Perceptual-expectancy style (PES) and pretreatment adjustment: a study of subtypes among male alcohol abusers

Jonathan H. Berns

College of William & Mary - School of Education

Follow this and additional works at: https://scholarworks.wm.edu/etd

Part of the Clinical Psychology Commons

Recommended Citation
https://dx.doi.org/doi:10.25774/w4-0rmx-as57

This Dissertation is brought to you for free and open access by the Theses, Dissertations, & Master Projects at W&M ScholarWorks. It has been accepted for inclusion in Dissertations, Theses, and Masters Projects by an authorized administrator of W&M ScholarWorks. For more information, please contact scholarworks@wm.edu.
INFORMATION TO USERS

This reproduction was made from a copy of a document sent to us for microfilming. While the most advanced technology has been used to photograph and reproduce this document, the quality of the reproduction is heavily dependent upon the quality of the material submitted.

The following explanation of techniques is provided to help clarify markings or notations which may appear on this reproduction.

1. The sign or “target” for pages apparently lacking from the document photographed is “Missing Page(s)”. If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting through an image and duplicating adjacent pages to assure complete continuity.

2. When an image on the film is obliterated with a round black mark, it is an indication of either blurred copy because of movement during exposure, duplicate copy, or copyrighted materials that should not have been filmed. For blurred pages, a good image of the page can be found in the adjacent frame. If copyrighted materials were deleted, a target note will appear listing the pages in the adjacent frame.

3. When a map, drawing or chart, etc., is part of the material being photographed, a definite method of “sectioning” the material has been followed. It is customary to begin filming at the upper left hand corner of a large sheet and to continue from left to right in equal sections with small overlaps. If necessary, sectioning is continued again—beginning below the first row and continuing on until complete.

4. For illustrations that cannot be satisfactorily reproduced by xerographic means, photographic prints can be purchased at additional cost and inserted into your xerographic copy. These prints are available upon request from the Dissertations Customer Services Department.

5. Some pages in any document may have indistinct print. In all cases the best available copy has been filmed.
PERCEPTUAL-EXPECTANCY STYLE (PES) AND PRETREATMENT ADJUSTMENT: A STUDY OF SUBTYPES AMONG MALE ALCOHOL ABUSERS

The College of William and Mary in Virginia

Copyright 1983 by Berns, Jonathan Harris

All Rights Reserved
PERCEPTUAL-EXPECTANCY STYLE (PES) AND
PRETREATMENT ADJUSTMENT:
A STUDY OF SUBTYPES AMONG MALE ALCOHOL ABUSERS

A Dissertation
Presented to
The Faculty of the School of Education
The College of William and Mary in Virginia

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

November 1982

by
Jonathan H. Berns
PERCEPTUAL-EXPECTANCY STYLE (PES) AND PRETREATMENT ADJUSTMENT; A STUDY OF SUBTYPES AMONG MALE ALCOHOL ABusers

by

Jonathan H. Berns

Approved November 1982 by

Fred L. Adair, Ph.D.

James M. Yankovich, Ed.D.

Charles O. Matthews, Ph.D.
Chairman of Doctoral Committee
DEDICATION

To my wife, Virginia, for her help, encouragement, and tolerance.

From beginning to end, as it has most always been.
ACKNOWLEDGEMENTS

I would like to thank the patients and staff of the Alcohol Recovery Service at the Naval Regional Medical Center, Portsmouth, Virginia for their help and cooperation in the course of this research, especially Lt. David Mather, M.A., Capt. Don Hazlett, M.D., Cdr. John House, Ph.D. and Cdr. Pete Goyer, M.D. While the views expressed in this study may not reflect their own, their encouragement and hospitality were in the best tradition of both science and the Navy.

Others who provided consultation, expertise and a shoulder to cry on are Mike Powell, M.A. and Jerry Phillips, M.A.

I would also like to express my gratitude to the members of my committee, who have been generous to me both professionally and personally.
TABLE OF CONTENTS

DEDICATION ....................................... 3
ACKNOWLEDGEMENTS ................................. 4
LIST OF TABLES .................................. 8
LIST OF FIGURES ................................. 9

Chapter

I. INTRODUCTION .................................. 10
   Statement of the Problem .................... 10
   Definitions .................................... 12
   Overview ...................................... 15
   Hypotheses .................................... 24
   Summary of Chapter I and Presentation of Succeeding Chapters ............... 25

II. SURVEY OF RELEVANT LITERATURE ............ 27
   Alcohology: A Field in Transition ......... 27
   Need for Isolation of Subtypes ............... 34
   Adjustment as a Dependent Measure ........... 41
   The Expectancy Variable: Locus of Control (LOC) .......................... 44
   The Perpetual Factor: State Dependence-State Independence (SD-SI) .......... 47
   Alcohol and SDI ................................ 53
   Combining LOC with SD-SI to Produce a Higher-Order Construct: Congruence-Incongruence or PES .......... 55
Alcohol and PES ...................... 72
Summary .............................. 80

III. POPULATION, SAMPLE, PROCEDURES, AND HYPOTHESES TO BE TESTED .............. 83
Population under Study ............... 83
Sample and Procedure ................. 85
Limitations Resulting from Procedure and from Characteristics of Obtained Sample .................................. 89
Instrumentation ........................ 92
Research Design and Date Analysis .... 108
Hypotheses ........................... 110

IV. RESULTS .............................. 111
Presentation of the Analysis of the Data ............................................. 111
Summary .................................. 124

V. DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS .......................... 125
Introduction ........................ 125
Discussion of the Results ............ 127
Conclusions .......................... 140
Recommendations ..................... 151
Summary .................................. 152

