692	N.S.
CRs	15	31.13	5.93		

(One-tailed tests)

TABLE 4.218: - Means, Standard Deviations, and t-tests for Youngest versus Oldest Subjects on So scale.

	Youngest	S.D.	Oldest	S.D.	t	p
PDs	22.24	6.71	29.68	6.70	3.921	< .001
PTs	32.93	6.28	33.33	6.62	0.169	N.S.
ABs	39.40	4.67	39.26	3.17	0.091	N.S.
CRs	27.00	7.39	31.13	5.93	1.687	N.S.

TABLE 4.219: - Analysis of Variance for the So scale, Young Early/Old Early/Old Late starters.

Source:	df	ss	ms	F	p
Between groups	2	973.45	486.72	12.50	< .001
Within groups	54	2101.81	38.92		
Total	56	3075.26			

TABLE 4.220: - Means, Standard Deviations, and t-tests for the So scale, Young Early/Old Early/Old Lates.

	N	Mean	S.D.	t	p
YE	12	20.00	6.56	YE/OE 3.150	< .005
OE	19	27.21	5.97	YE/OL 4.899	< .001
OL	26	30.88	6.27	OE/OL 1.978	<.10 p> .05

TABLE 4.221: - Number of Subjects Manifesting Occupational and Geographical Instability (percentages parenthesized)

	PDs	PTs	ABs	CRs
N	100	60	30	30
Wanderlust	65 (65)	7 (12)	6 (20)	21 (70)
X^2 PD/PT = 40.97, p <.001 PD/AB = 17.08, p <.001 PD/CR = 0.08, N.S.				
Frequ.job change	42 (42)	13 (22)	3 (10)	12 (40)
X^2 PD/PT = 6.00, p <.02 PD/AB = 9.07, p <.01 PD/CR = 0.00, N.S.				
Frequ.geog.change	62 (62)	9 (15)	7 (23)	21 (70)
X^2 PD/PT = 31.68, p < .001 PD/AB = 12.34, p < .001 PD/CR = 0.34, N.S.				
Been a sailor	38 (38)	8 (13)	0	7 (23)
X^2 PD/PT = 9.96, p< .01 PD/CR = 1.59, N.S.				
N.Z.Nationality	66 (66)	46 (77)	26 (87)	27 (90)
X^2 PD/PT = 1.55, N.S. PD/AB = 3.81, p <.10 p> .05 PD/CR = 5.40, p <.05				

TABLE 4.222: - Number of Subjects describing themselves as Impulsive (percentages parenthesized)

	PDs	PTs	ABs	CRs
N	100	60	30	30
Impulsive	75 (75)	20 (33)	9 (30)	19 (63)

X^2 PD/PT = 25.29, p < .001
PD/AB = 18.51, p < .001
PD/CR = 1.04, N.S.

TABLE 4.223: - Number of Subjects describing themselves as Promiscuous (percentages parenthesized)

	PDs	PTs	ABs	CRs
N	100	60	30	30
De factos	51 (51)	10 (17)	0	15 (50)

X^2 PD/PT = 17.31, p < .001
PD/CR = 0.01, N.S.

Unfaithful	44 (57)	10 (25)	3 (11)	12 (48)

X^2 PD/PT = 9.69, p < .01
PD/AB = 16.09, p < .001
PD/CR = 0.32, N.S.

Illegitimate chil.	15 (15)	1 (2)	0	11 (37)

X^2 PD/PT = 6.00, p < .02
PD/CR = 5.48, p < .02

TABLE 4.224: - Number of Subjects describing disciplinary & other Difficulties in School Years (percentages parenthesized)

	PDs	PTs	ABs	CRs
N	100	60	30	30
Sent to Principal frequently	58 (58)	26 (43)	9 (30)	22 (73)

X^2 PD/PT = 2.67, N.S.
PD/AB = 6.16, p < .02
PD/CR = 1.69, N.S.

Suspended school	12 (12)	1 (2)	0	5 (17)

X^2 PD/PT = 4.07, p < .05
PD/CR = 0.12, N.S.

Truanting	40 (40)	12 (20)	3 (10)	16 (53)

X^2 PD/PT = 5.95, p < .02
PD/AB = 8.07, p < .01
PD/CR = 1.17, N.S.

Stealing	72 (72)	23 (38)	11 (37)	21 (70)

X^2 PD/PT = 16.25, p < .001
PD/AB = 10.99, p < .001
PD/CR = 0.00, N.S.

Gave teachers troub.	27(27)	12 (20)	2 (7)	9 (30)

X^2 PD/PT = 0.65, N.S.
PD/AB = 4.39, p < .05
PD/CR = 0.00, N.S.

TABLE 4.225: - Number of Subjects reporting a Criminal History (percentages parenthesized)

	PDs	PTs	ABs	CRs
N	100	60	30	30
Ever arrested	78 (78)	18 (30)	0	30 (100)
X^2 PD/PT = 34.02, p < .001				
Serious crimes	43 (43)	13 (22)	0	30 (100)
X^2 PD/PT = 6.59, p < .02				

TABLE 4.226: - Number of Early/Middle/Late onset drinkers describing Occupational and Geographical Instability (percentages parenthesized)

	Early	Middle	Late
N	47	25	28
Wanderlust	36 (77)	16 (64)	13 (46)
X^2 E/M = 0.74, N.S.			
E/L = 5.79, p < .02			
M/L = 1.02, N.S.			
Frequ.job change	24 (51)	11 (44)	7 (25)
X^2 E/M = 0.10, N.S.			
E/L = 3.91, p < .05			
M/L = 1.37, N.S.			
Frequ.geog.change	34 (72)	17 (68)	11 (39)
X^2 E/M = 0.01, N.S.			
E/L = 6.68, p < .01			
M/L = 3.31, p <.10 p> .05			
Sailor	19 (40)	12 (48)	7 (25)
X^2 E/M = 0.13, N.S.			
E/L = 1.23, N.S.			
M/L = 2.13, N.S.			

TABLE 4.227: - Number of Early/Middle/Late onset drinkers reporting Promiscuity (percentages parenthesized)

	Early	Middle	Late
N	47	25	28
De factos	31 (66)	12 (48)	8 (29)
X^2 E/M = 1.50, N.S.			
E/L = 8.40, p < .01			
M/L = 1.38, N.S.			
Unfaithful	22 (65)	13 (65)	9 (39)
X^2 E/M = 0.07, N.S.			
E/L = 2.67, N.S.			
M/L = 1.94, N.S.			
Illegitimate child.	12 (26)	3 (12)	0
X^2 E/M = 1.08, N.S.			

TABLE 4.228: - Number of Early/Middle/Late onset Drinkers describing Themselves as Impulsive (percentages parenthesized)

	Early 47	Middle 25	Late 28
N			
Impulsive	39 (83)	18 (72)	18 (64)

X^2 E/M = 0.62, N.S.
E/L = 2.42, N.S.
M/L = 0.09, N.S.

TABLE 4.229: - Numbers of Early/Middle/Late onset Drinkers reporting Disciplinary and other Difficulties during School Years (percentages parenthesized)

	Early 47	Middle 25	Late 28
N			
Sent to Principal	33 (70)	11 (44)	14 (50)

X^2 E/M = 3.68, $p < .10$ $p > .05$
E/L = 2.27, N.S.
M/L = 0.02, N.S.

Suspended school	9 (19)	3 (12)	0

X^2 E/M = 0.20, N.S.

Truanting	24 (51)	9 (36)	7 (25)

X^2 E/M = 0.94, N.S.
E/L = 3.91, $p < .05$
M/L = 0.33, N.S.

Thieving	38 (81)	18 (72)	16 (57)

X^2 E/M = 0.31, N.S.
E/L = 3.80, $p < .10$ $p > .05$
M/L = 0.71, N.S.

Gave teach.trouble.	18 (38)	4 (16)	5 (18)

X^2 E/M = 2.84, $p < .10$ $p > .05$
E/L = 2.56, N.S.
M/L = 0.03, N.S.

TABLE 4.230: - Number of Early/Middle/Late onset Drinkers Reporting a Criminal History (percentages parenthesized)

	Early 47	Middle 25	Late 28
N			
Inebriety arrests	36 (77)	16 (64)	10 (36)

X^2 E/M = 0.73, N.S.
E/L = 10.72, $p < .01$
M/L = 3.19, $p < .10$ $p > .05$

Serious offences	29 (62)	11 (44)	3 (11)

X^2 E/M = 1.41, N.S.
E/L = 16.64, $p < .001$
M/L = 5.94, $p < .02$

TABLE 4.231: - Comparison of Youngest versus Oldest Drinkers on Indices of Sociopathy (percentages parenthesized)

	Youngest	Oldest	X^2	p
N	25	25		
Wanderlust	19 (76)	15 (60)	0.82	N.S.
Freq.job change	11 (44)	9 (36)	0.08	N.S.
Freq.geog.change	19 (76)	14 (56)	1.42	N.S.
Been sailor	9 (36)	11 (44)	0.08	N.S.
Impulsive	22 (88)	16 (64)	2.74	< .10 p > .05
De factos	19 (76)	9 (36)	6.57	<.02
Unfaithful	12 (75)	12 (57)	0.62	N.S.
Illegitimate child.	7 (28)	0	-	-
Sent to Principal	17 (68)	16 (64)	0.00	N.S.
Suspended school	4 (16)	4 (16)	0.14	N.S.
Truanting	16 (64)	7 (28)	5.15	< .05
Thieving	20 (80)	16 (64)	0.89	N.S.
Gave teach.trouble	14 (56)	6 (24)	4.08	< .05
Inebriety arrests	20 (80)	12 (48)	4.25	< .05
Serious offences	18 (72)	8 (32)	6.49	< .02

TABLE 4.232: - Number of Young Early/Old Early/Old Late Drinkers describing Occupational and Geographical Instability (percentages parenthesized)

	Young Early	Old Early	Old Late
N	12	19	26
Wanderlust	9 (75)	14 (74)	11 (42)
X^2 YE/OE = 0.10, N.S.			
YE/OL = 2.33, N.S.			
OE/OL = 3.22, p < .10 p > .05			
Frequ.job change	6 (50)	9 (47)	6 (23)
X^2 YE/OE = 0.04, N.S.			
YE/OL = 1.64, N.S.			
OE/OL = 1.94, N.S.			
Frequ.geog.change	10 (83)	14 (74)	9 (35)
X^2 YE/OE = 0.04, N.S.			
YE/OL = 5.96, p < .02			
OE/OL = 5.26, p < .05			
Been sailor	2 (17)	11 (58)	7 (27)
X^2 YE/OE = 3.62, p < .10 p > .05			
YE/OL = 0.07, N.S.			
OE/OL = 3.21, p < .10 p > .05			

TABLE 4.233: - Number of Young Early/Old Early/Old Late starters describing Themselves as Impulsive (percentages parenthesized)

	Young Early	Old Early	Old Late
N	12	19	26
	10 (83)	14 (74)	17 (65)
X^2 YE/OE = 0.04, N.S.			
YE/OL = 0.56, N.S.			
OE/OL = 0.07, N.S.			

TABLE 4.234: - Number of Young Early/Old Early/Old Lates reporting Promiscuity (percentages parenthesized)

	Young Early	Old Early	Old Late
N	12	19	26
De factos	9 (75)	9 (47)	8 (31)
X^2 YE/OE = 1.33, N.S.			
YE/OL = 4.83, p <.05			
OE/OL = 0.68, N.S.			
Unfaithful	4 (67)	11 (69)	8 (35)
X^2 YE/OE = 0.17, N.S.			
YE/OL = 0.92, N.S.			
OE/OL = 3.13, p <.10 p > .05			
Illegitimate child.	4 (33)	2 (11)	1 (4)
X^2 (not calculated)			

TABLE 4.235: - Number of Young Early/Old Early/Old Lates reporting Disciplinary and other Difficulties during School Years (percentages parenthesized)

	Young Early	Old Early	Old Late
N	12	19	26
Sent to Principal	10 (83)	13 (68)	13 (50)
X^2 YE/OE = 0.26, N.S.			
YE/OL = 2.55, N.S.			
OE/OL = 0.87, N.S.			
Suspended school	3 (25)	4 (21)	0
X^2 YE/OE = 0.04, N.S.			
Truanting	9 (75)	8 (42)	7 (27)
X^2 YE/OE = 2.05, N.S.			
YE/OL = 5.93, p <.02			
OE/OL = 0.56, N.S.			
Thieving	10 (83)	16 (84)	14 (54)
X^2 YE/OE = 0.17, N.S.			
YE/OL = 1.93, N.S.			
OE/OL = 3.32, p <.10 p > .05			
Gave teach.trouble	9 (75)	5 (26)	4 (15)
X^2 YE/OE = 5.26, p <.05			
YE/OL = 10.45, p <.01			
OE/OL = 0.29, N.S.			

TABLE 4.236: - Number of Young Early/Old Early/Old Lates reporting a Criminal History (percentages parenthesized)

	Young Early	Old Early	Old Late
N	12	19	26
Inebriety arrests	10 (83)	15 (79)	10 (38)
X^2 YE/OE = 0.02, N.S.			
YE/OL = 4.95, p <.05			
OE/OL = 5.77, p <.02			

TABLE 4.236 Cont:-

	Young Early	Old Early	Old Late
N	12	19	26
Serious offences	10 (83)	8 (42)	3 (12)

X^2 YE/OE = 3.62, $p < .10$ $p > .05$
YE/OL = 15.74, $p < .001$
OE/OL = 4.05, $p < .05$

TABLE 4.237: - Comparison of the Young Early Drinkers with the Combined Psychiatric Patients (percentages parenthesized)

	Patients	Young Early	X^2	p
N	60	12		
Unfaithful	10 (25)	4 (67)	2.54	N.S.
Freq.job change	13 (22)	6 (50)	2.80	$< .10$ $p > .05$
Wanderlust	7 (12)	9 (75)	19.69	$< .001$
Freq.geog.change	9 (15)	10 (83)	20.65	$< .001$
Serious offences	13 (22)	10 (83)	14.77	$< .001$
Sent to Principal	26 (43)	10 (83)	4.90	$< .05$
Truanting	12 (20)	9 (75)	12.10	$< .001$
Thieving	23 (38)	10 (83)	6.44	$< .02$
Gave teachers trouble	12 (20)	9 (75)	12.10	$< .001$
De factos	10 (17)	9 (75)	14.64	$< .001$
Impulsive	20 (33)	10 (83)	8.33	$< .01$
			t	
HDHQ Mean	19.63	29.75	4.534	$< .001$
Stereoscope Mean	8.88	14.00	4.153	$< .001$
So scale Mean	33.01	20.00	6.939	$< .001$

TABLE 4.238: - Comparison of the Old Late Drinkers with the Combined Psychiatric Patients (percentages parenthesized)

	Patients	Old Late	X^2	p
N	60	26		
Unfaithful	10 (25)	8 (35)	0.29	N.S.
Freq.job change	13 (22)	6 (23)	0.01	N.S.
Wanderlust	7 (12)	11 (42)	8.52	$< .01$
Freq.geog.change	9 (15)	9 (35)	3.11	$< .10$ $p > .05$
Serious offences	13 (22)	3 (12)	0.65	N.S.
Sent to Principal	26 (43)	13 (50)	0.11	N.S.
Truanting	12 (20)	7 (27)	0.18	N.S.
Thieving	23 (38)	14 (54)	1.20	N.S.
Gave teachers troub.	12 (20)	4 (15)	0.04	N.S.
De factos	10 (17)	8 (31)	1.41	N.S.
Impulsive	20 (33)	17 (65)	6.35	$< .02$
			t	
HDHQ Mean	19.63	18.69	0.570	N.S.
Stereoscope Mean	8.88	8.53	0.351	N.S.
So scale Mean	33.01	30.88	1.526	N.S.

Family Background:

TABLE 4.239: - Number of Subjects reporting Parental Problem Drinking (percentages parenthesized)

	PDs 100	PTs 60	ABs 30	CRs 30
N				
Parent a PD	47 (47)	14 (23)	2 (7)	6 (20)
X^2 PD/PT = 7.92, p < .01 PD/AB = 14.31, p < .001 PD/CR = 5.89, p < .02				
Father a PD	46 (46)	13 (22)	2 (7)	5 (17)
X^2 PD/PT = 8.52, p < .01 PD/AB = 13.69, p < .001 PD/CR = 7.14, p < .01				
Mother a PD	8 (8)	3 (5)	0	2 (7)
X^2 PD/PT = 0.16, N.S. PD/CR = 0.02, N.S.				

TABLE 4.240: - Number of Subjects reporting Parental Psychiatric Illness (percentages parenthesized)

	PDs 100	PTs 60	ABs 30	CRs 30
N				
Parent psych.ill	27 (27)	20 (33)	5 (17)	3 (10)
X^2 PD/PT = 0.45, N.S. PD/CR = 2.86, p < .10 p > .05 PD/AB = 0.82, N.S.				
Mother psych.ill	20 (20)	15 (25)	2 (7)	3 (10)
X^2 PD/PT = 0.29, N.S. PD/AB = 2.05, N.S. PD/CR = 0.97, N.S.				
Father psych.ill	9 (9)	9 (15)	3 (10)	1 (3)
X^2 PD/PT = 0.81, N.S. PD/AB = 0.03, N.S. PD/CR = 0.40, N.S.				

TABLE 4.241: - Subjects' Ratings of Parental Warmth, etc. (percentages parenthesized)

	PDs 100	PTs 60	ABs 30	CRs 30
N				
Mother warm & kind	55 (55)	31 (52)	24 (80)	17 (57)
X^2 PD/PT = 0.06, N.S. PD/AB = 5.04, p < .05 PD/CR = 0.00, N.S.				
Mother positive	80 (80)	47 (78)	29 (97)	24 (80)
X^2 PD/PT = 0.00, N.S. PD/AB = 3.58, p<.10 p > .05 PD/CR = 0.07, N.S.				

TABLE 4.241, Cont:-

	PDs	PTs	ABs	CRs
Father warm & kind	34 (34)	28 (47)	19 (63)	11 (37)
X^2 PD/PT = 2.02, N.S.				
PD/AB = 7.05, $p < .01$				
PD/CR = 0.00, N.S.				
Father positive	57 (57)	43 (72)	26 (87)	15 (50)
X^2 PD/PT = 2.84, $p < .10$ $p > .05$				
PD/AB = 7.56, $p < .01$				
PD/CR = 0.22, N.S.				
Both warm & kind	21 (21)	19 (32)	15 (50)	9 (30)
X^2 PD/PT = 1.74, N.S.				
PD/AB = 8.30, $p < .01$				
PD/CR = 0.61, N.S.				
Incompatible	51 (51)	25 (42)	10 (33)	10 (33)
X^2 PD/PT = 0.96, N.S.				
PD/AB = 2.22, N.S.				
PD/CR = 2.22, N.S.				
Prefers mother	42 (42)	18 (30)	13 (43)	10 (33)
X^2 PD/PT = 1.82, N.S.				
PD/AB = 0.00, N.S.				
PD/CR = 0.40, N.S.				

TABLE 4.242: - Number of Subjects Separated from at least One Parent before Age 16 for Longer than One Year, but including Separations shorter than One Year if occurring before Age Three (percentages parenthesized)

	PDs	PTs	ABs	CRs
N	100	60	30	30
Separated	64 (64)	21 (35)	11 (37)	19 (63)
X^2 PD/PT = 11.52, $p < .001$				
PD/AB = 5.98, $p < .02$				
PD/CR = 0.02, N.S.				

TABLE 4.243: - Number of Subjects Separated from at least One Parent before Age 16, for Longer than One Year (percentages parenthesized)

	PDs	PTs	ABs	CRs
N	100	60	30	30
Separated	55 (55)	15 (25)	7 (23)	16 (53)
X^2 PD/PT = 12.52, $p < .001$				
PD/AB = 8.05, $p < .01$				
PD/CR = 0.00, N.S.				

TABLE 4.244: - Number of Subjects experiencing the possibly "femininising" influence of being raised by the mother alone (percentages parenthesized)

	PDs 100	PTs 60	ABs 30	CRs 30
N				
Alone with mother	28 (28)	6 (10)	5 (17)	12 (40)

X^2 PD/PT = 6.22, p <.02
PD/AB = 1.02, N.S.
PD/CR = 1.04, N.S.

TABLE 4.245: - Number of Subjects Separated from Parents by Death (percentages parenthesized)

	PDs 100	PTs 60	ABs 30	CRs 30
N				
Separated by Death	17 (17)	7 (12)	1 (3)	5 (17)

X^2 PD/PT = 0.47, N.S.
PD/AB = 2.56, N.S.
PD/CR = 0.06, N.S.

TABLE 4.246: Number of Subjects Separated from Parents for Reasons other than Death (percentages parenthesized)

	PDs 100	PTs 60	ABs 30	CRs 30
N				
Sep.by other than dth.	47 (47)	14 (23)	10 (33)	14 (47)

X^2 PD/PT = 7.93, p <.01
PD/AB = 1.24, N.S.
PD/CR = 0.03, N.S.

TABLE 4.247: - Number of Subjects Separated from both Parents for Longer than One Year (percentages parenthesized)

	PDs 100	PTs 60	ABs 30	CRs 30
N				
Separated	35 (35)	7 (12)	4 (13)	8 (27)

X^2 PD/PT = 9.38, p <.01
PD/AB = 4.18, p <.05
PD/CR = 0.40, N.S.

TABLE 4.248: - Number of Subjects Separated from Mother only for Longer than One Year (percentages parenthesized)

	PDs 100	PTs 60	ABs 30	CRs 30
N				
Separated	3 (3)	2 (3)	0	1 (3)

X^2 PD/PT = 0.12, N.S.
PD/CR = 0.26, N.S.

TABLE 4.249: - Subjects Separated from Father only, for Longer than One Year (percentages parenthesized)

	PDs	PTs	ABs	CRs
N	100	30	30	30
Separated	17 (17)	6 (10)	3 (10)	7 (23)

X^2 PD/PT = 0.98, N.S.
PD/AB = 0.41, N.S.
PD/CR = 0.27, N.S.

TABLE 4.250: - Early/Middle/Late Drinkers with Problem Drinking, Psychiatrically Ill, or Incompatible Parents (percentages parenthesized)

	Early	Middle	Late
N	47	25	28
Parent a PD	26 (55)	14 (56)	7 (25)

X^2 E/M = 0.03, N.S.
E/L = 5.38, $p < .05$
M/L = 4.11, $p < .05$

Parent psych.ill	15 (32)	4 (16)	8 (29)

X^2 E/M = 1.39, N.S.
E/L = 0.00, N.S.
M/L = 0.99, N.S.

Parents incompatible	29 (62)	10 (40)	12 (43)

X^2 E/M = 2.28, N.S.
E/L = 1.82, N.S.
M/L = 0.00, N.S.

TABLE 4.251: - Early/Middle/Late Drinkers separated from a Parent for Longer than One Year (percentages parenthesized)

	Early	Middle	Late
N	47	25	28
Separated	34 (72)	17 (68)	13 (46)

X^2 E/M = 0.01, N.S.
E/L = 4.00, $p < .05$
M/L = 1.71, N.S.

TABLE 4.252: - Early/Middle/Late Drinkers' Ratings of Parents (percentages parenthesized)

	Early	Middle	Late
N	47	25	28
Father positive	24 (51)	15 (60)	18 (64)

X^2 E/M = 0.23, N.S.
E/L = 0.77, N.S.
M/L = 0.00, N.S.

TABLE 4.252, Cont:-

	Early	Middle	Late
Mother positive	34 (72)	22 (88)	24 (86)
X^2 E/M = 1.50, N.S.			
E/L = 1.12, N.S.			
M/L = 0.02, N.S.			
Both warm & kind	7 (15)	5 (20)	9 (32)
X^2 E/M = 0.05, N.S.			
E/L = 2.18, N.S.			
M/L = 0.48, N.S.			

TABLE 4.253: - Early/Middle/Late Drinkers' Ratings of Mothers versus Fathers as Positive (percentages parenthesized)

	N	Mothers	Fathers	X^2	p
Early	47	34 (72)	24 (51)	3.65	< .10 p > .05
Middle	25	22 (88)	15 (60)	3.74	< .10 p > .05
Late	28	24 (86)	18 (64)	2.38	N.S.

TABLE 4.254: - Youngest versus Oldest Drinkers compared On Family Background Variables (percentages parenthesized)

	Youngest	Oldest	X^2	p
N	25	25		
Parent a PD	12 (48)	11 (44)	0.00	N.S.
Parent psy.ill	12 (48)	4 (16)	4.50	<.05
Separations	23 (92)	11 (44)	11.12	<.001
Moth.positive	17 (68)	22 (88)	1.86	N.S.
Fath.positive	13 (52)	13 (52)	0.08	N.S.
Both warm	4 (16)	7 (28)	0.47	N.S.

TABLE 4.255: - Young Early/Old Early/Old Late starters with Problem Drinking, Psychiatrically Ill, or Incompatible Parents (percentages parenthesized)

	Young Early	Old Early	Old Late
N	12	19	26
Parent a PD	3 (25)	12 (63)	7 (27)
X^2 YE/OE = 2.93, p < .10 p > .05			
YE/OL = 0.07, N.S.			
OE/OL = 4.54, p < .05			
Parent psych.ill	6 (50)	2 (11)	7 (27)
X^2 YE/OE = 4.15, p < .05			
YE/OL = 1.05, N.S.			
OE/OL = 0.98, N.S.			
Parents incompatible	8 (67)	11 (58)	12 (46)
X^2 YE/OE = 0.01, N.S.			
YE/OL = 0.68, N.S.			
OE/OL = 0.23, N.S.			

TABLE 4.256: - Young Early/Old Early/Old Late starters Separated from Parents for Longer than One Year (percentages parenthesized)

	Young Early	Old Early	Old Late
N	12	19	26
Separated	10 (83)	12 (63)	11 (42)

X^2 YE/OE = 0.66, N.S.
YE/OL = 4.05, $p < .05$
OE/OL = 1.18, N.S.

TABLE 4.257: - Young Early/Old Early/Old Late starters' Ratings of Parents (percentages parenthesized)

	Young Early	Old Early	Old Late
N	12	19	26
Mother warm & kind	5 (42)	11 (58)	13 (50)

X^2 YE/OE = 0.27, N.S.
YE/OL = 0.01, N.S.
OE/OL = 0.05, N.S.

Mother positive	8 (67)	17 (89)	21 (81)

X^2 YE/OE = 1.24, N.S.
YE/OL = 0.29, N.S.
OE/OL = 0.15, N.S.

Father warm & kind	4 (33)	3 (16)	13 (50)

X^2 YE/OE = 0.50, N.S.
YE/OL = 0.37, N.S.
OE/OL = 4.24, $p < .05$

Father positive	7 (58)	9 (47)	16 (62)

X^2 YE/OE = 0.05, N.S.
YE/OL = 0.02, N.S.
OE/OL = 0.42, N.S.

TABLE 4.258: - Young Early/Old Early/Old Late starters' Ratings of Mothers versus Fathers as Positive (percentages parenthesized)

	N	Mothers	Fathers	X^2	p
Young Early	12	8 (67)	7 (58)	0.00	N.S.
Old Early	19	17 (89)	9 (47)	5.96	<.02
Old Late	26	21 (81)	16 (62)	1.49	N.S.

TABLE 4.259: - Comparison of Young Early starters versus the Combined Psychiatric Patient group on Family Background Variables (percentages parenthesized)

	Patients	Young Early	X^2	p
N	60	12		
Parent a PD	14 (23)	3 (25)	0.06	N.S.
Father warm	28 (47)	4 (33)	0.28	N.S.
Father positive	43 (72)	7 (58)	0.33	N.S.
Mother warm	31 (52)	5 (42)	0.10	N.S.
Mother positive	47 (78)	8 (67)	0.25	N.S.
Separations	21 (35)	10 (83)	7.66	<.01

TABLE 4.260: - Comparison of Old Late starters versus the Combined Psychiatric Patient group on Family Background Variables (percentages parenthesized)

	Patients	Old Late	X^2	p
N	60	26		
Parent a PD	14 (23)	7 (27)	0.00	N.S.
Father warm	28 (47)	13 (50)	0.00	N.S.
Father positive	43 (72)	16 (62)	0.45	N.S.
Mother warm	31 (52)	13 (50)	0.00	N.S.
Mother positive	47 (78)	21 (81)	0.00	N.S.
Separations	21 (35)	11 (42)	0.16	N.S.

TABLE 4.261: - Comparison of Old Early starters versus the Combined Psychiatric Patient group on Family Background Variables (percentages parenthesized)

	Patients	Old Early	X^2	p
N	60	19		
Parent a PD	14 (23)	12 (63)	8.66	< .01
Father warm	28 (47)	3 (16)	4.56	< .05
Father positive	43 (72)	9 (47)	2.80	<.10 p> .05
Mother warm	31 (52)	11 (58)	0.05	N.S.
Mother positive	47 (78)	17 (89)	0.56	N.S.
Separations	21 (35)	12 (63)	3.63	<.10 p> .05

TABLE 4.262: - Comparison of Early starters versus the Combined Psychiatric Patient group on Family Background Variables (percentages parenthesized)

	Patients	Early	X^2	p
N	60	47		
Parent a PD	14 (23)	26 (55)	10.21	<.01
Father positive	43 (72)	24 (51)	3.95	<.05
Mother positive	47 (78)	34 (72)	0.24	N.S.
Separations	21 (35)	34 (72)	13.27	<.001

APPENDIX B

Materials

Navran Dependency scale:

Consists of 57 items extracted from the MMPI, described in J.cons.Psychol. 18: 192, 1954, L.A.Navran, and in J.clin.Psychol. 13: 364-368, 1957, S.A.Hathaway and P.F.Briggs.

Bernreuter Self-sufficiency scale:

Consists of 66 items; items and scoring are described in J.abnorm.soc.Psychol. 28: 291-300, 1933, R.G.Bernreuter.

Foulds Hostility-Direction-of-Hostility questionnaire:

The HDHQ consists of 52 items extracted from the MMPI and described in J.ment Sci. 106: 599-610, 1960, Foulds et al, and in Personality and Personal Illness, G.A.Foulds et al, 1965. The HDHQ was combined with the So scale from the California Psychological inventory in the following order, questions from the HDHQ being marked with an asterisk:-

1.* In school I was sometimes sent to the Principal for cutting up.
2.* I don't blame anyone for trying to grab everything he can get in this world.
3.* I easily become impatient with people.
4. I often feel that I made a wrong choice in my occupation,
5. When I was going to school I played hooky quite often.
6.* I get mad easily and then get over it soon.
7. I think Lincoln was greater than Washington.
8.* At times I feel like smashing things.
9. I would do almost anything on a dare.
10. As a youngster I was suspended from school one or more times for cutting up.
11.* At times I feel like picking a fist fight with someone.
12. With things going as they are, it's hard to keep up hope of amounting to something.
13.* At times I have a strong urge to do something harmful or shocking.
14. I feel myself to be alone in the world.
15. I think I am stricter about right and wrong than most people.
16. I am somewhat afraid of the dark.
17. I am very sensitive to what people think about me.
18.* Sometimes I feel as if I must injure myself or someone else.
19. I hardly ever get excited or thrilled.
20. I was a slow learner in school.
21. My parents have often disapproved of my friends.

22.* I can easily make other people afraid of me, and sometimes do for the fun of it.
23.* Sometimes I enjoy hurting persons I love.
24.* I sometimes tease animals.
25.*F I am too easily downed in an argument.
26. My home life was always happy.
27. I often act on the spur of the moment without stopping to think.
28. I always feel there is something between me and the rest of the world.
29. My parents have generally let me make my own decisions.
30.* I get angry sometimes.
31.*F I have no enemies who really wish to harm me.
32. I would rather go without something than ask for a favour.
33. I have had more than my share of things to worry about.
34.* If people had not had it in for me I would have been much more successful.
35. When I meet a stranger I often think he is better than I am.
36.* Someone has it in for me.
37.* I am sure I get a raw deal from life.
38.* I believe I am being followed.
39.* I commonly wonder what hidden reasons another may have for doing something nice for me.
40.* I believe I am being plotted against.
41. Before I do something I try to consider how my friends will react to it.
42. I have never been in trouble with the law.
43. In school I was sometimes sent to the Principal for cutting up.
44.* Someone has been trying to rob me.
45.* I know who is responsible for most of my troubles.
46. I keep out of trouble at all costs.
47. I feel lonely even when among people.
48. I feel shy with members of the same sex.
49.*F I have very few quarrels with members of my family.
50. I am much different from most people.
51.* Some of my family have habits that bother me and annoy me very much.
52.* I have at times stood in the way of people who were trying to do something, not because it amounted to much but because of the principle of the thing.
53.* Most people make friends because friends are useful to them.
54. Most of the time I feel happy.
55. In school I found it very hard to talk before the class.
56.* I do not blame a person for taking advantage of someone who lays himself open to it.
57. I often feel as though I have done something wrong or wicked.
58.* Most people are honest chiefly through fear of being caught.
59. It is hard for me to act natural when I am with new people.

60.* I think most people would lie to get ahead.
61.* I think nearly everyone would tell a lie to keep out of trouble.
62. I have often gone against my parents' wishes.
63.* When someone does me a wrong, I feel I should pay him back if I can, just for the principle of the thing.
64. I often think about how I look and what impression I am making upon others.
65. I have never done any heavy drinking.
66. I find it easy to "drop" or "break with" a friend.
67. I get nervous when I have to ask someone for a job.
68.* It is safer to trust nobody.
69.* I have often found people jealous of my good ideas just because they had not thought of them first.
70.* Some people are so bossy that I feel like doing the opposite of what they request, even though I know they are right.
71. Sometimes I used to feel that I would like to leave home.
72. I played hooky from school quite often as a youngster.
73.* Much of the time I feel as if I had done something wrong or evil.
74. I never worry about my looks.
75. I have been in trouble one or more times because of my sex behaviour.
76.* I believe my sins are unpardonable.
77. I go out of my way to meet trouble rather than try to escape it.
78. My home life was always very pleasant.
79.* I have not lived the right kind of life.
80. I seem to do things that I regret more often than other people do.
81.* I believe I am a condemned person.
82. My table manners are not quite as good at home as when I am out in company.
83. It is pretty easy for people to win arguments with me.
84. I know who is responsible for most of my troubles.
85.* I wish I could get over worrying about things I have said that may have injured others' feelings.
86.* At times I think I am no good at all.
87. I get pretty discouraged with the law when a smart lawyer gets a criminal free.
88.* I certainly feel useless at times.
89. I have used alcohol excessively.
90. Even when I have gotten into trouble I was usually trying to do the right thing.
91.*F I seem to be about as capable and smart as others round me.
92.* I have often lost out on things because I couldn't make up my mind soon enough.
93.*F I usually expect to succeed in things I do.
94. It is very important to me to have enough friends and social life.
95. I sometimes wanted to run away from home.
96. Life usually hands me a pretty raw deal.
97.* Often I can't understand why I have been so cross and grouchy.

98. People often talk about me behind my back.
99. I would never play cards (poker) with a stranger.
100. I don't think I'm quite as happy as others seem to be.
101.* My hardest battles are with myself.
102.* I have several times given up doing a thing because I thought too little of my ability.
103. I used to steal sometimes when I was a youngster.
104. My home life as a child was less peaceful and quiet than those of most other people.
105. Even the idea of giving a talk in public makes me afraid.
106.* I am too easily downed in an argument.
107. As a youngster in school I used to give the teachers lots of trouble.
108.* I have sometimes felt that difficulties were piling up so high that I could not overcome them.
109.* I am certainly lacking in self-confidence.
110. If the pay was right I would like to travel with a circus or carnival.
111. I never cared much for school.
112. The members of my family were always very close to each other.
113.*F I am entirely self-confident.
114. My parents never really understood me.
115.* I shrink from facing a crisis or difficulty.
116. A person is better off if he doesn't trust anyone.

FTP2 (Future Time Perspective):

Subjects were asked to select 10 items from the following list and estimate the age they might be when these things happened to them. Items 1-25 are taken from the list used by Stein and Craik, J.cons.Psychol.29: 460-467, 1965, and items 26-40 from the list used by Wallace, J.abnorm.soc.Psychol.52: 240-245, 1956.

1. Buy or trade in your car.
2. Take a long holiday.
3. Get married.
4. Get a promotion.
5. Have enough time for your favourite sport or hobby.
6. Buy or build a house.
7. Have your first child.
8. Have economic security.
9. Find or change jobs.
10. Move to another city or town.
11. Achieve highest skill in your work.
12. Improve your body build.
13. Win lots of money.
14. Have your last child.
15. Get more education.
16. Have emotional security.
17. Your youngest child gets married.
18. Achieve your major goal.
19. Buy something you have always wanted.
20. Pay off debts.
21. Improve your physical health.
22. Get a divorce.

23. Become an officer in a club or organization.
24. Visit out of town relatives.
25. Move to another house or apartment.
26. Your first grandchild is born.
27. You die.
28. You lose interest in sexual activities.
29. You are too old to be physically active.
30. Your son achieves his greatest success in life.
31. You retire.
32. Your youngest child leaves home.
33. Your mother dies.
34. You feel that you have reached old age.
35. Your last sexual intercourse occurs.
36. You have reached middle age.
37. Your father dies.
38. You can no longer have children.
39. Your first great-grandchild is born.
40. You can say that you have most of the things you want.

Biographical Data Questionnaire:

1. What is your present age?
2. What nationality are you?
3. What is your usual occupation?
4. Were you trained for any occupation?
5. What occupational level did you reach?
6. At present are you married ..... divorced or separated..... widowed ..... single?
7. How many times have you been married ..... divorced .....?
8. Have you had any long-term relationships in which you have lived with women, apart from marriage? ..... How many .....? For how long.....?
9. Have you ever been unfaithful to your wife?
10. Are you supporting any illegitimate children?
11. How many cigarettes do you smoke daily?
12. Have you ever taken drugs such as LSD, marihuana, etc?
13. Have you frequently changed jobs, not because of drinking problems but from preference?
14. Would you say you had a "wanderlust?"
15. Have you frequently changed home towns from preference?
16. Have you ever worked as a sailor, or wanted to?
17. How old were you when you finally left home?
18. Would you say you were a shy, self-conscious person?
19. Do you find it very difficult to establish close relationships with people?
20. At present, would you say that you had many close friends (4+) ..... few close friends (2-3) ..... no close friends ..... ?
21. Do you prefer to have casual acquaintances rather than close friends?
22. With whom do you usually live? Alone ..... with others ..... ?
23. Were you shy as a child, finding it difficult to mix with others?

24. In adolescence would you say you had many close friends ..... few close friends ..... no close friends ..... ?
25. How long ha e you been in the hospital?
26. For how long has drinking been a problem?
27. How many times have you been arrested for alcoholism?
28. How old were you when first arrested for alcoholism?
29. How many times have you been arrested for other crimes? Theft ..... breaking and entering ..... assault ..... embezzlement ..... other ..... ?
30. How old were you when you were first arrested for a crime other than alcoholism?
31. Have you committed any crimes that you were not arrested for but would have been if caught?
32. If it were not for financial, health, or other reasons, would you keep on drinking heavily if you could?
33. Do you prefer to drink beer ..... wine ..... spirits ..... ?
34. Have you ever tried non-beverage alcohols such as meths, antifreeze, hair tonic, etc?
35. Do you prefer to drink a large amount every day but without getting really drunk and passing out, or do you prefer to have days or weeks when you don't drink but then go on a binge and drink till you pass out?
36. What is the most important effect heavy drinking has on you?
37. Was your father an alcoholic or very heavy drinker ..... moderate drinker ..... light social drinker ..... abstainer ..... ?
38. Was your mother an alcoholic or very heavy drinker ..... moderate drinker ..... light social drinker ..... abstainer ..... ?
39. Did either parent have a nervous breakdown or enter a psychiatric hospital at any time?
40. Was either parent ever arrested?
41. Did either parent ever take drugs such as LSD, marihuana, etc?
42. How old were you when your father died ..... mother died ..... ?
43. Which parent did most of the punishing when you were small, and how? Physical beatings ..... constant nagging and argument ..... friendly warnings or privileges taken away ..... no punishment at all ..... ?
44. Which parent did you prefer, or did you like both equally?
45. Could you very briefly describe your parents?
46. Did your parents get on well together when you were young?
47. Would you rate your parents on one of the following categories:

	Mother	Father
Warm, friendly, & kind		
Cold, withdrawn, indifferent		
Harsh, severe, unkind		
Changeable but mostly kind		
Changeable but mostly unkind		

48. Were you separated from your mother at any time before the age of 16? ..... If "Yes" state reason: death ..... divorce ..... desertion ..... hospital illness .....? What age were you when this happened?
49. Were you separated from your father at any time before the age of 16? ..... If "Yes" state reason: death ..... divorce ..... desertion ..... hospital illness ..... ? What age were you when this happened?
50. With whom did you live for most of the time until age 16? Both parents together ..... mother alone ..... father alone ..... grandparents ..... relatives ..... friends ..... boarding school ..... institution ..... ?

Stereoscope and Stereograms:

The stereoscope was a modified Engel-type one (see Engel, 1956; 1961), comprising a light-tight box 6 inches high and 9 inches in length. A pair of stereoscopic lenses made by the firm of Carl Zeiss was set into the lid of the box, projecting about 2 inches above the box and connected by tubes to the stereogram holder 4 inches beneath; separate tubes from each lens ensured that the two visual fields were kept totally separate from each other. Illumination of each visual field was by two 15-watt bulbs set beneath and behind the stereogram holder. Timing of illumination was controlled by an interval timer set at 0.5 of a second. Although it had been intended to have each lens adjustable for individual subjects, for optimum fusion, this posed considerable problems in construction, but in any case the Carl Zeiss specialist advised that at 0.5 of a second over a distance of 4 inches it would not have been possible for the eyes to adjust for perfect fusion; this modification was therefore dispensed with. The two stereograms of each pair were stuck to one piece of cardboard for insertion into the holder. As the position of each on the cardboard determined the degree of fusion taking place, a variety of versions were tried out with a number of subjects being used as guinea pigs. The pair of stereograms was accepted when most viewers agreed on its being the best version offered.

20 stereograms were used, with 10 violent ones being shown to the left eye and 10 violent ones to the right eye, each paired with a neutral stereogram. They were as follows:-

1. Man with knife in back/postman.
2. Man operating a press/man with gun at a counter.
3. Man hanging himself/man at a microphone.
4. Man mowing his lawn/man shooting at body on ground.
5. Men wrestling/man with a hockey stick.
6. Man hitting nail with hammer/man holding gun to his head.
7. Man sticking knife into another/man operating a press.
8. Person sitting at desk/man burgling a car.
9. Man shooting at another/man showing picture to another.
10. Man jabbing knife at another/men shaking hands.
11. Men playing baseball/man hitting another with a bat.
12. Man shooting figure on ground/man mowing his lawn.
13. Burglar at a safe/man switching on T.V.

14. Man at a microphone/man shooting himself in the head.
15. Man shooting at a figure on ground/man sawing on bench.
16. Man standing/man hanging himself.
17. Man shooting another/man showing picture to another.
18. Man with pneumatic drill/man with knife at another's neck.
19. Man painting at easel/man going upstairs with gun.
20. Postman/man with knife in his back.

None of these stereograms was a duplicate of any other.

Threat apparatus used in Hypothesis 1:

This was simply a small metal box containing a battery which activated a needle on a dial on the front of the box, when switched on. An impressive but entirely non-functional array of wires led from the box to wrist electrodes which were attached to the subjects.

APPENDIX C

FTP2 item preferences amongst groups, and criminal records of groups

FTP2 Item Preferences (percentages parenthesized):

	PDs	PTs	ABs	CRs
N	100	60	30	30
Buy or trade in car	36 (36)	33 (55)	16 (53)	15 (50)
Take a long holiday	50 (50)	30 (50)	19 (63)	17 (57)
Get married	29 (29)	18 (30)	2 (7)	9 (30)
Get a promotion	13 (13)	10 (17)	15 (50)	4 (13)
Have enough time for a sport or hobby	45 (45)	24 (40)	9 (30)	9 (30)
Buy or build a house	38 (38)	31 (52)	8 (27)	16 (53)
Have your first child	5 (5)	9 (15)	2 (7)	2 (7)
Have economic security	61 (61)	29 (48)	9 (30)	11 (37)
Find or change jobs	44 (44)	27 (45)	6 (20)	11 (37)
Move to another city	29 (29)	15 (25)	12 (40)	14 (47)
Achieve highest skill in your work	21 (21)	14 (23)	8 (27)	8 (27)
Improve your body build	20 (20)	11 (18)	3 (10)	4 (13)
Win lots of money	26 (26)	9 (15)	0	2 (7)
Have your last child	4 (4)	4 (7)	2 (7)	3 (10)
Get more education	24 (24)	12 (20)	6 (20)	6 (20)
Have emotional security	50 (50)	25 (42)	2 (7)	9 (30)
Youngest child marries	19 (19)	13 (22)	18 (60)	8 (27)
Achieve your major goal	35 (35)	17 (28)	6 (20)	15 (50)
Buy something you have always wanted	28 (28)	13 (22)	3 (10)	9 (30)
Pay off debts	21 (21)	8 (13)	6 (20)	7 (23)
Improve physical health	49 (49)	18 (30)	2 (7)	4 (13)
Get a divorce	10 (10)	2 (3)	0	4 (13)
Become officer in club or organization	12 (12)	8 (13)	2 (7)	4 (13)
Visit out of town relations	15 (15)	12 (20)	4 (13)	6 (20)
Move to another house or apartment	24 (24)	15 (25)	7 (23)	8 (27)
First grandchild is born	14 (14)	15 (25)	11 (37)	9 (30)
You die	14 (14)	25 (42)	13 (43)	11 (37)
You lose interest in sexual activities	13 (13)	6 (10)	2 (7)	4 (13)
You are too old to be physically active	16 (16)	9 (15)	4 (13)	5 (17)
Son achieves greatest success in life	15 (15)	7 (12)	9 (30)	4 (13)
You retire	36 (36)	29 (48)	22 (73)	9 (30)
Your youngest child leaves home	5 (5)	9 (15)	15 (50)	4 (13)
Your mother dies	9 (9)	13 (22)	8 (27)	7 (23)
You reach old age	23 (23)	19 (32)	8 (27)	7 (23)
Last intercourse occurs	13 (13)	3 (5)	0	2 (7)
Reached middle age	16 (16)	15 (25)	5 (17)	6 (20)
Your father dies	7 (7)	11 (18)	8 (27)	5 (17)
Can't father children	7 (7)	2 (3)	0	2 (7)
Great grand-child born	5 (5)	5 (8)	4 (13)	2 (7)
You can say you have most of the things you want	52 (52)	28 (47)	12 (40)	16 (53)

Criminal Records of Subjects:

62% of problem drinkers had been arrested for inebriety, and 43% for serious offences (excluding inebriety-related and traffic offences), compared with 22% of psychiatric patients arrested for serious offences.

	Number of PDs	Number of PTs
Assault	16	2
Carrying offensive weapons	3	0
Wilful damage (incl.arson)	2	0
Wilful trespassing	0	1
Theft	17	4
Burglary	2	0
Breaking and entering	3	0
Safe-blowing	1	0
Conversion	9	0
False pretences	5	1
Receiving stolen goods	1	1
False cheques	1	0
Embezzlement	1	0
Non-payment of maintenance	7	1
Indecent exposure	1	0
Intercourse with minors	1	0
Indecent assault	0	2
Indecent phone calls and letters	0	1
Homosexuality	0	1
Attempted suicide	0	1
Other (harbouring mental patient, bookmaking, AWOL, cashing cheque not his own, escaping from custody - 2 subjects wouldn't detail crimes)	7 *	0 *

32% of the problem drinkers and 17% of the psychiatric patients had committed crimes which went undetected, as follows:-

	Number of PDs	Number of PTs
Theft	16	5
Burglary	1	0
Breaking and entering	1	1
Embezzlement	1	0
False pretences and fraud	4	0
False cheques	1	0
Conversion	1	0
Conning	1	0
Assault	8	0
Wilful damage	2	0
Intercourse with minors	2	1
Homosexuality	0	1
Indecent letters and phone calls	0	1
Under-age drinking	0	1
Other (tax evasion, arranged illegal abortion)	2	0
Other (swapped number plates on two cars)	0 *	1 *

*Number of subjects will not total correctly because most committed more than one type of offence.

Crimes of the 30 criminals are listed below, under the crime for which they were currently serving a sentence, with other crimes for which they had ever been arrested being shown in brackets.

No.1 Car conversion,10 charges (theft, 10 charges; breaking and entering, 20 charges).
No.2 Attempted murder, grievous bodily harm,1 charge (assault, 2 charges; conversion, 1 charge; theft, 1 charge; burglary, 1 charge; transvestism, 1 charge).
No.3 Driving while disqualified,3 charges (burglary, 2 charges; non-payment of maintenance, 1 charge).
No.4 Incest,1 charge (assault, 1 charge).
No.5 Theft as a servant,1 charge.
No.6 Burglary,3 charges (theft, 15 charges; assault, 2 charges).
No.7 Receiving stolen goods,4 charges (theft, 6 charges; assault, 6 charges).
No.8 Misappropriation of clients' funds,17 charges.
No.9 Theft as a servant,1 charge.
No.10 Manslaughter.
No.11 Indecent assault on a minor (pederasty, 2 charges).
No.12 Manslaughter.
No.13 Murder (non-payment of maintenance, 1 charge; burglary, 1 charge; conversion, 1 charge).
No.14 Grievous bodily harm with intent, 1 charge.
No.15 Pederasty,1 charge.
No.16 Indecent assault on young girl, 1 charge.
No.17 Incest, 1 charge.
No.18 Assault on wife, 1 charge (desertion from Army, 3 charges).
No.19 Fraud and false pretences,4 charges (receiving stolen goods, 1 charge).
No.20 Driving while disqualified,3 charges.
No.21 Receiving stolen goods,8 charges (carrying a dangerous weapon, 1 charge; assault, 4 charges; intercourse with minor, 1 charge).
No.22 Embezzlement,1 charge.
No.23 Theft as a servant,1 charge.
No.24 False pretences,1 charge.
No.25 Driving with excess blood alcohol - person killed.
No.26 Theft,1 charge (false cheques, 1 charge).
No.27 Pederasty,4 charges.
No.28 Theft as a servant,3 charges.
No.29 Breaking and entering,1 charge (receiving stolen goods, 1 charge; theft, 5 charges; intercourse with minors, 1 charge).
No.30 Breaking and entering,2 charges (theft, 5 charges).

BIBLIOGRAPHY

ABRAHAM, K.
The psychological relation between sexuality and alcoholism (1908). In Selected papers of Karl Abraham. London, Hogarth Press, 1927.

ACKERMAN, J.M.
Clinical events attending father-loss in the histories of V.A.schizophrenics and alcoholic patients. Quart.J.Stud. Alcohol 30: 1027, 1969.

ADELSON, J.
Personality. Ann.Rev.Psychol. 20: 217-252, 1969.

ALLEN, L.R.
Self-esteem of male alcoholics. Psychol.Rec. 19: 381-389, 1969.

ALLPORT, G.W.
The ego in contemporary psychology. Psychol.Rev. 50: 451-478, 1943.

ANANT, S.S.
Former alcoholics and social drinking: an unexpected finding. Quart.J.Stud.Alcohol 31: 494, 1970.

ANDERSON, L.M.
Personality characteristics of parents of neurotic, aggressive, and normal preadolescent boys. J.cons. & clin.Psychol.33: 575-581, 1969.

ANDRY, R.C.
Faulty paternal and maternal-child relationships, affection, and delinquency. Brit.J.Delinq. 8: 34-48, 1957-58.

ARMSTRONG, J.D.
The search for the alcoholic personality. Annals Amer. Acad.Pol.Soc.Science 315: 40-47, 1958.

ARONSON, H. and A.Gilbert.
Preadolescent sons of male alcoholics: an experimental study of personality patterning. Arch.gen.Psychiat. 8: 235-241, 1963.

BACH, G.R.
Father-fantasies and father-typing in father-separated children. Child Develop. 17-18: 63-80, 1946-47.

BACON, M.K.
The dependency-conflict hypothesis and the frequency of drunkenness. Quart.J.Stud.Alcohol 35: 863-876, 1974.

BACON, S.D.
Inebriety, social integration and marriage. Quart.J. Stud.Alcohol 5: 86-125 and 303-339, 1944.

BACON, S.D.
Excessive drinking and the institution of the family. In Alcohol, Science and Society Lecture 16, Quart.J. Stud.Alcohol, 1945.

BAGBY, J.W.
A cross-cultural study of perceptual predominance in binocular rivalry. J.abnorm.soc.Psychol.54: 331-334, 1957.

BAHR, H.M.
Lifetime affiliation patterns of early- and late-onset heavy drinkers on Skid Row. Quart.J.Stud.Alcohol 30: 645-656, 1969.

BAILEY, M.B.
Alcoholism and marriage: a review of research and professional literature. Quart.J.Stud.Alcohol 22: 81-97, 1961.

BAILEY, M.B.
Psychophysiological impairment in wives of alcoholics as related to their husband's drinking and sobriety. pp.134-144. In Fox, R. ed. Alcoholism, behavioural research, therapeutic approaches. New York, Springer, 1967.

BAILEY, M.B. and J.Stewart.
Normal drinking by persons reporting previous problem drinking. Quart.J.Stud.Alcohol 28: 305-315, 1967.

BAILEY, W., F.Hustmyer, and A.Kristofferson.
Alcoholism, brain damage, and perceptual dependence. Quart.J.Stud.Alcohol 22: 387-393, 1961.

BALES, R.F.
Cultural differences in rates of alcoholism. Quart.J. Stud.Alcohol 6: 480-499, 1946.

BANDURA, A.
Principles of behaviour modification. New York, Holt, Rinehart and Wilson, 1969.

BANDURA, A. and R.H.Walters.
Adolescent aggression. New York, Ronald Press, 1959.

BARCLAY, A. and D.R.Cusumano.
Father absence, cross-sex identity, and field-dependent behaviour in male adolescents. Child Develop. 38: 243-250, 1967.

BARNDT, R.J. and Johnson, D.M.
Time orientation in delinquents. J.abnorm.soc.Psychol. 51: 343-345, 1955.

BARRON, F.
Family relationships, problem drinking, and antisocial behaviour among adolescent males. Quart.J.Stud.Alcohol 32: 1161, 1971.

BARRY, H., III.
Sociocultural aspects of alcohol addiction. pp.455-471. In Wikler, A. ed. The addictive states. Baltimore, Williams and Wilkins, 1968.

BARRY, J.R., H.E.Anderson, Jr., and O.B.Thomason.
MMPI characteristics of alcoholic males who are well and poorly adjusted in marriage. J.clin.Psychol.23: 355-360, 1967.

BARTHOLOMEW, A.A. and M.F.Kelley.
The incidence of a criminal record in 1000 consecutive "alcoholics." Brit.J.Criminol. 5: 143-149, 1965.

BEAN, K.L. and G.O.Karasievich.
Psychological test results at three stages of in-patient alcoholism treatment. J.Stud.Alcohol 36: 838-852, 1975.

BECKER, G.S. and P.Israel.
Integrated drug- and psycho-therapy in the treatment of alcoholism. Quart.J.Stud.Alcohol 22: 610-633, 1961.

BEITNER, M.S.
Word meaning and sexual identification in paranoid schizophrenics and anxiety neurotics. J.abnorm.soc. Psychol.63: 289-293, 1961.

BEJEROT, N.
A theory of addiction as an artificially induced drive. Amer.J.Psychiat. 128: 842-846, 1972.

BELL, R.G.
Dependence upon depressant chemicals. Quart.J.Stud. Alcohol 18: 143, 1957.

BELLEVILLE, R.E.
Control of behaviour by drug-produced internal stimuli. Psychopharmacologia (Berl.) 5: 95-105, 1964.

BELOFF, H. and J.Beloff.
Unconscious self-evaluation using a stereoscope. J. abnorm.soc.Psychol. 59: 275-278, 1959.

BERG, N.L.
Effects of alcohol intoxication on self-concept. Quart. J.Stud.Alcohol 32: 442-453, 1971.

BERG, P.S.D. and H.H.Toch.
"Impulsive" and "neurotic" inmates: a study of personality and perception. J.criminal Law, criminol. & Pol. Sci. 55: 230-234, 1964.

BERNARDIN, A.C. and R.Jessor.
A construct validation of the Edwards Personal Preference Schedule with respect to dependency. J.cons.Psychol.21: 63-67, 1957.

BERNREUTER, R.G.
The measurement of self-sufficiency. J.abnorm.soc. Psychol.28: 291-300, 1933.

BERTRAND, S. and J.Masling.
Oral imagery and alcoholism. J.abnorm.Psychol.74: 50-53, 1969.

BIELIAUSKAS, V.J., S.B.Miranda, and L.M.Lansky.
Obviousness of two masculinity-femininity tests. J.cons.clin.Psychol.32: 314-318, 1968.

BIERI, J., W.M.Bradburn, and M.D.Galinsky.
Sex differences in perceptual behaviour. J.Personality 26: 1-12, 1958.

BILLER, H.B.
Father absence in the personality development of the male child. Developmental Psychol.2: 181-201, 1970.

BILLIG, O. and D.J.Sullivan.
Personality structure and prognosis of alcohol addiction: a Rorschach study. Quart.J.Stud.Alcohol 3: 554-573, 1943.

BIRTCHNELL, J.
Sibship size and mental illness. Brit.J.Psychiat. 117: 303-308, 1970.

BLANE, H.T.
The personality of the alcoholic; guises of dependency. New York, Harper and Row, 1968.

BLANE, H.T.
Aspects of dependency. In The person with alcoholism. Ann.N.Y.Acad.Sci.233: 15-22, 1974.

BLANE, H.T. and H.Barry, III.
Birth order and alcoholism: a review. Quart.J.Stud. Alcohol 34: 837-852, 1973.

BLANE, H.T., H.Barry, III, and H.Barry,Jr.
Sex differences in birth order of alcoholics. Brit.J. Psychiat. 119: 657-661, 1971.

BLANE, H.T. and M.E.Chafetz.
Dependency conflict and sex-role identity in drinking adolescents. Quart.J.Stud.Alcohol 32: 1025-1039, 1971.

BLEULER, M.
Familial and personal background of chronic alcoholics. pp.110-166. In Diethelm, O. ed. Etiology of chronic alcoholism. Springfield, Ill., Thomas, 1955.

BLOCH, D.A. et al.
A study of children referred for residential treatment in New York State. Albany, New York, Interdepartmental Health Resources Board, 1959.

BLOCK, M.A.
Normal drinking in recovered alcohol addicts: comment on the article by D.L.Davies. Quart.J.Stud.Alcohol 24: 114-117, 1963.

BLOCK, M.A.
Who is qualified to treat the alcoholic? Comment on the Krystal-Moore discussion. Quart.J.Stud.Alcohol 26: 121-124, 1965.

BLUM, E.M.
Psychoanalytic views of alcoholism: a review. Quart. J.Stud.Alcohol 27: 259-299, 1966.

BLUM, E.M. and R.H.Blum.
Alcoholism. Modern psychological approaches to treatment. San Francisco, Jossey-Bass, 1969.

BLUMBERG, S.
MMPI F scale as an indicator of severity of psychopathology. J.clin.Psychol.23: 96-99, 1967.

BOOTH, K.G.
The need of male alcoholics to maintain a dependency status and avoid self-reliance. Dissert.Abstracts International 30: (4-B), 1893; 1969.

BOTWINICK, J. and S.Machover.
A psychometric examination of latent homosexuality in alcoholism. Quart.J.Stud.Alcohol 12: 268-273, 1951.

BOUTIN, L.D.
Pain tolerance of essential and reactive alcoholics. Dissert.Abstracts International 28: 1184-B; 1967.

BRALEY, L.S. and N.H.Freed.
Modes of temporal orientation and psychopathology. J.cons.clin.Psychol.36: 33-39, 1971.

BRAMEL, D.
A dissonance theory approach to defensive projection. J.abnorm.soc.Psychol.64: 121-129, 1962.

BROCK, T.C. and C.Del Giudice.
Stealing and temporal orientation. J.abnorm.soc. Psychol. 66: 91-94, 1963.

BROWN, B.S. et al.
Use of alcohol by addict and nonaddict populations. Amer.J.Psychiat. 130: 599-601, 1973.

BROWN, F.
Childhood bereavement and subsequent psychiatric disorder. Brit.J.Psychiat. 112: 1035-1041, 1966.

BROWN, M.A.
Alcoholic profiles on the Minnesota Multiphasic. J.clin.Psychol.6: 266-269, 1950.

BROWNE, W.J.
The alcoholic bout as an acting out. Psychoanal.Quart. 34: 420-437, 1965.

BRUNING, J.L. and B.L.Kintz.
Computational handbook of statistics. Illinois, Scott, Foresman and Co., 1968.

BUCKLEW, J.
Paradigms for psychopathology: a contribution to case history analysis. Chicago, Lippincott, 1960.

BUCKLEW, J.
Prediction of psychiatric symptoms from case history information. Psychol.Rec. 17: 1-12, 1967.

BUCKLEW, J.
The use of symptoms to assess case history information. Multivar.behav.Res. (Special issue): 157-168, 1968.

BUHLER, C. and Lefever, D.W.
A Rorschach study on the psychological characteristics of alcoholics. Quart.J.Stud.Alcohol 8: 197-260, 1947.

BURDICK, J.A.
A field-independent alcoholic population. J.Psychol. 73: 163-166, 1969.

BURK, E.D.
Some contemporary issues in child development and the children of alcoholic parents. In Nature and nurture in alcoholism. Annals N.Y.Acad.Sci. 197: 189-197, 1972.

BUSS, A.H.
The psychology of aggression. New York, Wiley and Sons, 1961.

BUSS, A.H.
Psychopathology. New York, Wiley and Sons, 1966.

BUTTON, A.D.
A Rorschach study of 67 alcoholics. Quart.J.Stud. Alcohol 17: 35-52, 1956a.

BUTTON, A.D.
A study of alcoholics with the Minnesota Multiphasic Personality Inventory. Quart.J.Stud.Alcohol 17: 263-281, 1956b.

BUTTON, A.D.
The psychodynamics of alcoholism: a survey of 87 cases. Quart.J.Stud.Alcohol 17: 443-460, 1956c.

BUTTON, A.D.
The genesis and development of alcoholism: an empirically based schema. Quart.J.Stud.Alcohol 17: 671-675, 1956d.

BUTTS, S.V. and J.Chotlos.
Closed-mindedness in alcoholics. Quart.J.Stud.Alcohol 35: 906-910, 1974.

CALAHAN, D.
Problem drinkers. San Francisco, Jossey-Bass, 1970.

CALAHAN, D. and R.Room.
Problem drinking among American men. New Haven, Conn., College and University Press, 1974.

CAMPS, F.E.
Genetics and alcoholism. In Nature and nurture in alcoholism. Annals N.Y.Acad.Sci. 197: 134-137, 1972.

CANTER, F.M.
Simulation on the California Psychological Inventory and the adjustment of the simulator. J.cons.Psychol. 27: 253-256, 1963.

CAPPELL, H. and C.P.Herman.
Alcohol and tension reduction: a review. Quart.J. Stud.Alcohol 33: 33-64, 1972.

CAPPELL, H. and B.Latané.
Effects of alcohol and caffeine on the social and emotional behaviour of the rat. Quart.J.Stud.Alcohol 30: 345-356, 1969.

CAPPON, D. and M.Tyndel.
Time perception in alcoholism: a study of interval estimation and temporal orientation in alcoholic patients. Quart.J.Stud.Alcohol 28: 430-435, 1967.

CARTWRIGHT, D.S. and K.I.Howard.
Multivariate analysis of gang delinquency: 1.Ecologic influences. Multivar.behav.Res. 1: 321-371, 1966.

CATANZARO, R.J.
The disease: alcoholism. pp.5-25. In Catanzaro, R.J. ed. Alcoholism: the total treatment approach. Springfield, Ill., Thomas, 1968.

CATTELL, R.B., E.Komlos, and D.F.Tatro.
Significant differences of affective, paranoid, and non-paranoid schizophrenic psychotics on primary source traits on the 16 PF. Multivar.behav.Res. (Special issue): 33-54, 1968.

CATTELL, R.B., D.R.Saunders, and G.Stice.
Handbook for the 16 Personality Factor questionnaire. Champaign, Ill., Institute of Personality and Ability Testing, 1957.

CECCARELLI, G.
Personality characteristics of chronic alcoholic patients studied by means of the Minnesota Multiphasic Personality Inventory. Quart.J.Stud.Alcohol 21: 516, 1960.

CHAFETZ, M.E.
Practical and theoretical considerations in the psychotherapy of alcoholism. Quart.J.Stud.Alcohol 20: 281-291, 1959.

CHAFETZ, M.E.
The prevention of alcoholism. Int.J.Psychiat.9: 329-348, 1970-71.

CHAFETZ, M.E., H.T.Blane, and M.J.Hill.
Children of alcoholics. Observations in a child guidance clinic. Quart.J.Stud.Alcohol 32: 687-698, 1971.

CHEN, E. and S.Cobb.
Family structure in relation to health and disease: a review of the literature. J.chron.Dis.12: 544-567, 1960.

CHESS, S.B., C.Neuringer, and G.Goldstein.
Arousal and field dependency in alcoholics. J.gen. Psychol. 85: 93-102, 1971.

CHESSICK, R.D., D.H.Looff, and H.G.Price.
The alcoholic-narcotic addict. Quart.J.Stud.Alcohol 22: 261-268, 1961.

CHOTLOS, J.W. and G.Goldstein.
Psychophysiological responses to meaningful sounds. J.nerv.ment.Dis. 145: 314-325, 1967.

CLEVELAND, S.E. and M.P.Sikes.
Body image in chronic alcoholics and non-alcoholic psychiatric patients. J.Project.Tech.30: 265-269, 1966.

CLINEBELL, H.J., Jr.
Philosophical-religious factors in the aetiology and treatment of alcoholism. Quart.J.Stud.Alcohol 24: 473-488, 1963.

COHEN, M., I.A.Liebson, and L.A.Faillace.
The role of reinforcement contingencies in chronic alcoholism: an experimental analysis of one case. Behav.Res.Ther. 9: 375-379, 1971.

COHEN, M. et al.
Moderate drinking by chronic alcoholics: a schedule-dependent phenomenon. J.nerv.ment.Dis.153: 434-444, 1971.

COLLINS, L.F., A.E.Maxwell, and C.Cameron.
A factor analysis of some child psychiatric clinic data. J.ment.Sci. 108: 274-285, 1962.

COMREY, A.L. and B.Schlesinger.
Verification and extension of a system of personality dimensions. J.appl.Psychol.46: 257-262, 1962.

CONGER, J.J.
Reinforcement theory and the dynamics of alcoholism. Quart.J.Stud.Alcohol 17: 296-305, 1956.

COOK, A.B.
The concept of alcoholism as a disease. In A compilation of papers presented to the First School of Alcohol Studies, Massey University, New Zealand, 1963.

COOPERSMITH, S.
Adaptive reactions of alcoholics and nonalcoholics. Quart.J.Stud.Alcohol 25: 262-278, 1964.

COOPERSMITH, S. and K.Woodrow.
Basal conductance levels of normals and alcoholics. Quart.J.Stud.Alcohol 28: 27-32, 1967.

COROTTO, L.V.
An exploratory study of the personality characteristics of alcoholic patients who volunteer for continued treatment. Quart.J.Stud.Alcohol 24: 432-442, 1963.

CRADDICK, R.A. and W.D.Leipold.
Note on the height of Draw-a-Person figures by male alcoholics. J.Project.Tech. 32: 486, 1968.

CRADDICK, R.A., W.D.Leipold, and V.Leipold.
Effect of role-empathy on height of human figures drawn by male alcoholics. Percept.mot.Skills 30: 747-752, 1970.

CROW, L.T.
Effects of alcohol on conditioned avoidance responding. Physiol. & Behav. 1: 89-91, 1966.

CUTTER, H.S.G. et al.
Alcohol, power, and inhibition. Quart.J.Stud.Alcohol 34: 381-389, 1973.

DAVIDOFF, E. and C.A.Whitaker.
Prepsychotic personality in alcoholic psychoses. Psychiat.Quart. 14: 103-120, 1940.

DAVIDS, A.
Ego functions in disturbed and normal children: aspiration, inhibition, time estimation, and delayed gratification. J.cons.clin.Psychol.33: 61-70, 1969.

DAVIDS, A. and A.N.Parenti.
Time orientation and interpersonal relations of emotionally disturbed and normal children. J.abnorm. soc.Psychol. 57: 299-305, 1958.

DAVIDS, A., C.Kidder, and M.Reich.
Time orientation in male and female juvenile delinquents. J.abnorm.soc.Psychol.64: 239-240, 1962.

DAVIDSON, P.O., R.W.Payne, and R.B.Sloane.
Conditionability in normals and neurotics.
J.exp.Res.Pers. 3: 107-113, 1968.

DAVIDSON, W.S., II.
Studies of aversive conditioning for alcoholics: a critical review of theory and research methodology.
Psychol.Bull. 81: 571-581, 1974.

DAVIES, D.L.
Normal drinking in recovered alcohol addicts. Quart. J.Stud.Alcohol 23: 94-104, 1962. Also in Quart J.Stud. Alcohol Special Reprint, 3-13, 1962-63.

DAVIES, D.L.
Alcoholism as a disease. Psychol.Med.(Lond.) 4: 130-132, 1974.

DAVIES, D.L., D.F.Scott, and M.E.L.Malherbe.
Resumed normal drinking in recovered psychotic alcoholics. Int.J.Addiction 4: 187-194, 1969.

DAVIS, J.M.
Personality, perceptual defense, and stereoscopic perception. J.abnorm.soc.Psychol.58: 398-402, 1959.

DAVIS, V.E. and M.J.Walsh.
Alcohol, amines and alkaloids: a possible biochemical basis for alcohol addiction. Science 167: 1005-1007, 1970.

DENNEHY, C.M.
Childhood bereavement and psychiatric illness. Brit.J. Psychiat. 112: 1049-1069, 1966.

DE PALMA, N. and H.D.Clayton.
Scores of alcoholics on the Sixteen Personality Factor questionnaire. J.clin.Psychol. 14: 390-392, 1958.

DE VITO, R.A., L.A.Flaherty, and G.J.Mozdzierz.
Toward a psychodynamic theory of alcoholism. Dis.nerv. Syst. 31: 43-49, 1970.

DIETHELM, O.
Research in chronic alcoholism. pp.1-15. In Diethelm, O. ed. Etiology of chronic alcoholism. Springfield, Ill., Thomas, 1955.

DIETHELM, O and R.M.Barr.
Psychotherapeutic interviews and alcohol intoxication. Quart.J.Stud.Alcohol 23: 243-251, 1962.

DIGNAN, Sr. M.H.
Ego identity and maternal identification. J.Pers.soc. Psychol. 1: 476-483, 1965.

DILLING, C.A. and A.I.Rabin.
Temporal experience in depressive states and schizophrenia. J.cons.Psychol.31: 604-608, 1967.

DOLLARD, J. and N.E.Miller.
Personality and psychotherapy. New York, McGraw Hill, 1950.

DONOVAN, D.M., W.H.Hague, and M.R.O'Leary.
Perceptual differentiation and defense mechanisms in alcoholics. J.clin.Psychol.31: 356-359, 1975.

DREHER, K.F. and J.G.Fraser.
Smoking habits of alcoholic outpatients. Int.J.Addiction 2: 259-270, 1967.

DREHER, K.F. and J.G.Fraser.
Smoking habits of alcoholic outpatients. Int.J.Addiction 3: 65-80, 1968.

EDWARDS, G.
The status of alcoholism as a disease. pp.140-162. In Phillipson, R.V. ed. Modern trends in drug dependence and alcoholism. London, Butterworths, 1970.

EHRLICH, A.
Neural control of feeding behaviour. Psychol.Bull. 61: 100-114, 1964.

ELLERMANN, M.J.
Social and clinical features of chronic alcoholism. J.nerv.ment.Dis. 107: 556-568, 1948.

EMRICK, C.D.
Abstinence and time perception of alcoholics. Quart. J.Stud.Alcohol 31: 384-393, 1970.

ENDLER, N.S.
Changes in meaning during psychotherapy as measured by the Semantic Differential. pp.518-523. In Snider, J.G. and C.E.Osgood. Semantic Differential technique. Chicago, Aldine Publishing Co., 1969.

ENGEL, E.
The role of content in binocular resolution. Amer.J. Psychol.69: 87-91, 1956.

ENGEL, E.
Binocular methods in psychological research. pp.290-305. In Kilpatrick, F.P. ed. Explorations in transactional psychology. New York, University Press, 1961.

EVENSON, R.C. et al.
Factors in the description and grouping of alcoholics. Amer.J.Psychiat. 130: 49-54, 1973.

EWING, J.A.
Some recent attempts to inculcate controlled drinking in patients resistant to Alcoholics Anonymous. In The person with alcoholism. Annals N.Y.Acad.Sci. 233: 147-154, 1974.

EYSENCK, H.J.
Dimensions of personality. London, Hunt, Barnard and Co., 1947.

EYSENCK, H.J.
A dynamic theory of anxiety and hysteria. J.ment.Sci. 101: 28-51, 1955.

EYSENCK, H.J.
The dynamics of anxiety and hysteria. London, Routledge and Kegan Paul, 1957.

EYSENCK, H.J. ed.
Handbook of abnormal psychology. New York, Basic Books, 1961.

EYSENCK, H.J. and S.B.G.Eysenck.
Manual of the Eysenck Personality Inventory. London, University of London Press, 1964.

EYSENCK, H.J. and S.J.Rachman.
The application of learning theory to child psychiatry. pp.104-167. In Howells, J.G. ed. Modern perspectives in child psychiatry. Edinburgh, Oliver and Boyd, 1965.

FAU, R. and R.Chateau.
Concerning the problem of alcoholism: the world of drinkers. Quart.J.Stud.Alcohol 24: 548, 1963.

FEINEY, F.E. et al.
The challenge of the Skid Row alcoholic. Quart.J. Stud.Alcohol 16: 645-667, 1955.

FENICHEL, O.
The psychoanalytic theory of neurosis. New York, Norton, 1945.

FILSTEAD, W.J. and J.J.Rossi.
Some suggested priorities in the alcohol-problems field. Quart.J.Stud.Alcohol 34: 1360-1363, 1973.

FINE, B.J.
Field dependence-independence as "sensitivity" of the nervous system: supportive evidence with colour and weight discrimination. Percept.mot.Skills 37: 287-295, 1973.

FITZGERALD, B.J., R.A.Pasewark, and C.E.Tanner.
Use of the Edwards Personal Preference Schedule with hospitalized alcoholics. J.clin.Psychol.23: 194-195, 1967.

FLAHERTY, J.A., W.T.McGuire, and R.L.Gatski.
The psychodynamics of the "dry drunk." Amer.J.Psychiat. 112: 460-464, 1955.

FORCE, R.C.
Development of a covert test for the detection of alcoholism by a keying of the Kuder Preference Record. Quart.J.Stud.Alcohol 19: 72-78, 1958.

FOULDS, G.A.
"Psychic:somatic" symptoms and hostility. Brit.J.soc. clin.Psychol. 5: 185-189, 1966.

FOULDS, G.A.
Neurosis and character disorder in hospital and in prison. Brit.J.Criminol. 8: 46-49, 1968.

FOULDS, G.A. and C.Hassall.
The significance of age of onset of excessive drinking in male alcoholics. Brit.J.Psychiat. 115: 1027-1032, 1969.

FOULDS, G.A., T.M.Caine, and M.A.Creasy.
Aspects of extra- and intro-punitive expression in mental illness. J.ment.Sci. 106: 599-610, 1960.

FOULDS, G.A. et al.
Personality and personal illness. London, Tavistock, 1965.

FOULKS, J.D. and J.T.Webb.
Temporal orientation of diagnostic groups. J.clin. Psychol. 26: 155-159, 1970.

FOWLER, R.D., Jr., S.K.Teel, and F.A.Coyle, Jr.
The measurement of alcoholic response to treatment by Barron's Ego-strength scale. J.Psychol.67: 65-68, 1967.

FOX, R.
Treatment of alcoholism. pp.163-172. In Himwich, H.E. ed. Alcoholism, basic aspects and treatment. American Association for Advancement of Science, Publ.No.47,1957.

FOX, R.
Conclusions and outlook. pp.328-335. In Fox, R. ed. Alcoholism, behavioural research, therapeutic approaches. New York, Springer, 1967.

FOX, R.
A multidisciplinary approach to the treatment of alcoholism. Int.J.Psychiat. 5: 34-44, 1968.

FOX, R. and P.Lyon.
Alcoholism: its scope, cause, and treatment. New York, Random House, 1955.

FRANKS, C.M.
Alcohol, alcoholism, and conditioning: a review of the literature and some theoretical considerations. J.ment.Sci. 104: 14-33, 1958.

FRANKS, C.M.
Alcoholism. pp.448-480. In Costello, C.G. ed. Symptoms of psychopathology: a handbook. New York, Wiley and Sons, 1970.

FRANKS, C.M. and V.Franks.
"Conditionability" as a general factor of man's performance in different learning situations. p.331. In Abstracts of XVIII Internat.Cong.Psychol.Vol.1. Moscow, 1966.

FREED, E.X.
The effect of alcohol upon approach-avoidance conflict in the white rat. Quart.J.Stud.Alcohol 28: 236-254, 1967.

FREED, E.X.
Interpersonal values of hospitalized alcoholic psychiatric patients. Psychol.Rep. 22: 403-406, 1968.

FREED, E.X.
Alcoholism and manic-depressive disorders. Some perspectives. Quart.J.Stud.Alcohol 31: 62-89, 1970.

FREED, E.X.
Alcohol and conflict. Role of drug-dependent learning in the rat. Quart.J.Stud.Alcohol 32: 13-28, 1971.

FREED, E.X.
Drug abuse by alcoholics: a review. Int.J.Addict. 8: 451-473, 1973.

FREED, E.X.
Alcoholism and schizophrenia: the search for perspectives. A review. J.Stud.Alcohol 36: 853-881, 1975.

FREUD, S.
New introductory lectures on psychoanalysis. London, Hogarth Press, 1949.

FULLER, G.B.
Research in alcoholism with the 16 PF test. Information Bulletin No.12, Institute for Personality and Ability Testing, 1966.

FULLER, G.B., G.H.Lunney, and W.M.Naylor.
Role of perception in differentiating subtypes of alcoholism. Percept.mot.Skills 23: 735-743, 1966.

GARDNER, L. and C.A.McCollough.
A reinvestigation of the dissociative effect of curareform drugs. Amer.Psychologist 17: 398, 1962.

GARDNER, R.W. et al.
Cognitive control: a study of individual consistencies in cognitive behaviour. In Klein, G.S. ed. Psychol. Issues Part 4: 1-185, 1959.

GATH, D.
The male drunk in court. pp.9-26. In Cook, T., D.Gath, and C.Hensman eds. The drunkenness offence. London, Pergamon Press, 1969.

GERARD, D.L. and C.Kornetsky.
Adolescent opiate addiction: study of control and addict subjects. Psychiat.Quart. 29: 457-486, 1955.

GERARD, D.L. and G.Saenger.
Outpatient treatment of alcoholics; a study of outcome and determinants. Toronto, University of Toronto Press, 1966.

GERARD, D.L., G.Saenger, and R.Wile.
The abstinent alcoholic. Arch.gen.Psychiat.6: 83-95, 1962.

GIBBINS, R.J. and R.H.Walters.
Three preliminary studies of a psychoanalytic theory of alcohol addiction. Quart.J.Stud.Alcohol 21: 618-641, 1960.

GIRDEN, E. and E.Culler.
Conditioned responses in curarized striate muscle in dogs. J.comp. Psychol. 23: 261-274, 1937.

GLATT, M.M.
Alcoholism, crime, and juvenile delinquency. Brit.J. Deling. 9: 84-93, 1958.

GLATT, M.M.
Normal drinking in recovered alcohol addicts: comment on the article by D.L.Davies. Quart.J.Stud.Alcohol 26: 116-117, 1965.

GLESER, G.C. and D.Ihilevich.
An objective instrument for measuring defense mechanisms. J.cons.clin.Psychol. 33: 51-60, 1969.

GLIEDMAN, L.H.
Temporal orientation and alcoholism. Addictions 3: 11-14, 1956.

GLOVER, E.
Etiology of alcoholism. Chap.5. In Glover, E. On the early development of mind. New York, International University Press, 1956a.

GLOVER, E.
Etiology of drug addiction. Chap.12. In Glover, E. On the early development of mind. New York, International University Press, 1956b.

GLOVER, E.
Review of S.Rado's "Psychoanalysis of behaviour." Psychoanal.Quart. 26: 251-253, 1957.

GOLDMAN, M.S. et al.
Effects of group decision-making on group drinking by alcoholics. Quart.J.Stud.Alcohol 34: 807-822, 1973.

GOLDSTEIN, A. and B.A.Judson.
Alcohol dependence and opiate dependence: lack of relationship in mice. Science 172: 290-292, 1971.

GOLDSTEIN, G. and J.W.Chotlos.
Dependency and brain damage in alcoholics. Percept. mot.Skills 21: 135-150, 1965.

GOLDSTEIN, G. and J.W.Chotlos.
Stability of field dependence in chronic alcoholic patients. J.abnorm.Psychol.71: 420, 1966.

GOLDSTEIN, G. et al.
Generalizability of field dependency in alcoholics. J.cons.clin.Psychol.32: 560-564, 1968.

GOLDSTEIN, S.G. and J.D.Linden.
Multivariate classification of alcoholics by means of the MMPI. J.abnorm.Psychol.74: 661-669, 1969.

GOLIGHTLY, C. and R.C.Reinehr.
16 PF profiles of hospitalized alcoholic patients: replication and extension. Psychol.Rep. 24: 543-545, 1969.

GOMBERG, E.S.Lisansky.
Etiology of alcoholism. J.cons.clin.Psychol.32: 18-20, 1968.

GOODWIN, D.W.
Is alcoholism hereditary? A review and critique. Arch.gen.Psychiat. 25: 545-549, 1971.

GOODWIN, D.W., J.B.Crane, and S.B.Guze.
Felons who drink: an 8-year follow-up. Quart.J. Stud. Alcohol 32: 136-147, 1971.

GOODWIN, D.W. et al.
Alcohol and recall: state-dependent effects in man. Science 163: 1358-1360, 1969.

GOODWIN, D.W. et al.
Alcohol problems in adoptees raised apart from alcoholic biological parents. Arch.gen.Psychiat. 28: 238-243, 1973.

GOODWIN, D.W. et al.
Alcoholism and the hyperactive child syndrome. J.nerv.ment.Dis. 160: 349-353, 1975.

GORDON, O., R.Brayer, and R.Tikofsky.
Personality variables and the perception of embedded figures. Percept.mot.Skills 12: 195-202, 1961.

GOSS, A. and T.E.Morosko.
Alcoholism and clinical symptoms. J.abnorm.Psychol. 74: 682-684, 1969.

GOSS, A., T.E.Morosko, and R.Sheldon.
Use of the Edwards Personal Preference Schedule with alcoholics in a vocational rehabilitation programme. J.Psychol.68: 287-289, 1968.

GOTTESFELD, B.H. et al.
Psychiatric implications of the treatment of alcoholism with tetraethylthiuram disulfide: a preliminary report. Quart.J.Stud.Alcohol 12: 184-205, 1951.

GOTTHEIL, E. et al.
Alcoholics' patterns of controlled drinking. Amer.J. Psychiat. 130: 418-422, 1973.

GOUGH, H.G.
Identifying psychological femininity. Educ.psychol. Measmt. 12: 427-439, 1952.

GOUGH, H.G.
Manual for the California Psychological Inventory. Palo Alto, California, Consulting Psychologists Press, 1957.

GOUGH, H.G.
Diagnostic patterns on the MMPI. pp.340-350. In Welsh, G.S. and W.G.Dahlstrom. Basic readings on the MMPI in psychology and medicine. Minneapolis, University of Minnesota Press, 1960a.

GOUGH, H.G.
Theory and measurement of socialization. J.cons.Psychol. 24: 23-30, 1960b.

GOUGH, H.G.
Conceptual analysis of psychological test scores and other diagnostic variables. J.abnorm.Psychol.70: 294-302, 1965a.

GOUGH, H.G.
Cross-cultural validation of a measure of asocial behaviour. Psychol.Rep. 17: 379-387, 1965b.

GOUGH, H.G.
A cross-cultural analysis of the CPI femininity scale. J.cons.Psychol.30: 136-141, 1966a.

GOUGH, H.G.
Graduation from high school as predicted from the California Psychological Inventory. Psychol.in the School 3: 208-216, 1966b.

GOUGH, H.G.
An interpreter's syllabus for the California Psychological Inventory. pp.55-79. In McReynolds, P. ed. Advances in Psychological Assessment Vol.1. Palo Alto, California, Science and Behaviour Books, 1968.

GOUGH, H.G. and A.B.Heilbrun, Jr.
The Adjective check-list manual. Palo Alto, California, Consulting Psychologists Press, 1965.

GOUGH, H.G. and H.S.Sandhu.
Validation of the CPI socialization scale in India. J.abnorm.soc.Psychol. 68: 544-547, 1964.

GOUGH, H.G., E.A.Wenk, and V.V.Rozynko.
Parole outcome as predicted from the CPI, the MMPI, and a base expectancy table. J.abnorm.Psychol.70: 432-441, 1965.

GRAY, A.K.
A look at some international problems of alcoholism. In A compilation of papers presented to the First School of Alcohol Studies, Massey University, New Zealand, 1963.

GRAY, M.G. and M.Moore.
Incidence and significance of alcoholism in the history of criminals. J.criminol.Psychopath. 3: 316, 1941.

GREENACRE, P.
Conscience in the psychopath. Amer.J.Orthopsychiat. 15: 495-509, 1945.

GREER, S.
The relationship between parental loss and attempted suicide: a control study. Brit.J.Psychiat. 110: 698-705, 1964.

GRIFFITHS, R.R., G.E.Bigelow, and I.Liebson.
Alcohol self-administration and social interactions in alcoholics. Proc.81st.Ann.convention Amer.Psychol.Assn. 8: 1039-1040, 1973.

GROSS, W.F. and L.L.Carpenter.
Alcoholic personality: reality or fiction. Psychol.Rep. 28: 375-378, 1971.

GRYGIER, T.G.
Homosexuality, neurosis, and "normality": a pilot study in psychological measurement. Brit.J.Delinq. 9: 59-61, 1958.

GUERTIN, W.H.
The search for recurring patterns among individual profiles. Educ.psychol.Measmt. 26: 151-165, 1966.

GUTHRIE, G.M.
Six MMPI diagnostic profile patterns. pp.368-373. In Welsh, G.S. and W.G.Dahlstrom. Basic readings on the MMPI in psychology and medicine. Minneapolis, University of Minnesota Press, 1960.

GUZE, S.B., D.W.Goodwin, and J.B.Crane.
Criminality and psychiatric disorders. Arch.gen. Psychiat. 20: 583-591, 1969.

GUZE, S.B. et al.
Psychiatric illness and crime with particular reference to alcoholism: a study of 223 criminals. J.nerv.ment.Dis. 134: 512-521, 1962.

GYNTHER, M.D., C.H.Presher, and R.L.McDonald.
Personal and interpersonal factors associated with alcoholism. Quart.J.Stud.Alcohol 20: 321-333, 1959.

HAAS, K.
Direction of hostility and psychiatric symptoms. Psychol.Rep. 16: 555-556, 1965.

HAERTZEN, C.A. et al.
Manual for alcoholic scales on the Inventory of Habits and Attitudes. Psychol.Rep. 25: 947-973, 1969.

HAGGARD, H.W. and E.M.Jellinek.
Alcohol explored. New York, Doubleday, 1942.

HALPERN, F.
Studies of compulsive drinkers: psychological test results. Quart.J.Stud.Alcohol 6: 468-479, 1946.

HAMBURG, S.
Behaviour therapy in alcoholism: a critical review of broad-spectrum approaches. J.Stud.Alcohol 36: 69-87, 1975.

HAMMERSLEY, D.W.
Conditioned-reflex treatment. pp.53-76. In Wallerstein, R.S. et al. Hospital treatment of alcoholism. London, Imago Publishing Co., 1957.

HAMPTON, P.J.
A psychometric study of drinkers. J.cons.Psychol. 15: 501-504, 1951.

HAMPTON, P.J.
The development of a personality questionnaire for drinkers. Genet.Psychol.Monogr. 48: 55-115, 1953.

HANFMANN, E.
The life history of an ex-alcoholic with an evaluation of factors involved in causation and rehabilitation. Quart.J.Stud.Alcohol 12: 405-443, 1951.

HARE, E.H. and G.K.Shaw.
A study in family health: (1) Health in relation to family size. Brit.J.Psychiat. 111: 461-466, 1965.

HARGER, R.N. and H.R.Hulpieu.
The pharmacology of alcohol. pp.103-218. In Thompson, G.N. ed. Alcoholism. Springfield, Ill., Thomas, 1956.

HARLEY, J.Preston, R.Cohen, and A.J.Silverman.
Field dependence and response to alcohol. Quart.J. Stud.Alcohol 35: 973-986, 1974.

HARPER, J. and B.Hickson.
Results of hospital treatment of chronic alcoholism. Lancet 2: 1056-1059, 1951.

HARRINGTON, C.
Errors in sex-role behaviour in teen-age boys. New York, Columbia Teachers Press, 1970.

HARRIS, R.E. and V.M.Ives.
A study of the personality of alcoholics. Amer. Psychologist 2: 405, 1947.

HARTLEY, R.E.
Sex-role pressures and the socialization of the male child. Psychol.Rep. 5: 457-468, 1959.

HARVEY, O.J., D.E.Hunt, and H.M.Schroder.
Conceptual systems and personality organization. New York, Wiley and Sons, 1961.

HASKELL, R.J.
Relationship between aggressive behaviour and psychological tests. J.Project.Tech.25: 431-440, 1961.

HASSALL, C.
A controlled study of the characteristics of young male alcoholics. Brit.J.Addict. 63: 193-201, 1968.

HASSALL, C. and G.A.Foulds.
Hostility among young alcoholics. Brit.J.Addict. 63: 203-208, 1968.

HASTORF, A.H. and G.Myro.
The effect of meaning on binocular rivalry. Amer.J. Psychol. 72: 393-400, 1959.

HATHAWAY, S.R. and P.F.Briggs.
Some normative data on new MMPI scales. J.clin.Psychol. 13: 364-368, 1957.

HATHAWAY, S.R. and P.Meehl.
Psychiatric implications of code types. pp.136-144. In Welsh, S.G. and W.G.Dahlstrom. Basic readings on the MMPI in psychology and medicine. Minneapolis, University of Minnesota Press, 1960.

HAYMAN, M.
The myth of social drinking. Amer.J.Psychiat. 124: 585-594, 1967.

HEDBERG, A.G. et al.
The use of the MMPI (Mini-Mult) to predict alcoholics' responses to a behavioural treatment program. J.clin.Psychol.31: 271-274, 1975.

HEILBRUN, A.B., Jr.
Parental identification and college adjustment. Psychol.Rep. 10: 853-854, 1962.

HEILBRUN, A.B., Jr.
Conformity to masculinity-femininity stereotypes and ego identity in adolescents. Psychol.Rep. 14: 351-357, 1964.

HELPER, M.M.
Learning theory and the self concept. J.abnorm.soc. Psychol. 51: 184-194, 1955.

HENDERSON, D.K.
Psychopathic States. New York, Norton and Co., 1939.

HERSHON, H.I.
Alcoholism, physical dependence and disease: comment on "The Alcohologist's Addiction." Quart.J.Stud.Alcohol 34: 506-508, 1973.

HERSHON, H.I.
Alcoholism and the concept of disease. Brit.J.Addict. 69: 123-131, 1974.

HETHERINGTON, E.M. and S.E.Feldman.
College cheating as a function of subject and situational variables. J.educ.Psychol.55: 212-218, 1964.

HEWITT, C.C.
A personality study of alcohol addiction. Quart.J.Stud. Alcohol 4: 368-386, 1943. Also pp.419-426. In Welsh, G.S. and W.G.Dahlstrom. Basic readings on the MMPI in psychology and medicine. Minneapolis, University of Minnesota Press, 1960.

HIGGINS, J.W.
Psychodynamics in the excessive drinking of alcohol. Arch.Neurol.Psychiat. 69: 713-726, 1953.

HIGGINS, R.L. and G.A.Marlatt.
Effects of anxiety arousal on the consumption of alcohol by alcoholics and social drinkers. J.cons.clin.Psychol. 41: 426-433, 1973.

HILGARD, J.R. and M.F.Newman.
Parental loss by death in childhood as an etiological factor among schizophrenic and alcoholic patients compared with a non-patient community sample. J.nerv.ment.Dis. 137: 14-28, 1963.

HILL, H.E.
The social deviant and initial addiction to narcotics and alcohol. Quart.J.Stud.Alcohol 23: 562-582, 1962.

HILL, H.E., C.A.Haertzen, and H.Davis.
An MMPI factor analytic study of alcoholics, narcotic addicts, and criminals. Quart.J.Stud.Alcohol 23: 411-431, 1962.

HOBSON, G.N.
Anxiety and the alcoholic:as measured by eye-blink conditioning. Quart.J.Stud.Alcohol 32: 976-981, 1971.

HOCH, P.H.
Personality factors in alcoholic psychoses. Psychiat.Quart. 14: 338-346, 1940.

HOFF, E.C.
The research conference on problems of alcohol and alcoholism, Washington D.C., 25-26 October, 1958. Quart.J.Stud.Alcohol 20: 415-420, 1959.

HOFF, E.C.
The alcoholisms. In Papers presented at the 28th. International Congress on Alcohol and Alcoholism, Washington D.C., September 15-20, 1968.

HOFFER, A. and H.Osmond.
Concerning an etiological factor in alcoholism. The possible role of adrenochrome metabolism. Quart.J. Stud.Alcohol 20: 750-756, 1959.

HOFFMANN, H.
Personality characteristics of alcoholics in relation to age. Psychol.Rep. 27: 167-171, 1970.

HOFFMANN, H., and P.C.Nelson.
Personality characteristics of alcoholics in relation to age and intelligence. Psychol.Rep.29: 143-146, 1971.

HOFFMANN, H., D.N.Jackson, and H.A.Skinner.
Dimensions of psychopathology among alcoholic patients. J.Stud.Alcohol 36: 825-837, 1975.

HOFFMANN, H., R.G.Loper, and Sr.M.L.Kammeier.
Identifying future alcoholics with MMPI alcoholism scales. Quart.J.Stud.Alcohol 35: 490-498, 1974.

HOFFMANN, H., P.C.Nelson, and D.N.Jackson.
The effects of detoxification on psychopathology for alcoholics as measured by the Differential Personality Inventory (DPI). J.clin.Psychol.30: 89-93, 1974.

HOGAN, R. et al.
Personality correlates of undergraduate marihuana use. J.cons.clin.Psychol.35: 58-63, 1970.

HOLLAND, J.G.
The prediction of college grades from the California Psychological Inventory and the scholastic aptitude test. J.educ.Psychol.50: 135-142, 1959.

HOLLOWAY, I.
Some psychological concomitants of addiction. Unpublished Ph.D.thesis. University of Adelaide, Australia, 1969.

HOLZBERG, J.D., B.Bursten, and A.Santiccioli.
The reporting of aggression as an indication of aggressive tension. J.abnorm.soc.Psychol.50: 12-18, 1955.

HOLZINGER, R., R.Mortimer, and W.Van Dusen.
Aversion conditioning treatment of alcoholism. Amer.J.Psychiat. 124: 246-247, 1967.

HORN, J.L. and K.W.Wanberg.
Symptom patterns related to excessive use of alcohol. Quart.J.Stud.Alcohol 30: 35-58, 1969.

HOYT, D.P. and G.M.Sedlacek.
Differentiating alcoholics from normals and abnormals with the MMPI. J.clin.Psychol.14: 69-74, 1958.

HURWITZ, J.I. and D.Lelos.
A multilevel interpersonal profile of employed alcoholics. Quart.J.Stud.Alcohol 29: 64-76, 1968.

IMBER, S.D. et al.
Temporal processes in alcoholism. Quart.J.Stud.Alcohol 32: 304-309, 1971.

IZIKOWITZ, S.
Psychiatric sequels of alcohol use and abuse; forms of disease and symptomatology. Quart.J.Stud.Alcohol 20: 371, 1959.

JACKSON, D.N.
A short form of Witkin's Embedded Figures test. J.abnorm.soc.Psychol.53: 254-255, 1956.

JACKSON, J.K.
Types of drinking patterns of male alcoholics. Quart. J.Stud.Alcohol 19: 269-302, 1958.

JACKSON, J.K.
Social adjustment preceding, during, and following the onset of alcoholism. Quart.J.Stud.Alcohol 20: 379, 1959.

JACKSON, J.K.
Alcoholism and the family. pp.472-492. In Pittman, D.J. and C.R.Snyder eds. Society, culture, and drinking patterns. New York, Wiley, 1962.

JACOBS, M.A. et al.
Relationship of oral frustration factors with heavy cigarette smoking in males. J.nerv.ment.Dis. 141: 161-171, 1965.

JACOBS, M.A. et al.
Orality, impulsivity, and cigarette smoking in men: further findings in support of a theory. J.nerv.ment. Dis. 143: 207-219,1966.

JACOBS, M.A. et al.
Psychologic aspects of cigarette smoking in men. Psychosom.Med. 32: 469-485, 1970.

JACOBS, M.A. and A.Z.Spilken.
Personality patterns associated with heavy cigarette smoking in male college students. J.cons.clin.Psychol. 37: 428-432, 1971.

JACOBSEN, E.
Metabolism of ethyl alcohol. Pharmacol.Rev. 4: 107-135, 1952.

JACOBSON, G.R.
Reduction of field dependence in chronic alcoholic patients. J.abnorm.Psychol.73: 547-549, 1968.

JACOBSON, G.R., V.D.Pisani, and H.L.Berenbaum.
Temporal stability of field dependence among hospitalized alcoholics. J.abnorm.Psychol.76: 10-12, 1970.

JELLINEK, E.M.
The disease concept of alcoholism. New Haven, Hill House press, 1960.

JELLINEK, E.M.
Phases of alcohol addiction. pp.356-368. In Pittman, D.J. and C.R.Snyder eds. Society, culture, and drinking patterns. New York, Wiley and Sons, 1962.

JENKIN, N. and K.Wroegh.
Contemporary concepts of masculinity and femininity. Psychol.Rep. 25: 679-697, 1969.

JENSEN, A.
Aggression in fantasy and overt behaviour. Psychol.Monogr. 71: No.445, 1957.

JESSOR, R. and S.L.Jessor.
Adolescent development and the onset of drinking: a longitudinal study. J.Stud.Alcohol 36: 27-51, 1975.

JESSOR, R. et al.
Society, personality, and deviant behaviour: a study of a tri-ethnic community. New York, Holt, Rinehart, and Wilson, 1968.

JONES, B., and O.A.Parsons.
Impaired abstracting ability in chronic alcoholics. Arch.gen.Psychiat. 24: 71-75, 1971.

JONES, M.B. and B.L.Borland.
Social mobility and alcoholism: a comparison of alcoholics with their fathers and brothers. J.Stud.Alcohol 36: 62-68, 1975.

JONES, M.Cover
Personality correlates and antecedents of drinking patterns in adult males. J.cons.clin.Psychol.32: 2-12, 1968.

JONES, M.Cover
Personality antecedents and correlates of drinking patterns in women. J.cons.clin.Psychol.36:61-69, 1971.

KALANT, H.
Some recent physiological and biochemical investigations on alcohol and alcoholism. Quart.J.Stud. Alcohol 23: 52-93, 1962.

KALIN, R.
Social drinking in different settings. pp.21-44. In McClelland, D.C. et al. The drinking man. New York, Free Press, 1972a.

KALIN, R.
Self-descriptions of college problem drinkers. pp.217-231. In McClelland, D.C. et al. The drinking man. New York, Free Press, 1972b.

KALIN, R., D.C.McClelland, and M.Kahn.
The effects of male social drinking on fantasy. pp.3-20. In McClelland, D.C. et al. The drinking man. New York, Free Press, 1972.

KARP, S.A.
Field dependence and overcoming embeddedness. J.cons.Psychol.27: 294-302, 1963.

KARP, S.A. and N.L.Konstadt.
Alcoholism and psychological differentiation: long-range effect of heavy drinking on field dependence. J.nerv.ment.Dis. 140: 412-416, 1965.

KARP, S.A., D.C.Poster, and A.Goodman.
Differentiation in alcoholic women. J.Personality 31: 386-393, 1963.

KARP, S.A., L.Silberman, and S.Winters.
Psychological differentiation and socioeconomic status. Percept.mot.Skills 28: 55-60, 1969.

KARP, S.A., H.A.Witkin, and D.R.Goodenough.
Alcoholism and psychological differentiation: effect of alcohol on field dependence. J.abnorm.Psychol. 70: 262-265, 1965a.

KARP, S.A., H.A.Witkin, and D.R.Goodenough.
Alcoholism and psychological differentiation: effect of achievement of sobriety on field dependence. Quart.J. Stud.Alcohol 26: 580-585, 1965b.

KEEHN, J.D.
Neuroticism and extraversion: chronic alcoholics' reports on effects of drinking. Psychol.Rep. 27: 767-770, 1970.

KELLER, M.
Definition of alcoholism. Quart.J.Stud.Alcohol 21: 125-134, 1960.

KELLER, M.
The definition of alcoholism and the estimation of its prevalence. pp.310-329. In Pittman, D.J. and C.R. Snyder, eds. Society, culture, and drinking patterns. New York, Wiley, 1962.

KELLER, M.
Multidisciplinary perspectives on alcoholism and the need for integration; an historical and prospective note. J.Stud.Alcohol 36: 133-147, 1975.

KELLY, D.H.W. and C.J.S.Walter.
The relationship between clinical diagnosis and anxiety, assessed by forearm blood flow and other measurements. Brit.J.Psychiat. 114: 611-626, 1968.

KELLY, F.J. and D.J.Baer.
Age of male delinquents when father left home and recidivism. Psychol.Rep. 25: 1010, 1969.

KELLY, G.A.
The psychology of personal constructs, Vols.1 and II. New York, Norton, 1955.

KENDELL, R.E.
Normal drinking by former alcohol addicts. Quart.J. Stud.Alcohol 26: 247-257, 1965.

KENDELL, R.E. and M.C.Staton.
The fate of untreated alcoholics. Quart.J.Stud.Alcohol 27: 30-41, 1966.

KESSELL, N. and H.Walton.
Alcoholism. London, MacGibbon and Kee, 1966.

KINGHAM, R.J.
Alcoholism and the reinforcement theory of learning. Quart.J.Stud.Alcohol 19: 320-330, 1958.

KINTZ, B.L. et al.
The experimenter effect. Psychol.Bull.63:223-232, 1965.

KIRCHNER, J.H. and S.S.Marzolf.
Personality of alcoholics as measured by the Sixteen Personality Factor questionnaire and House-tree-person colour-choice characteristics. Psychol.Rep. 35: 627-642, 1974.

KISH, G.B.
Correlates of active-passive food preferences: failure to confirm a relationship with alcoholism. Percept. mot.Skills 31: 839-847, 1970.

KISSIN, B., S.M.Rosenblatt, and S.Machover.
Prognostic factors in alcoholism. APA psychiat.res. Rep. 24: 22-43, 1968.

KJØLSTAD, T.
Normal drinking in recovered alcohol addicts: further comment on the article by D.L.Davies. Quart.J.Stud. Alcohol 24: 728-730, 1963.

KJØLSTAD, T.
Alcoholism among sailors. Quart.J.Stud.Alcohol 27: 358, 1966.

KLEBANOFF, S.G.
Personality factors in symptomatic chronic alcoholism as indicated by the Thematic Apperception test. J.cons.Psychol.11: 111-119, 1947.

KLEIN, G.S.
Cognitive control and motivation. pp.87-118. In Lindzey, G. ed. Assessment of human motives. New York, Grove Press, Rinehart and Co., 1958.

KLINE, J.A. et al.
Personality characteristics of male native American alcoholic patients. Int.J.Addict.8: 729-732, 1973.

KLINEBERG, S.L.
Changes in outlook on the future between childhood and adolescence. J.pers.soc.Psychol. 7: 185-193, 1967.

KLOPFER, B. and D.M.Kelley.
The Rorschach technique. Yonkers-on-Hudson, World Book Co., 1942.

KNAPP, R.B.
Personality correlates of delinquency rate in a Navy sample. J.appl.Psychol. 47: 68-71, 1963.

KNIGHT, R.P.
The dynamics and treatment of chronic alcohol addiction. Bull.Menninger Clin. 1: 233-250, 1937a.

KNIGHT, R.P.
The psychodynamics of chronic alcoholism. J.nerv.ment. Dis. 86: 538-548, 1937b.

KNIGHT, R.P.
The psychoanalytic treatment in a sanatorium of chronic addiction to alcohol. J.Amer.med.Ass. 111: 1443-1448, 1938.

KOKONIS, N.D.
Sex-role identification in neurosis: psychoanalytic-developmental and role theory predictions compared. J.abnorm.Psychol.80: 52-57, 1972.

KOLLER, K.M. and J.N.Castanos.
Family background and life situation in alcoholics. Arch.gen.Psychiat. 21: 602-610, 1969.

KOLLER, K.M. and J.N.Castanos.
Family background in prison groups: a comparative study of parental deprivation. Brit.J.Psychiat. 117: 371-380, 1970.

KORAN, L.M. and P.E.Maxim.
Field dependence in manic-depressive patients. J.nerv. ment.Dis. 155: 209-208, 1972.

KRAFT, T.
Social anxiety model of alcoholism. Percept.mot.Skills 33: 797-798, 1971.

KRAFT, T. and B.Wijesinghe.
Systematic desensitization of social anxiety in the treatment of alcoholism: a psychometric evaluation of change. Brit.J.Psychiat. 117: 443-444, 1970.

KRAUSS, H.H. and R.A.Ruiz.
Anxiety and temporal perspective. J.clin.Psychol.23: 340-342, 1967a.

KRAUSS, H.H. and R.A.Ruiz.
Anxiety and temporal perspective. J.clin.Psychol.23: 454-455, 1967b.

KRISTIANSON, P.
A comparative study of two alcoholic groups and a control group. Brit.J.med.Psychol.43: 161-175, 1970.

KRISTOFFERSON, M.W.
Effect of alcohol on perceptual field dependence. J.abnorm.Psychol.73: 387-391, 1968.

KULIK, J.A., K.B.Stein, and T.R.Sarbin.
Disclosure of delinquent behaviour under conditions of anonymity and nonanonymity. J.cons.clin.Psychol. 32: 506-509, 1968a.

KULIK, J.A., K.B.Stein, and T.R.Sarbin.
Dimensions and patterns of adolescent antisocial behaviour. J.cons.clin.Psychol.32: 375-382, 1968b.

LAIRD, J.T.
A comparison of male normals, psychiatric patients, and alcoholics for sex drawn first. J.clin.Psychol.18: 302, 1962.

LANDIS, C.
Theories of the alcoholic personality. In Alcohol, science, and society, Lecture No.11. Quart.J.Stud. Alcohol. New Haven, 1945.

LANDIS, C. and M.M.Bolles.
Textbook of abnormal psychology. New York, MacMillan, 1946.

LASHLEY, K.S.
The effect of strychnine and caffeine upon rate of learning. Psychobiology 1: 141-170, 1917.

LAWLIS, G.F. and S.E.Rubin.
16 PF study of personality patterns in alcoholics. Quart.J.Stud.Alcohol 32: 318-327, 1971.

LAZARUS, R.S.
Psychological stress and the coping process. New York, McGraw Hill, 1966.

LAZOWICK, L.M.
On the nature of identification. J.abnorm.soc.Psychol. 51: 175-183, 1955.

LEARY, T.
Multilevel measurement of interpersonal behaviour. Berkeley, California, Psychol.Consult.Service, 1956.

LEARY, T.
Interpersonal diagnosis of personality, a functional theory and methodology for personality evaluation. New York, Ronald, 1957.

LEMERE, F.
The nature and significance of brain damage from alcoholism. Amer.J.Psychiat. 113: 361-362, 1956a.

LEMERE, F.
What causes alcoholism? J.clin.exp.Psychopath. 17: 202-206, 1956b.

LEMERE, F.
Normal drinking in recovered alcohol addicts: further comment on the article by D.L.Davies. Quart.J.Stud. Alcohol 24: 727-728, 1963.

LEMERT, E.M.
Alcoholism: theory, problem, challenge: (III).Alcoholism and the sociocultural situation. Quart.J.Stud.Alcohol 17: 306-317, 1956.

LEMERT, E.M.
The occurrence and sequence of events in the adjustment of families to alcoholism. Quart.J.Stud.Alcohol 21: 679-697, 1960.

LEMERT, E.M.
Dependency in married alcoholics. Quart.J.Stud.Alcohol 23: 590-609, 1962.

LENTZ, T.F. et al.
Personality correlates of alcoholic beverage consumption. Character and Personality 12: 54-70, 1943.

LESSER, G.S.
The relationship between overt and fantasy aggression as a function of maternal response to aggression. J.abnorm.soc.Psychol.55: 218-221, 1957.

LESSING, E.E.
Demographic, developmental, and personality correlates of length of future time perspective (FTP). J.Personality 36: 183-201, 1968.

LESTER, D.
A biological approach to the aetiology of alcoholism. Quart.J.Stud.Alcohol 21: 701-703, 1960.

LESTER, D.
Endogenous ethanol: a review. Quart.J.Stud.Alcohol 22: 554-574, 1961.

LESTER, D.
Self-selection of alcohol by animals, human variation, and the aetiology of alcoholism: a critical review. Quart.J.Stud.Alcohol 27: 395-438, 1966.

LEVINE, J.
The sexual adjustment of alcoholics. Quart.J.Stud. Alcohol 16: 675-680, 1955.

LEVINE, J. and E.Zigler.
The essential-reactive distinction in alcoholism: a developmental approach. J.abnorm.Psychol.81: 242-249, 1973.

LEVINE, M. et al.
Intelligence, and measures of inhibition and time sense. J.clin.Psychol.15: 224-226, 1959.

LEVY, R.I.
The psychodynamic functions of alcohol. Quart.J.Stud. Alcohol 19: 649-659, 1958.

LEWIN, K.
A dynamic theory of personality. New York, McGraw Hill, 1935.

LEWINSOHN, P.M. and A.Riggs.
The effect of content upon the thinking of acute and chronic schizophrenics. J.abnorm.soc.Psychol.65: 206-207, 1962.

LEWIS, J.M. et al.
Studies in abstraction: schizophrenia and orality; preliminary results. J.nerv.ment.Dis. 129: 564-567, 1959.

LIBB, J.W. and E.S.Taulbee.
Psychotic-appearing MMPI profiles among alcoholics. J.clin.Psychol. 27: 101-102, 1971.

LICHTENSTEIN, E. and J.H.Bryan.
CPI correlates of the need for approval. J.clin. Psychol. 22: 453-455, 1966.

LINDQUIST, E.F.
Design and analysis of experiments in psychology and education. Cambridge, Massachusetts, Houghton Mifflin, 1953.

LINTON, H.B.
Dependence on external influence: correlates in perception, attitude, and judgement. J.abnorm.soc. Psychol. 51: 502-507, 1955.

LISANSKY, E.S.
The aetiology of alcoholism: the role of psychological predisposition. Quart.J.Stud.Alcohol 21: 314-343, 1960.

LISANSKY, E.S.
Clinical research in alcoholism and the use of psychological tests: a re-evaluation. pp.3-15. In Fox, R., ed. Alcoholism, behavioural research, therapeutic approaches. New York, Springer, 1967.

LOLLI, G.
The addictive drinker. Quart.J.Stud.Alcohol 10: 404-414, 1949.

LOLLI, G.
Alcoholism as a disorder of the love disposition. Quart.J.Stud.Alcohol 17: 96-107, 1956.

LOLLI, G.
Normal drinking in recovered alcohol addicts: comment on the article by D.L.Davies. Quart.J.Stud.Alcohol 24: 326-330, 1963.

LOPER, R.G., M.L.Kammeier, and H.Hoffmann.
MMPI characteristics of college freshman males who later became alcoholics. J.abnorm.Psychol.82: 159-162, 1973.

LORAND, S.
A survey of psychoanalytic literature on problems of alcohol: bibliography. In Lorand, S., ed. Yearbook of Psychoanalysis 1: 359-370, 1945.

LYKKEN, D.T.
Statistical significance in psychological research. Psychol.Bull. 70: 151-159, 1968.

LYNN, D.B. and W.L.Sawrey.
The effects of father-absence on Norwegian boys and girls. J.abnorm.soc.Psychol. 59: 258-262, 1959.

MABRY-HALL, M.
Aberrant Rorschach perceptions of alcoholics. Quart.J. Stud.Alcohol 28: 255-266, 1967.

MACANDREW, C.
The differentiation of male alcoholic outpatients from nonalcoholic male psychiatric outpatients by means of the MMPI. Quart.J.Stud.Alcohol 26: 238-246, 1965.

MACANDREW, C.
Self-reports of male alcoholics; a dimensional analysis of certain differences from nonalcoholic male psychiatric outpatients. Quart.J.Stud.Alcohol 28: 43-51, 1967.

MACANDREW, C. and R.H.Geertsma.
An analysis of responses of alcoholics to scale 4 of the MMPI. Quart.J.Stud.Alcohol 24: 23-38, 1963.

MACANDREW, C. and R.H.Geertsma.
A critique of alcoholism scales derived from the MMPI. Quart.J.Stud.Alcohol 25: 68-76, 1964.

MACCOBY, M.
Alcoholism in a Mexican village. pp.232-260. In McClelland, D.C. et al. The drinking man. New York, Free Press, 1972.

MACDOUGALL, L.
The treatment of the alcoholic in clinics and institutions. In A compilation of papers presented to the First School of Alcohol Studies. Massey University, New Zealand, 1963.

MACHOVER, K.
Personality projection in the drawing of the human figure. Springfield, Ill., Thomas, 1949.

MACHOVER, S. and F.S.Puzzo.
Clinical and objective studies of personality variables in alcoholism. 1.Clinical investigations of the "alcoholic personality." Quart.J.Stud.Alcohol 20: 505-519, 1959a.

MACHOVER, S. and F.S.Puzzo.
Clinical and objective studies of personality variables in alcoholism. II.Clinical study of personality correlates of remission from active alcoholism. Quart. J.Stud.Alcohol 20: 520-527, 1959b.

MACHOVER, S. et al.
Clinical and objective studies of personality variables in alcoholism. III.An objective study of homosexuality in alcoholism. Quart.J.Stud.Alcohol 20: 528-542, 1959.

MACKAY, J.R., D.L.Phillips, and F.O.Bryce.
Drinking behaviour among teenagers: a comparison of institutionalized and non-institutionalized youth. J.Health & Soc.Behav. 8: 46-54, 1967.

MAINORD, F.R.
A note on the use of figure drawings in the diagnosis of sexual inversion. J.clin.Psychol. 9: 188-189, 1953.

MALETZKY, B.M. and J.Klotter.
Smoking and alcoholism. Amer.J.Psychiat. 131: 445-447, 1974.

MALZBERG, B.
A study of 1st.admissions with alcoholic psychoses in N.Y.state, 1943-4. Quart.J.Stud.Alcohol 8:274-295,1947.

MALZBERG, B.
1st.admissions with alcoholic psychoses in N.Y.state year ended March 31, 1948, with a note of 1st.admissions for alcoholism without psychosis. Quart.J.Stud.Alcohol 10: 461-470, 1949.

MANSON, M.P.
A psychometric differentiation of alcoholics from non-alcoholics. Quart.J.Stud.Alcohol 9: 175-206, 1948.

MANSON, M.P.
A psychometric analysis of psychopathic characteristics of alcoholics. J.cons.Psychol. 13: 111-118, 1949.

MARCONI, J.T.
The concept of alcoholism. Quart.J.Stud.Alcohol 20: 216-235, 1959.

MARCONI, J.T.
Scientific theory and operational definitions in psychopathology. With special reference to alcoholism. Quart. J.Stud.Alcohol 28: 631-640, 1967.

MARDONES, J.
On the relationship between deficiency of B vitamins and alcohol intake in rats. Quart.J.Stud.Alcohol 12: 563-575, 1951.

MARDONES, J.
Metabolic and nutritional patterns in alcoholism. Ann.N.Y.Acad.Sci. 57: 788-793, 1954.

MARDONES, J.
Evidence of genetic factors in the appetite for alcohol and alcoholism. In Nature and nurture in alcoholism. Ann.N.Y.Acad.Sci. 197: 138-142, 1972.

MARKS, V.
Alcohol and changes in body constituents: glucose and hormones. Proc.roy.Soc.Med. 68: 377-380, 1975.

MARLATT, G.A., B.Demming, and J.B.Reid.
Loss of control drinking in alcoholics: an experimental analogue. J.abnorm.Psychol.81: 233-241, 1973.

MASLING, J., L.Weiss, and B.Rothschild.
Relationships of oral imagery to yielding behaviour and birth order. J.cons.clin.Psychol.32: 89-91, 1968.

MATTOCKS, A.L. and V.Spencer.
A correlational study of the dependency-proneness of prison inmates and membership in social clubs. J.clin.Psychol.27: 48-50, 1971.

MAULE, H.G. and J.Cooper.
Alcoholism and crime - a study of the drinking and criminal habits of 50 discharged prisoners. Brit.J.Addict. 61: 201-212, 1966.

MAYFIELD, D.G.
Psychopharmacology of alcohol. 1.Affective change with intoxication, drinking behaviour, and affective state. J.nerv.ment.Dis. 146: 314-321, 1968a.

MAYFIELD, D.G.
Psychopharmacology of alcohol. II.Affective tolerance in alcohol intoxication. J.nerv.ment.Dis. 146: 322-327, 1968b.

MCALLISTER, J.
Foulds' "continuum of personal illness" and the 16 PF. Brit.J.Psychiat. 114: 53-56, 1968.

MCCANCE, C.
Aetiological factors in alcoholism: some areas of research. J.psychosom.Res. 14: 285-294, 1970.

MCCANCE, C. and P.F.McCance.
Alcoholism in North-East Scotland: its treatment and outcome. Brit.J.Psychiat. 115: 189-198, 1969.

MCCLELLAND, D.C.
Examining the research basis for alternative explanations of alcoholism. pp.276-315. In McClelland, D.C. et al. The drinking man. New York, Free Press, 1972.

MCCONAGHY, N., and S.H.Lovibond.
Methodological formalism in psychiatric research. J.nerv.ment.Dis. 144: 117-123, 1967.

MCCORD, J.
Some differences in backgrounds of alcoholics and criminals. In Nature and nurture in alcoholism. Ann.N.Y.Acad.Sci. 197: 183-187, 1972.

MCCORD, J., W.McCord, and E.Thurber.
Some effects of paternal absence on male children. J.abnorm.soc.Psychol. 64: 361-369, 1962.

MCCORD, W.M.
The personality of social deviants. pp.311-325. In Norbeck, E., et al. The study of personality: an interdisciplinary appraisal. New York, Holt, Rinehart and Winston, 1968.

MCCORD, W.M., and J.McCord.
A longitudinal study of the personality of alcoholics. pp.413-430. In Pittman, D.J. and C.R.Snyder, eds. Society, culture, and drinking patterns. New York, Wiley, 1962.

MCCORD, W.M., J.McCord, and J.Gudeman.
Origins of alcoholism. California, Stanford University Press, 1960.

MCGUIRE, M.T., S.Stein, and J.H.Mendelson.
Comparative psychosocial studies of alcoholic and non-alcoholic subjects undergoing experimentally induced ethanol intoxication. Psychosom.Med. 28: 13-26, 1966.

MCKENZIE, D.F.
The alcoholic and penal treatment. In A compilation of papers presented to the Second School of Alcohol Studies, Massey University, New Zealand, 1965.

MCNAMEE, H.B., N.K.Mello, and J.H.Mendelson.
Experimental analysis of drinking patterns of alcoholics: concurrent psychiatric observations. Amer.J.Psychiat. 124: 1063-1069, 1968.

MCQUITTY, L.
Best classifying every individual at every level. Educ.psychol.Measmt. 23: 337-345, 1963.

MCQUITTY, L.
Multiple rank order typal analysis for the isolation of independent types. Educ.psychol.Measmt. 26: 3-11, 1966a.

MCQUITTY, L.
Single and multiple hierarchical classification by reciprocal pairs and rank order types. Educ.psychol. Measmt. 26: 253-265, 1966b.

MCQUITTY, L.
Improved hierarchical syndrome analysis of discrete and continuous data. Educ.psychol.Measmt. 26: 577-582, 1966c.

MCWILLIAMS, J., C.C.Brown, and J.G.Minard.
Field dependence and self-actualization in alcoholics. J.Stud.Alcohol 36: 387-394, 1975.

MEDNICK, S.A. and T.F.McNeil.
Current methodology in research on the aetiology of schizophrenia. Psychol.Bull. 70: 681-693, 1968.

MEEHL, P.E.
Profile analysis of the MMPI in differential diagnosis. pp.292-297. In Welsh, G.S. and W.G.Dahlstrom. Basic readings on the MMPI in psychology and medicine. Minneapolis, University of Minnesota press, 1960.

MEEHL, P.E. and S.R.Hathaway.
The K factor as a suppressor variable in the MMPI. pp.12-40. In Welsh, G.S. and W.G.Dahlstrom. Basic readings on the MMPI in psychology and medicine. Minneapolis, University of Minnesota press, 1960.

MEER, B. and A.H.Amon.
Age-sex preference patterns of alcoholics and normals. Quart.J.Stud.Alcohol 24: 417-431, 1963.

MENDELSON, J.H.
Ethanol-1-C14 metabolism in alcoholics and nonalcoholics. Science 159: 319-320, 1968.

MENDELSON, J.H., J.La Dou, and P.Solomon.
Experimentally induced chronic intoxication and withdrawal in alcoholics. Quart.J.Stud.Alcohol Supplement 2: 40-52, 1964.

MENDELSON, J.H., N.K.Mello, and P.Solomon.
Small group drinking behaviour: an experimental study of chronic alcoholics. pp.399-428. In Wikler, A., ed. The addictive states. Baltimore, Williams and Wilkins, 1968.

MENNINGER, K.
A discussant in Knight, R.P., The psychoanalytic treatment in a sanatorium of chronic addiction to alcohol. J.Amer.med.Ass. 111: 1443-1448, 1938a.

MENNINGER, K.
Man against himself. New York, Harcourt Brace, 1938b.

MENSH, I.N.
Psychopathic conditions, addictions, and sexual deviations. pp.1058-1081. In Wolman, B.B., ed. Handbook of clinical psychology. New York, McGraw Hill, 1965.

MERRY, J.
The "loss of control" myth. Lancet 1: 1257-1258, 1966.

MEZEI, A. and L.Levendel.
The personality of the alcoholic. Quart.J.Stud.Alcohol 31: 228, 1970.

MIK, G.
Sons of alcoholic fathers. Brit.J.Addict. 65: 305-315, 1970.

MILLER, D.R. and G.E.Swanson.
Inner conflict and defense. New York, Holt, Rinehart, and Winston, 1960.

MILLER, N.E.
Effect of drugs on motivation: the value of using a variety of measures. Ann.N.Y.Acad.Sci. 65:318-333,1956.

MILLER, N.E., C.J.Bailey, and J.A.F.Stevenson.
Decreased "hunger" but increased food intake resulting from hypothalamic lesions. Science 112: 256-259, 1950.

MILLER, W.B.
Lower class culture as a generating milieu of gang delinquency. J.soc.Issues 14: 5-19, 1958.

MINDLIN, D.F.
The characteristics of alcoholics as related to prediction of therapeutic outcome. Quart.J.Stud. Alcohol 20: 604-619, 1959.

MINDLIN, D.F.
Evaluation of therapy for alcoholics in a workhouse setting. Quart.J.Stud.Alcohol 21: 90-112, 1960.

MIRAMS, S.W.P.
Physiological and psychological theories on alcoholism. In A compilation of papers presented to the 1st.School of Alcohol Studies. Massey University, New Zealand,1963.

MIRONE, L.
Dietary deficiency in mice in relation to voluntary alcohol consumption. Quart.J.Stud.Alcohol 18: 552-560, 1957.

MOGAR, R.E., W.M.Wilson, and S.T.Helm.
Personality subtypes of male and female alcoholic patients. Int.J.Addict. 5: 99-113, 1970.

MOORE, M.
Aggression themes in a binocular rivalry situation. J.Pers.soc.Psychol. 3: 685-688, 1966.

MOORE, R.A.
The problem of abstinence by the patient as a requisite for the psychotherapy of alcoholism. Quart.J.Stud. Alcohol 23: 105-111, 1962.

MOORE, R.A.
Who is qualified to treat the alcoholic? III.Advantages of nonpsychotherapists. Quart.J.Stud.Alcohol 24: 712-718, 1963.

MOORE, R.A.
Comment on "The Alcohologist's Addiction." Quart.J. Stud.Alcohol 33: 1043-1045, 1972.

MOORE, R.A. and T.C.Murphy.
Denial of alcoholism as an obstacle to recovery. Quart.J.Stud.Alcohol 22: 597-609, 1961.

MOORE, R.A. and F.Ramseur.
Effects of psychotherapy in an open-ward hospital on patients with alcoholism. Quart.J.Stud.Alcohol 21: 233-252, 1960a.

MOORE, R.A. and F.Ramseur.
A study of the background of 100 hospitalized veterans with alcoholism. Quart.J.Stud.Alcohol 21: 51-67, 1960b.

MORRISON, J.R.
Bipolar affective disorder and alcoholism. Amer.J. Psychiat. 131: 1130-1133, 1974.

MORRISON, J.R., R.W.Hudgens, and R.G.Barchha.
Life events and psychiatric illness: a study of 100 patients and 100 controls. Brit.J.Psychiat. 114: 423-432, 1968.

MORROW, M.A.
Alcoholic profiles on the Minnesota Multiphasic Personality inventory. J.clin.Psychol.6: 266-269, 1950.

MOTTIN, J.L.
Drug-induced attenuation of alcohol consumption. Quart.J.Stud.Alcohol 34: 444-472, 1973.

MOWRER, O.H.
Learning theory and personality dynamics. New York, Ronald Press, 1950.

MOZDZIERZ, G.J. et al.
Temperament characteristics of chronic alcoholics as measured by the Guilford-Zimmerman Temperament Survey. J.Psychol. 79: 97-102, 1971.

MOZDZIERZ, G.J. et al.
Personality characteristic differences between alcoholics who leave treatment against medical advice and those who don't. J.clin.Psychol. 29: 78-82, 1973.

MURPHY, A.J.
Alcoholism and pauperism. In Alcohol, science, and society, Lecture No.17. Quart.J.Stud.Alcohol. New Haven, 1945.

MURRAY, H.A. and C.Kluckhohn.
Outline of a conception of personality. pp.3-49. In Kluckhohn, C. et al. Personality in nature, society, and culture. London, Jonathan Cape, 1953.

MURRAY, J.B.
Drug addiction. J.gen.Psychol. 77: 41-68, 1967.

MUSSEN, P. and L.Distler.
Masculinity, identification, and father-son relationships. J.abnorm.soc.Psychol. 59: 350-356, 1959.

MUSSEN, P. and L.Distler.
Child-rearing antecedents of masculine identification in kindergarten boys. Child Develop. 31: 89-100, 1960.

MUSSEN, P. and E.Rutherford.
Parent-child relations and parental personality in relation to young children's sex-role preferences. Child Develop. 34: 589-607, 1963.

MYERSON, D.J.
A three-year study of a group of Skid Row alcoholics. pp.151-161. In Himwich, H.E. ed. Alcoholism, basic aspects and treatment. Amer.Ass.Advancement of Science, Publication No.47, 1957.

MYERSON, D.J.
Clinical observations on a group of alcoholic prisoners. Quart.J.Stud.Alcohol 20: 555-572, 1959.

NATHAN, P.E. and J.S.O'Brien.
An experimental analysis of the behaviour of alcoholics and non-alcoholics during prolonged experimental drinking: a necessary precursor of behaviour therapy? Behav.Therapy 2: 455-476, 1971.

NAVRAN, L.A.
A rationally derived MMPI scale to measure dependence. J.cons.Psychol. 18: 192, 1954.

NAVRATIL, L.
On the aetiology of alcoholism. Quart.J.Stud.Alcohol 20: 236-244, 1959.

NERVIANO, V.J.
The second stratum factor structure of the 16 PF for alcoholic males. J.clin.Psychol. 30: 83-85, 1974.

NERVIANO, V.J. and W.F.Gross.
A multivariate delineation of two alcoholic profile types on the 16 PF. J.clin.Psychol. 29: 371-374, 1973.

NEWMAN, H.W.
Acquired tolerance to ethyl alcohol. Quart.J.Stud. Alcohol 2: 453-463, 1941.

NORBURY, F.G.
Some mental mechanisms in alcoholism. J.Amer.med.Ass. 118: 25-28, 1942.

NØRVIG, J. and B.Nielsen.
A follow-up study of 221 alcohol addicts in Denmark. Quart.J.Stud.Alcohol 17: 633-642, 1956.

OLTMANN, J.E. and S.Friedman.
Parental deprivation in psychiatric conditions: III.In personality disorders and other conditions. Dis.nerv.Syst. 28: 298-303, 1967.

OTIS, L.S.
Dissociation and recovery of a response learned under the influence of chlorpromazine or saline. Science 143: 1347-1348, 1964.

OVERALL, J.E.
MMPI personality patterns of alcoholics and narcotic addicts. Quart.J.Stud.Alcohol 34: 104-111, 1973.

OVERALL, J.E. and J.H.Patrick.
Unitary alcoholism factor and its personality correlates. J.abnorm.Psychol.79: 303-309, 1972.

OVERTON, D.A.
State dependent or "dissociated" learning produced with pentobarbital. J.comp.physiol.Psychol.57: 3-12, 1964.

OVERTON, D.A.
State dependent learning produced by depressant and atropine-like drugs. Psychopharmacologia (Berl.) 10: 6-31, 1966.

PAREDES, A., D.Gregory, and B.M.Jones.
Induced drinking and social adjustment in alcoholics. Quart.J.Stud.Alcohol 35: 1279-1293, 1974.

PAREDES, A. et al.
Loss of control in alcoholism. An investigation of the hypothesis, with experimental findings. Quart.J.Stud. Alcohol 34: 1146-1161, 1973.

PARK, P.
Problem drinking and role deviation: a study in incipient alcoholism. pp.431-454. In Pittman, D.J. and C.R. Snyder, eds. Society, culture, and drinking patterns. New York, Wiley, 1962.

PARKE, R.D. and R.H.Walters.
Alcoholism, avoidance learning, and emotional responsiveness. Brit.J.soc.clin.Psychol.5:276-289,1966.

PARKER, F.B.
A comparison of the sex temperament of alcoholics and moderate drinkers. Amer.sociol.Rev. 24: 366-374, 1959.

PARKER, F.B.
Self-role strain and drinking disposition at a pre-alcoholic age level. J.soc.Psychol.78: 55-61, 1969.

PARSONS, O.A.
Clinical neuropsychology. Current Topics commun.clin. Psychol. 2: 1-60, 1970.

PARSONS, T.
Certain primary sources and patterns of aggression in the social structure of the western world. Psychiatry 10: 167-181, 1947.

PARTINGTON, J.T. and F.G.Johnson.
Personality types among alcoholics. Quart.J.Stud. Alcohol 30: 21-34, 1969.

PASCAL, G.R. and W.O.Jenkins.
A study of the early environment of workhouse inmate alcoholics and its relationship to adult behaviour. Quart.J.Stud.Alcohol 21: 40-50, 1960.

PATTISON, E.M.
A critique of alcoholism treatment concepts. Quart.J. Stud.Alcohol 27: 49-71, 1966.

PATTISON, E.M. et al.
Abstinence and normal drinking. An assessment of changes in drinking patterns in alcoholics after treatment. Quart.J.Stud.Alcohol 29: 610-633, 1968.

PAYNE, D.E. and P.H.Mussen.
Parent-child relations and father identification among adolescent boys. J.abnorm.soc.Psychol.52: 358-362, 1956.

PELTON, R.B., R.J.Williams, and L.L.Rogers.
Metabolic characteristics of alcoholics. 1.Response to glucose stress. Quart.J.Stud.Alcohol 20: 28-32, 1959.

PETERSON, D.R.
The diagnosis of sub-clinical schizophrenia. J.cons. psychol.18: 198-199, 1954. Also pp.415-418. In Welsh, G.S. & W.G.Dahlstrom. Basic readings on the MMPI in psychology and medicine. Minneapolis, University of Minnesota Press, 1960.

PETERSON, D.R.
Behaviour problems of middle childhood. J.cons.Psychol. 25: 205-209, 1961.

PETERSON, D.R., H.C.Quay, and A.C.Anderson.
Extending the construct validity of a socialized scale. J.cons.Psychol. 23: 182, 1959.

PETZEL, T.P. and E.J.Michaels.
Perception of violence as a function of levels of hostility. J.cons.clin.Psychol.41: 35-36, 1973.

PFEFFER, A.Z. and S.Berger.
A follow-up study of treated alcoholics. Quart.J.Stud. Alcohol 18: 624-648, 1957.

PHILLIP, A.E.
The constancy of structure of a hostility questionnaire. Brit.J.soc.clin.Psychol.7: 16-18, 1968.

PHILLIP, A.E.
Assessing punitiveness with the hostility and direction of hostility questionnaire (HDHQ). Brit.J.Psychiat. 123: 435-439, 1973.

PHILLIPS, L. and J.L.Framo.
Developmental theory applied to normal and psychopathological perception. J.Personality 22: 464-474, 1953-54.

PHILLIPS, L. and E.Zigler.
Social competence: the action-thought parameter and vicariousness in normal and pathological behaviours. J.abnorm.soc.Psychol. 63: 137-146, 1961.

PHILLIPSON, H.
The Object Relations technique. London, Tavistock Publications, 1955.

PIAGET, J.
Principal factors in determining evolution from childhood to adult life. pp.154-175. In Rapaport, D. ed. Organization and pathology of thought. New York, Columbia University Press, 1951.

PIETY, K.R.
Patterns of parent perceptions among neuropsychiatric patients and normal controls. J.clin.Psychol.23: 428-433, 1967.

PITTMAN, D.J. and C.W.Gordon.
Criminal careers of the chronic drunkenness offender. pp.535-546. In Pittman, D.J. and C.R.Snyder. Society, culture, and drinking patterns. New York, Wiley, 1962.

PLAUT, A.
Transference phenomena in alcoholism. Brit.J.med. Psychol. 42: 313-322, 1969.

PLAUT, T.F.A.
Alcohol problems. A report to the nation. New York, Oxford University Press, 1967.

PODOLSKY, E.
The obsessive-compulsive alcoholic. Amer.J.Psychiat. 117: 236-238, 1960a.

PODOLSKY, E.
The sociopathic alcoholic. Quart.J.Stud.Alcohol 21: 292-297, 1960b.

POLEY, W. and J.R.Royce.
Alcohol consumption, water consumption, and emotionality in mice. J.abnorm.Psychol. 79: 195-204, 1972.

PORTER, A.L., C.D.McCarthy, and H.E.Pearman.
Effect of stressful physical illness on future time perspective. J.clin.Psychol. 27: 447-448, 1971.

PROUT, C.T., E.I.Strongin, and M.A.White.
A study of results in hospital treatment of alcoholism in males. Amer.J.Psychiat. 107: 14-19, 1950.

PRUITT, W.A. and R.L.Van De Castle.
Dependency measures and welfare chronicity. J.cons.Psychol. 26: 559-560, 1962.

PRYER, M.W. and M.K.Distefano, Jr.
Further evaluation of the EPPS with hospitalized alcoholics. J.clin.Psychol. 26: 205, 1970.

PUMROY, D.K.
Relationship between the social desirability scale and the California Psychological inventory. Psychol.Rep. 10: 795-796, 1962.

PURCELL, K.
The TAT and antisocial behaviour. J.cons.Psychol.20: 448-456, 1956.

PURCELL, K. and E.Clifford.
Binocular rivalry and the study of identification in asthmatic and nonasthmatic boys. J.cons.Psychol.30: 388-394, 1966.

QUARANTA, J.V.
Alcoholism: a study of emotional immaturity and homosexuality as related factors in compulsive drinking. Quart.J.Stud.Alcohol 10: 354, 1949.

QUIRK, D.A.
Former alcoholics and social drinking: an additional observation. Quart.J.Stud.Alcohol 31: 494, 1970.

RABIN, A.I. and G.F.King.
Psychological studies. pp.216-278. In Bellak, L., ed. Schizophrenia: a review of the syndrome. New York, Grune and Stratton, 1966.

RADO, S.
Psychoanalysis of pharmacothymia (drug addiction). Psychoanal.Quart. 2: 1-23, 1933.

RADO, S.
Narcotic bondage: a general theory of the dependence on narcotic drugs. Amer.J.Psychiat. 114: 165-170, 1957.

RANKIN, J.G.
Definitive treatment of alcoholism. pp.31-37. In Alcoholism - problems in treatment. University of Melbourne, 4th. School of Alcohol Studies, 1969.

RAPAPORT, D.
On the psychoanalytic theory of thinking. Int.J.Psycho-Anal. 31: 161-170, 1950.

RAPAPORT, D.,ed.
Organization and pathology of thought. New York, Columbia University Press, 1951.

RAPAPORT, D.
On the psychoanalytic theory of affects. Int.J. Psycho-Anal. 34: 177-198, 1953.

RAPAPORT, D., M.Gil, and R.Schafer.
Diagnostic psychological testing Vol. II. Chicago, Yearbook Publishers, 1946.

RATHOD, N.H. and I.G.Thomson.
Women alcoholics. A clinical study. Quart.J.Stud. Alcohol 32: 45-52, 1971.

RAVNSBORG, I.S.
Misuse of drugs among alcoholics. Quart.J.Stud.Alcohol 26: 347, 1965.

REA, F.
Alcoholism; its psychology and cure. New York, Philosophical Library, 1956.

REICH, L.H., R.K.Davies, and J.M.Himmelhoch.
Excessive alcohol use in manic-depressive illness. Amer.J.Psychiat. 131: 83-86, 1974.

REILLY, D.H. and A.A.Sugarman.
Conceptual complexity and psychological differentiation in alcoholics. J.nerv.ment.Dis. 144: 14-17, 1967.

REINERT, R.E.
The concept of alcoholism as a bad habit. Bull.Menninger Clin. 32: 25-46, 1968.

REINERT, R.E. and W.T.Bowen.
Social drinking following treatment for alcoholism. Bull.Menninger Clin. 32: 280-290, 1968.

REITER, H.H.
Note on some personality differences between heavy and light drinkers. Percept.mot.Skills 30: 762, 1970.

REITZ, W.E. and D.N.Jackson.
Affect and stereoscopic resolution. J.abnorm.soc. Psychol. 69: 212-215, 1964.

RENNER, K.E.
Temporal integration: the effect of early experience. J.exp.Res.Personality 1: 201-210, 1966.

RENNER, K.E.
Temporal integration: an incentive approach to conflict resolution. Progr.exp.Pers.Res. 4: 127-177, 1967.

RENNER, K.E., B.A.Maher, and D.T.Campbell.
The validity of a method for scoring sentence-completion responses for anxiety, dependency, and hostility. J.appl.Psychol. 46: 285-290, 1962.

RHODES, R.J.
The MacAndrew alcoholism scale: a replication. J.clin.Psychol. 25: 189-191, 1969.

RHODES, R.J. and G.N.Yorioka.
Dependency among alcoholic and non-alcoholic institutionalized patients. Psychol.Rep. 22: 1343-1344, 1968.

RHODES, R.J., J.E.Carr, and E.D.Jurji.
Interpersonal differentiation and perceptual field differentiation. Percept.mot.Skills 27: 172-174, 1968.

RICE, D.G.
Rorschach responses and aggressive characteristics of MMPI F >16 scorers. J.Project.Tech. 32: 253-261, 1968.

RICH, C.C. and H.G.Davis.
Concurrent validity of MMPI alcoholism scales. J.clin.Psychol. 25: 425-426, 1969.

RICKS, D., C.Umbarger, and R.Mack.
A measure of increased temporal perspective in successfully treated adolescent delinquent boys. J.abnorm.soc.Psychol. 69: 685-689, 1964.

RIMMER, J. and D.S.Chambers.
Alcoholism: methodological considerations in the study of family illness. Amer.J.Orthopsychiat. 39: 760-768, 1969.

RITSON, B.
The prognosis of alcohol addicts treated by a specialized unit. Brit.J.Psychiat. 114: 1019-1029, 1968.

RITSON, B.
Personality and prognosis in alcoholism. Brit.J.Psychiat. 118: 79-82, 1971.

ROBINS, L.N.
Deviant children grown up: a sociological and psychiatric study of sociopathic personality. Baltimore, Williams and Wilkins, 1966.

ROBINS, L.N., W.M.Bates, and P.O'Neal.
Adult drinking patterns of former problem children. pp.395-412. In Pittman, D.J. and C.R.Snyder. Society, culture, and drinking patterns. New York, Wiley, 1962.

ROBINSON, D.
The alcohologist's addiction. Some implications of having lost control over the disease concept of alcoholism. Quart.J.Stud.Alcohol 33: 1028-1042, 1972.

ROBSON, R.A.H., I.Paulus, and G.G.Clarke.
An evaluation of the effect of a clinic treatment programme on the rehabilitation of alcoholic patients. Quart.J.Stud.Alcohol 26: 264-278, 1965.

ROEBUCK, J.B. and R.G.Kessler.
The etiology of alcoholism. Constitutional, psychological, and sociological approaches. Springfield, Ill., Thomas, 1972.

ROGERS, L.L. and A.M.Gawienowski.
Metabolic characteristics of alcoholics. 11.Serum copper concentrations in alcoholics. Quart.J.Stud. Alcohol 20: 33-37, 1959.

ROOS, P. and R.Albers.
Performance of alcoholics and normals on a measure of temporal orientation. J.clin.Psychol.21: 34-36, 1965.

ROSEN, A.C.
A comparative study of alcoholic and psychiatric patients with the MMPI. Quart.J.Stud.Alcohol 21: 253-266, 1960.

ROSEN, A.C.
Some differences in self perceptions between alcoholics and non-alcoholics. Percept.mot.Skills 23: 1279-1286, 1966.

ROSENBERG, C.M.
Young alcoholics. Brit.J.Psychiat. 115: 181-188, 1969a.

ROSENBERG, C.M.
Determinants of psychiatric illness in young people. Brit.J.Psychiat. 115: 907-915, 1969b.

ROSENBERG, C.M. and F.J.Buttsworth.
Anxiety in alcoholics. Quart.J.Stud.Alcohol 30: 729-732, 1969.

ROSENBERG, N.
MMPI alcoholism scales. J.clin.Psychol. 28: 515-522, 1972.

ROSENFELD, H.A.
Psychotic states, a psychoanalytical approach. London, Hogarth Press, 1965.

ROSENMAN, S.
Pacts, possessions, and the alcoholic. Amer.Imago 12: 241-274, 1955.

ROSENTHAL, M.J. et al.
Father-child relationships and children's problems. Arch.gen.Psychiat. 7: 360-373, 1962.

ROSS, M.W.
Relationship between sex role and sex orientation in homosexual men. The N.Z.Psychologist 4: 25-29, 1975.

ROTMAN, S.R. and N.D.Vestre.
The use of the MMPI in identifying problem drinkers among psychiatric hospital admissions. J.clin.Psychol. 20: 526-530, 1964.

ROTTER, J.B.
Clinical psychology. 2nd.ed. New Jersey, Prentice-Hall, 1971.

RUBIN, H.
The Minnesota Multiphasic Personality inventory as a diagnostic aid in a veterans' hospital. J.cons.Psychol. 12: 251-254, 1948.

RUDIE, R.R. and L.S.McGaughran.
Differences in developmental experience, defensiveness, and personality organization between two classes of problem drinkers. J.abnorm.soc.Psychol.62:659-665, 1961.

RUTTER, M.
Classification and categorization in child psychiatry. Int.J.Psychiat. 3: 161-172, 1967.

RYBACK, R.S.
State-dependent or "dissociated" learning with alcohol in the goldfish. Quart.J.Stud.Alcohol 30: 598-608, 1969.

SACHS, E., M.Weingarten, and N.W.Klein, Jr.
Effects of chlordiazepoxide on the acquisition of avoidance learning and its transfer to the normal state and to other drug conditions. Psychopharmacologia 9: 17-30, 1966.

SANFORD, N.
Personality and patterns of alcohol consumption. J.cons.clin.Psychol. 32: 13-17, 1968.

SANTROCK, J.W. and P.Wohlford.
Effects of father absence: influence of the reason for and the onset of the absence. Proc. 78th.Ann.convent. Amer.Psychol.Ass. 5: 265-266, 1970.

SARBIN, T.R. and E.A.Wenk.
Resolution of binocular rivalry as a means of identifying violence-prone offenders. J.crim.Law, criminol. & Police Sci. 60: 345-350, 1969.

SATTLER, J.M. and J.P.Pflugrath.
Future time perspective in alcoholics and normals. Quart.J.Stud.Alcohol 31: 839-850, 1970.

SCARPITTI, F.R. et al.
The "good" boy in a high delinquency area: four years later. Amer.sociol.Rev. 25: 555-558, 1960.

SCHAEFER, E.S.
Personality structure of alcoholics in outpatient psychotherapy. Quart.J.Stud.Alcohol 15: 304-319, 1954.

SCHAEFER, H.H., M.B.Sobell, and K.C.Mills.
Baseline drinking behaviours in alcoholics and social drinkers, kinds of drinks, and sip magnitude. Behav.Res.Ther. 9: 23-27, 1971.

SCHECTER, M.D. et al.
Emotional problems in the adoptee. Arch.gen.Psychiat. 10: 109-117, 1964.

SCHMIDT, H.O.
Test profiles as a diagnostic aid. pp.351-362. In Welsh, G.S. and W.G.Dahlstrom. Basic readings on the MMPI in psychology and medicine. Minneapolis, University of Minnesota Press, 1960.

SCHUCKIT, M.A.
Alcoholism and sociopathy - diagnostic confusion. Quart.J.Stud.Alcohol 34: 157-164, 1973.

SCHUCKIT, M.A. et al.
Alcoholism: antisocial traits in male alcoholics. Brit.J.Psychiat. 117: 575-576, 1970.

SCHULTZ, S.
Social and psychological correlates of inter-generational acceptance in male alcoholism. Ph.D.Thesis. Dissert.Abstracts Internat. 30: (4-B), 1906-1907, 1969.

SCHWARTZ, D.W. and S.A.Karp.
Field dependence in a geriatric population. Percept. mot.Skills 24: 495-504, 1967.

SCOTT, E.M.
Psychosexuality of the alcoholic. Psychol.Rep. 4: 599-602, 1958.

SEARS, P.S.
Child-rearing factors related to playing of sex-typed roles. Amer.Psychologist 8: 431 (abstract), 1953.

SEARS, R.R.
Relation of early socialization experiences to self-concepts and gender role in middle childhood. Child Develop. 41: 267-289, 1970.

SELIGER, R.V. and V.Cranford.
The Rorschach analysis in the treatment of alcoholism. Med.Rec.N.Y. 158: 32-38, 1945.

SELZER, M.L.
Normal drinking in recovered alcohol addicts: comment on the article by D.L.Davies. Quart.J.Stud.Alcohol 24: 113-114, 1963.

SELZER, M.L. and W.H.Holloway.
A follow-up of alcoholics committed to a state hospital. Quart.J.Stud.Alcohol 18: 98-120, 1957.

SHAFFER, J.
A new acquiescence scale for the MMPI. J.clin.Psychol. 19: 412-415, 1963.

SHEA, J.E.
Psychoanalytic therapy and alcoholism. Quart.J.Stud. Alcohol 15: 595-607, 1954.

SHEARN, C.R. and S.L.Warren.
Performance of hospitalized male alcoholics on the Kahn test of symbol arrangement. Percept.mot.Skills 25: 705-710, 1967.

SHEIL, S.A.Jr., J.M.O'Mally, and K.W.Johnsgard.
The Semantic Differential and inferred identification. Psychol.Rep. 14: 547-558, 1964.

SHELLEY, E.L.V. and H.H.Toch.
The perception of violence as an indicator of adjustment in institutionalized offenders. J.crim.Law, Criminol. & Police Sci. 53: 463-469, 1962.

SHERESHEVSKI-SHERE, E., L.M.Lasser, and B.H.Gottesfeld.
An evaluation of anatomy content and F+ percentage in the Rorschachs of alcoholics, schizophrenics, and normals. J.Project.Tech. 17: 229-233, 1953.

SHERFEY, M.J.
Psychopathology and character structure in chronic alcoholism. pp.16-42. In Diethelm, O. ed. Etiology of chronic alcoholism. Springfield, Ill., Thomas, 1955.

SHULMAN, A.J.
Alcohol addiction. Univ.of Toronto med.J. 28: 219-229, 1951.

SHYBUT, J.
Time perspective, internal versus external control, and severity of psychological disturbance. J.clin.Psychol. 24: 312-315, 1968.

SIEGEL, S.
Nonparametric statistics for the behavioural sciences. New York, McGraw Hill, 1956.

SIEGLER, M., H.Osmond, and S.Newell.
Models of alcoholism. Quart.J.Stud.Alcohol 29: 571-591, 1968.

SIEGMAN, A.W.
The relationship between future time perspective, time estimation, and impulse control in a group of young offenders and in a control group. J.cons.Psychol. 25: 470-475, 1961.

SIEGMAN, A.W.
Father absence during early childhood and antisocial behaviour. J.abnorm.Psychol.71: 71-74, 1966.

SILBER, A.
Psychodynamic therapy in alcoholism. pp.145-151. In Fox, R. ed. Alcoholism, behavioural research, therapeutic approaches. New York, Springer, 1967.

SILVERSTONE, S. and B.Kissin.
Field dependence in essential hypertension and peptic ulcer. J.psychosom.Res. 12: 157-161, 1968.

SIMMEL, E.
Alcoholism and addiction. Psychoanal.Quart. 17: 6-31, 1948.

SINGER, E.
Personality structure of chronic alcoholics. Amer.Psychologist 5: 323, 1950.

SINGER, E., H.T.Blane, and R.Kasschau.
Alcoholism and social isolation. J.abnorm.soc.Psychol. 69: 681-685, 1964.

SINGER, J.L.
Delayed gratification and ego development: implications for clinical and experimental research. J.cons.Psychol. 19: 259-266, 1955.

SINGER, J.L., H.Wilensky, and V.G.McCraven.
Delaying capacity, fantasy, and planning ability: a factorial study of some basic ego functions. J.cons. Psychol. 5: 375-383, 1956.

SKINNER, H.A., D.N.Jackson, and H.Hoffmann.
Alcoholic personality types: identification and correlates. J.abnorm.Psychol. 83: 658-666, 1974.

SMART, R.G.
Alcoholism, birth order, and family size. J.abnorm.soc.Psychol. 66: 17-23, 1963.

SMART, R.G.
Alcohol consumption and anxiety in college students. J.gen.Psychol.78: 35-39, 1968a.

SMART, R.G.
Future time perspectives in alcoholics and social drinkers. J.abnorm.Psychol. 73: 81-83, 1968b.

SMILDE, J.
Risks and unexpected reactions in disulfiram therapy of alcoholism. Quart.J.Stud.Alcohol 24: 489-494, 1963.

SMITH, J.A.
The choice of treatment procedures in the alcoholic. pp.173-180. In Himwich, H.E., ed. Alcoholism, basic aspects and treatment. Amer.Ass.Advancemt.Sci. Publication No.47, 1957a.

SMITH, J.A.
Psychiatric treatment of the alcoholic. J.Amer.med. Ass. 163: 734-738, 1957b.

SMITH, J.W.
Colour vision in alcoholics. In Nature and nurture in alcoholism. Ann.N.Y.Acad.Sci. 197: 143-147, 1972.

SOBELL, M.B., L.C.Sobell, and F.H.Samuels.
Validity of self-reports of alcohol-related arrests by alcoholics. Quart.J.Stud.Alcohol 35: 276-280, 1974.

SOLAR, D., G.Davenport, and D.Bruehl.
Social compliance as a function of field dependence. Percept.mot.Skills 29: 299-306, 1969.

SPIEGEL, D., P.A.Hadley, and R.G.Hadley.
Personality test patterns of rehabilitation centre alcoholics, psychiatric in-patients, and normals. J.clin.Psychol.26: 366-371, 1970.

STAGNER, R.
Theories of personality. pp.277-302. In Wolman, B.B., ed. Handbook of clinical psychology. New York, McGraw Hill, 1965.

STARRELS, R.J.
The character trait of the alcoholic. Psychiat.Quart. Suppl. 36: 14-34, 1962.

STEFFEN, J.J., P.E.Nathan, and H.A.Taylor.
Tension-reducing effects of alcohol: further evidence and some methodological considerations. J.abnorm. Psychol. 83: 542-547, 1974.

STEIN, K.B. and K.H.Craik.
Relationship between motoric and ideational activity preference and time perspective in neurotics and schizophrenics. J.cons.Psychol. 29: 460-467, 1965.

STEIN, K.B., H.G.Gough, and T.R.Sarbin.
The dimensionality of the CPI Socialization scale and an empirically derived typology among delinquent and non-delinquent boys. Multivar.Behav.Res. 1: 197-208, 1966.

STEIN, K.B., V.Rozynko, and L.A.Pugh.
The heterogeneity of personality among alcoholics. Brit.J.soc.clin.Psychol. 10: 253-259, 1971.

STEIN, K.B., T.R.Sarbin, and J.A.Kulik.
Future time perspective: its relation to the socialization process and the delinquent role. J.cons.clin. Psychol. 32: 257-264, 1968.

STOLLER, A.
Alcoholism: detection, diagnosis, and assessment. pp.17-25. In Alcoholism - problems in treatment. University of Melbourne 4th. School of Alcohol Studies, 1969.

STONE, H.
The TAT aggressive content scale. J.Project.Tech. 20: 445-452, 1956.

STORM, T. and W.K.Caird.
The effects of alcohol on serial verbal learning in chronic alcoholics. Psychonom. Sci. 9: 43-44, 1967.

STORM, T. and R.G.Smart.
Dissociation: a possible explanation of some features of alcoholism, and implications for its treatment. Quart.J.Stud.Alcohol 26: 111-115, 1965.

STORY, R.I.
Effects on thinking of relationships between conflict arousal and oral fixation. J.abnorm.Psychol. 73: 440-448, 1968.

STRAUS, R. and S.D.Bacon.
Alcoholism and social stability. A study of occupational integration in 2023 male clinic patients. Quart.J.Stud. Alcohol 12: 231-260, 1951.

STRAUS, R. and S.D.Bacon.
Drinking in college. New Haven, Yale University Press, 1953.

STRAYER, R.
A study of the employment adjustment of 80 male alcoholics. Quart.J.Stud.Alcohol 18: 278-287, 1957.

STRAYER, R.
Social integration of alcoholics through prolonged group therapy. Quart.J.Stud.Alcohol 22: 471-480, 1961.

STRECKER, E.A. and F.T.Chambers, Jr.
Alcohol: one man's meat. New York, MacMillan, 1938.

SUPER, D.E.
The Bernreuter Personality inventory: a review of research. Psychol.Bull. 39: 94-125, 1942.

SUTHERLAND, E.H., H.G.Schroeder, and C.L.Tordella.
Personality traits and the alcoholic: a critique of existing studies. Quart.J.Stud.Alcohol 11: 547-561,1950.

SWINSON, R.P.
Genetic polymorphism and alcoholism. In Nature and nurture in alcoholism. Ann.N.Y.Acad.Sci. 197: 129-133, 1972.

SWINSON, R.P.
Phenylthiocarbamide taste sensitivity in alcoholism. Brit.J.Addict. 68: 33-36, 1973.

SYME, L.
Personality characteristics and the alcoholic: a critique of current studies. Quart.J.Stud.Alcohol 18: 288-302, 1957.

TAHKA, V.
The alcoholic personality. A clinical study. Finland, Finnish Foundation for Alcohol Studies, 1966.

TAMERIN, J.S. and J.H.Mendelson.
The psychodynamics of chronic inebriation: observations of alcoholics during the process of drinking in an experimental group setting. Amer.J.Psychiat. 125: 886-899, 1969.

TAMERIN, S.Weiner, and J.H.Mendelson.
Alcoholics' expectancies and recall of experiences during intoxication. Amer.J.Psychiat. 126: 1697-1704, 1970.

TARTER, R.E.
Acquiescence in chronic alcoholics. J.clin.Psychol. 26: 301-302, 1970.

TARTER, R.E., J.Sheldon, and A.A.Sugarman.
Correlates of perceptual field orientation in alcoholics. J.clin.Psychol. 31: 364-366, 1975.

THOMPSON, G.N.
Acute and chronic alcoholic conditions. pp.1203-1221. In Arieti, S., ed. American handbook of psychiatry Vol.II. New York, Basic Books, 1959.

THOMPSON, N.L., Jr., et al.
Parent-child relationships and sexual identity in male and female homosexuals and heterosexuals. J.cons. clin.Psychol. 41: 120-127, 1973.

TINTERA, J.W.
Stabilising homeostasis in the recovered alcoholic through endocrine therapy: evaluation of the hypoglycaemia factor. Amer.Geriatr.Soc. 14: 126-151, 1966.

TOCH, H.H. and R.Schulte.
Readiness to perceive violence as a result of police training. Brit.J.Psychol. 52: 389-393, 1961.

TOLOR, A. and J.S.Tamerin.
The question of a genetic basis for alcoholism. Quart.J.Stud.Alcohol 34: 1341-1345, 1973.

TREMPER, M.
Dependency in alcoholics; a sociological review. Quart.J.Stud.Alcohol 33: 186-190, 1972.

UECKER, A.E., G.B.Kish, and M.E.Ball.
Differentiation of alcoholism from general psychopathology by means of two MMPI scales. J.clin.Psychol. 25: 287-289, 1969.

VAN DE CASTLE, R.L.
Perceptual defense in a binocular-rivalry situation. J.Personality 28: 448-462, 1960.

VANDERPOOL, J.A.
Alcoholism and the self-concept. Quart.J.Stud.Alcohol 30: 59-77, 1969.

VANNICELLI, M.L.
Mood and self-perception of alcoholics when sober and intoxicated. Quart.J.Stud.Alcohol 33: 341-357, 1972.

VEGA, A.
Cross-validation of four MMPI scales for alcoholism. Quart.J.Stud.Alcohol 32: 791-797, 1971.

VINODA, K.S.
Personality characteristics of attempted suicides. Brit.J.Psychiatry 112: 1143-1150, 1966.

VOGEL, M.D.
The relationship of personality factors to drinking patterns of alcoholics. Quart.J.Stud.Alcohol 22: 394-400, 1961a.

VOGEL, M.D.
GSR conditioning and personality factors in alcoholics and normals. J.abnorm.soc.Psychol.63: 417-421, 1961b.

VOGEL, M.D.
The relationship of GSR conditioning to drinking patterns of alcoholics. Quart.J.Stud.Alcohol 22: 401-410, 1961c.

VOGEL, S.
Psychiatric treatment of alcoholism. In Understanding alcoholism. Ann.N.Y.Acad.Pol.Soc.Sci. 315: 99-107, 1958.

VOGEL-SPROTT, M.D.
Individual differences in the suppressing effect of punishment on a rewarded response in alcoholics and non-alcoholics. Quart.J.Stud.Alcohol 28: 33-42, 1967a.

VOGEL-SPROTT, M.D.
Alcoholism as learned behaviour: some hypotheses and research. pp.46-54. In Fox, R., ed. Alcoholism, behavioural research, therapeutic approaches. New York, Springer, 1967b.

VOGEL-SPROTT, M.D. and R.K.Banks.
The effect of delayed punishment on an immediately rewarded response in alcoholics and nonalcoholics. Behav.Res.Ther. 3: 69-73, 1965.

VOTH, A.C.
An experimental study of mental patients through the autokinetic phenomenon. Amer.J.Psychiat. 103: 793-805, 1947.

VOTH, A.C.
Autokinesis and alcoholism. Quart.J.Stud.Alcohol 26: 412-422, 1965.

VOTH, H.M.
Choice of illness. Arch.gen.Psychiat. 6: 149-156,1962a.

VOTH, H.M.
Ego autonomy, autokinesis, and recovery from psychosis. Arch.gen.Psychiat. 6: 288-293, 1962b.

VOTH, H.M. and M.Mayman.
A dimension of personality organization. Arch.gen. Psychiat. 8: 366-380, 1963.

WAGNER, N.N.
Developmental aspects of impulse control. J.cons.Psychol. 24: 537-540, 1960.

WAHL, C.W.
Some antecedent factors in the family histories of 109 alcoholics. Quart.J.Stud.Alcohol 17: 643-654, 1956.

WALL, J.H.
A study of alcoholism in men. Amer.J.Psychiat. 92: 1389-1401, 1936.

WALLACE, M.
Future time perspective in schizophrenia. J.abnorm.soc. Psychol. 52: 240-245, 1956.

WALLACE, M. and A.I.Rabin.
Temporal experience. Psychol.Bull. 57: 213-236, 1960.

WALLERSTEIN, R.S.
Alcoholism, symptom or disease? Int.J.Psychiat. 5: 59-65, 1968.

WALLERSTEIN, R.S. et al.
Hospital treatment of alcoholism. London, Imago Publishing Co., 1957.

WALTON, D.
Drug addiction and habit-formation - an attempted integration. J.ment.Sci. 106: 1195-1229, 1960.

WALTON, H.J.
Personality as a determinant of the form of alcoholism. Brit.J.Psychiat. 114: 761-766, 1968.

WALTON, R.G.
Smoking and alcoholism: a brief report. Amer.J.Psychiat. 128: 1455-1456, 1972.

WARDLE, C.J.
Two generations of broken homes in the genesis of conduct and behaviour disorders in childhood. Brit.med.J. 2: 349, 1961.

WEBB, J.T. and B.S.Mayers.
Developmental aspects of temporal orientation in adolescents. J.clin.Psychol. 30: 504-507, 1974.

WEINGARTNER, H. and L.A.Faillace.
Alcohol state-dependent learning in man. J.nerv.ment. Dis. 153: 395-406, 1971.

WEISS, M.
Alcohol as a depressant in psychological conflict in rats. Quart.J.Stud.Alcohol 19: 226-237, 1958.

WELLMAN, M.
Toward an aetiology of alcoholisms; why young men drink too much. Canad.med.Ass.J. 73: 717-725, 1955a.

WELLMAN, M.
Fatigue during the second six months of abstinence. Canad.med.Ass.J. 72: 338-342, 1955b.

WELLMAN, W.M., M.A.Maxwell, and P.O'Hollaren.
Private hospital alcoholic patients and the changing conception of the "typical" alcoholic. Quart.J.Stud. Alcohol 18: 388-404, 1957.

WENGER, P.
History of a drinking habit in 400 inmates of a penal institution. N.Y.State J.Med. 44: 1898-1904, 1944.

WERNER, H.
Comparative psychology of mental development. Chicago, Follett, 1948.

WERTHEIM, J. and S.A.Mednick.
The achievement motive and field independence. J.cons.Psychol.22: 38, 1958.

WEST, L.J.
Research strategies in alcoholism. In Nature and nurture in alcoholism. Ann.N.Y.Acad.Sci. 197: 13-15, 1972.

WEXBERG, L.E.
Psychodynamics of patients with chronic alcoholism. J.clin.Psychopath. 10: 147-157, 1949.

WHALEN, T.
Wives of alcoholics; four types observed in a family service agency. Quart.J.Stud.Alcohol 14: 632-641, 1953.

WHISLER, R.H. and J.M.Cantor.
The MacAndrew scale: a cross-valication in a domiciliary setting. J.clin.Psychol. 22: 311-312, 1966.

WHITE, R.
The abnormal personality. New York, Ronald Press, 1948.

WHITELOCK, P.R., J.E.Overall, and J.H.Patrick.
Personality patterns and alcohol abuse in a state hospital population. J.abnorm.Psychol.78: 9-16, 1971.

WHITLOCK, F.A.
Alcoholism: a genetic disorder? Aust.N.Z.J.Psychiat. 9: 3-7, 1975.

WIENER, G.
Neurotic depressives' and alcoholics' oral Rorschach percepts. J.Project.Tech. 20: 453-455, 1956.

WIGGINS, J.S.
Personality structure. Ann.Rev.Psychol. 19: 293-350, 1968.

WILBY, W.E. and R.W.Jones.
Assessing patient response following treatment. Quart.J.Stud.Alcohol 23: 325, 1962.

WILKINS, W.L.
Applications of clinical psychology to addiction. In Brower, D. and C.E.Abt, eds. Progress in clinical psychology Vol.1, Sect.2. New York, Grune and Stratton, 1952.

WILKINSON, R.
The prevention of drinking problems. Alcohol control and cultural influences. New York, Oxford Press, 1970.

WILLIAMS, A.F.
Self-concepts of college problem drinkers: 1.A comparison with alcoholics. Quart.J.Stud.Alcohol 26: 586-594, 1965.

WILLIAMS, A.F.
Social drinking, anxiety, and depression. J.Pers.soc. Psychol. 3: 689-693, 1966.

WILLIAMS, A.F.
Validation of a college problem-drinking scale. J.Project.Tech. 31: 33-40, 1967a.

WILLIAMS, A.F.
Self-concepts of college problem drinkers: 2. Heilbrun Need scales. Quart.J.Stud.Alcohol 28: 267-276, 1967b.

WILLIAMS, A.F.
Psychological needs and social drinking among college students. Quart.J.Stud.Alcohol 29: 355-363, 1968.

WILLIAMS, A.F., W.F.McCourt, and L.Schneider.
Personality self-descriptions of alcoholics and heavy drinkers. Quart.J.Stud.Alcohol 32: 310-317, 1971.

WILLIAMS, R.J.
Alcoholics and metabolism. Scientific American 179: 50-53, 1948.

WILLIAMS, R.J.
The genetotrophic concept - nutritional deficiencies and alcoholism. Ann.N.Y.Acad.Sci. 57: 794-811, 1954.

WILLIAMS, R.J.
Biochemical individuality and cellular nutrition: prime factors in alcoholism. Quart.J.Stud.Alcohol 20: 452-463, 1959.

WILLIAMS, R.J.
You are extraordinary. New York, Random House, 1967.

WILSNACK, S.
Sex role identity in female alcoholism. J.abnorm. Psychol. 82: 253-261, 1973.

WINE, D.B. and A.E.Edwards.
Intemperance: psychological and sociological concomitants. Quart.J.Stud.Alcohol 25: 77-84, 1964.

WINOKUR, G. and P.J.Clayton.
Family history studies: IV.Comparison of male and female alcoholics. Quart.J.Stud.Alcohol 29: 885-891, 1968.

WINOKUR, G. et al.
Alcoholism: III.Diagnosis and familial psychiatric illness in 259 alcoholic probands. Arch.gen.Psychiat. 23: 104-111, 1970.

WINSHIP, G.M.
Antabuse treatment. pp.23-51. In Wallerstein, R.S. et al. Hospital treatment of alcoholism. London, Imago Publishing Co., 1957.

WISOTSKY, M.
A note on the order of figure drawing among incarcerated alcoholics. J.clin.Psychol.15: 65, 1959.

WITKIN, H.A.
The problem of individuality in development. pp.335-361. In Kaplan, B. and S.Wapner, eds. Perspectives in psychological theory. New York, International University Press, 1960.

WITKIN, H.A.
Psychological differentiation and forms of pathology. J.abnorm.Psychol. 70: 317-336, 1965.

WITKIN, H.A., D.R.Goodenough, and S.A.Karp.
Stability of cognitive style from childhood to young adulthood. J.Pers.soc.Psychol. 7: 291-300, 1967.

WITKIN, H.A., S.A.Karp, and D.R.Goodenough.
Dependence in alcoholics. Quart.J.Stud.Alcohol 20: 493-504, 1959.

WITKIN, H.A. et al.
Personality through perception. New York, Harper, 1954.

WITKIN, H.A. et al.
Psychological differentiation. New York, Wiley, 1962.

WITTMAN, M.P.
Developmental characteristics and personalities of chronic alcoholics. J.abnorm.soc.Psychol. 34: 361-377, 1939.

WOHLFORD, P. and D.Liberman.
Effect of father-absence on personal time, field independence, and anxiety. Proc. 78th.Ann.Convent. Amer.Psychol.Ass. 5: 263-264, 1970.

WOLF, I.
Alcoholism and marriage. Quart.J.Stud.Alcohol 19: 511-513, 1958.

WOLOWITZ, H.M. and M.J.Barker.
Alcoholism and oral passivity. Quart.J.Stud.Alcohol 29: 592-597, 1968.

WORTHINGTON, C.L.
"Alcoholism:" some problems in definition. Paper No.16, N.Z.Psychological Society conference. Massey University, 1972.

YORKE, C.
A critical review of some psychoanalytic literature on drug addiction. Brit.J.med.Psychol.43: 141-159, 1970.

ZACCARIA, J.S. and W.R.Weir.
A comparison of alcoholics and selected samples of non-alcoholics in terms of a positive concept of mental health. J.soc.Psychol.71: 151-157, 1967.

ZAMANSKY, H.S.
A technique for assessing homosexual tendencies. J.Personality 24: 436-448, 1955-56.

ZAMANSKY, H.S.
An investigation of the psychoanalytic theory of paranoid delusions. J.Personality 26: 410-425, 1958.

ZENEVICH, G.V.
On the nosological independence of chronic alcoholism. Quart.J.Stud.Alcohol 28: 572, 1967.

ZIGLER, E. and L.Phillips.
Psychiatric diagnosis: a critique. J.abnorm.soc.Psychol. 63: 607-618, 1961.

ZUCKER, R.A.
Sex-role identity patterns and drinking behaviour of adolescents. Quart.J.Stud.Alcohol 29: 868-884, 1968.

ZUCKERMAN, M., E.E.Levitt, and B.Lubin.
Concurrent and construct validity of direct and indirect measures of dependency. J.cons.Psychol. 25: 316-323,1961.

ZWERLING, I.
Psychiatric findings in an interdisciplinary study of forty-six alcoholic patients. Quart.J.Stud.Alcohol 20: 543-554, 1959.

ZWERLING, I. and M.Rosenbaum.
Alcoholic addiction and personality (non-psychotic conditions). pp.623-644. In Arieti, S. ed. American handbook of psychiatry Vol.1. New York, Basic Books, 1959.