APPENDICES
Appendix A. Consent Form A .......... 154
Appendix B. Face Sheet ................ 159
| Appendix C. | Form Letter from Subject to Significant Other | 161 |
| Appendix D. | How to Obtain the GEFT | 163 |
| Appendix E. | I-E Scale | 165 |
| Appendix F. | SAS-SR | 171 |
| Appendix G. | KAS-R | 178 |
| Appendix H. | Consent Form B | 191 |
| REFERENCES | | 195 |
| REFERENCE NOTES | | 214 |
| VITA | | 215 |
| ABSTRACT | | 216 |
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.</td>
<td>Changing Conceptions of Alcohol Abuse</td>
<td>32.</td>
</tr>
<tr>
<td>4.1.</td>
<td>Relationship of Age to Group Membership for A Effect, B Effect, and A x B Effect</td>
<td>113.</td>
</tr>
<tr>
<td>4.2.</td>
<td>Results of the SI vs. SD Contrast (A Effect) for the Dependent Measures of Adjustment: SAS-SR and KAS-R</td>
<td>115.</td>
</tr>
<tr>
<td>4.3.</td>
<td>Results of the I vs. E Contrast (B Effect) for the Dependent Measures of Adjustment: SAS-SR and KAS-R</td>
<td>116.</td>
</tr>
<tr>
<td>4.5.</td>
<td>Two-tailed t-test Comparisons of SAS-SR Obtained Results to the Weissman, et al. (1978) Community and Alcoholic Samples</td>
<td>121.</td>
</tr>
<tr>
<td>5.1.</td>
<td>Significant Results for the A Effect</td>
<td>128.</td>
</tr>
<tr>
<td>5.2.</td>
<td>Significant Results for the B Effect</td>
<td>134.</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Cells Formed by Median Splits of I-E and GEFT Scores (SD-SI) Based on Obtained Data</td>
<td>112</td>
</tr>
</tbody>
</table>
CHAPTER I - INTRODUCTION

Statement of the Problem

The problem which is addressed in this study is the classification of individual alcohol abusers into clinically relevant subtypes on the basis of a personality construct.

The compelling need for a classification system which permits "an assessment of the vicissitudes of living that individuals undergo . . . and . . . of life styles possible to alcoholics" (Apfeldorf, 1978), will be explored and addressed in terms of the current literature in Chapter II. For the moment it is sufficient to point out that personality assessment of alcohol abusing individuals is currently in disarray because of sweeping changes in the scientific community's conceptualization of both the problem of alcohol abuse and its treatment.

The goal of this study is to test the use of a subtyping system by showing its relationship to pretreatment adjustment.

Traditionally, alcohol problems have been viewed monolithically, as manifestations of an addictive or oral-dependent personality. As the assumptions upon which that point of view was based have given ground on the basis
of empirical study, the attention of investigators has turned instead "toward a more appropriate and clinically relevant goal, namely defining meaningful personality subtypes within the alcoholic population" (O'Leary, Donovan, Chaney, & O'Leary, 1980). The question, however, of what shall replace the traditional concepts remains unanswered.

In this study an attempt is made to validate, to some degree, the use of what has been described as "a higher order construct . . . a 'perceptual expectancy style'" (Lefcourt & Telegdi, 1971), by seeking to demonstrate a relationship between subclassifications based upon perceptual expectancy style (PES) and pretreatment adjustment in a group of relatively young men who have been diagnosed as alcoholic.

If it can be shown that pretreatment adjustment is related to the personality classification system under study, then it would be possible to (a) further investigate the validity of that construct in alcoholic populations, (b) study treatment outcome as a function of personality type, (c) study patient-treatment match in terms of personality orientation, and (d) study certain treatment strategies from the perspective of PES.
Definitions

Alcoholic Much attention is devoted in the second chapter to the ambiguities and vagueness of this term. In this study the terms alcoholic and alcoholism are defined as social labels denoting alcohol abuse to a degree which, for that person, is not socially sanctioned. Subjects for this study have been so classified by their social surroundings and are therefore alcoholics.

Locus of Control (LOC) LOC is a generalized expectancy variable, "an attempt to account for human behavior in relatively complex social situations" (Rotter, Chance, & Phares, 1972). LOC, as measured by Rotter's I-E (Rotter, 1966), is thought to reflect an individual's attitude concerning the degree of control he or she exercises over reward (reinforcement), and is thus a perception of the relationship between self and the environment. It is a bipolar variable which measures, in a generalized way, the individual's expectation of either control by the self—an internal (I) orientation—or of being controlled by external forces or fate—an external (E) orientation.

State Dependence-State Independence (SD-SI) SD-SI is a bipolar perceptual "process variable, representing

---

1 Some investigators use the terms state dependence-state independence, others field dependence-field independence. The two are interchangeable.
degree of autonomous functioning in assimilating information from self and field" (Witkin & Goodenough, 1981).

The relatively more state independent person is more able to overcome embeddedness, to perceive independently of the immediate context, and to overcome the field. The relatively more state dependent person is less able to overcome context and is less able to overcome embeddedness perceptually; his or her perception is thus relatively more dominated by the external, the field.

**Congruence-Incongruence** These terms are used in this study to describe sameness or difference in orientation between subject (or group) performance on two theoretically similar but statistically unrelated personality variables (Rohsenow & O'Leary, 1978) tested by a measure of SD-SI and a measure of LOC (always Rotter's I-E).

The term was first used in this manner by Lefcourt and Telegdi (1971) to describe groups formed by the interaction of the scores on Rotter's I-E and scores on a portable Rod-and-Frame test (a measure of SD-SI). **Ss** whose performance on both measures were in the same direction, internal and state independent (I-SI) and external and state dependent (E-SD), are defined as congruent in orientation. **Ss** whose performance on both measures indicated opposing orientations, external and state independent (E-SI) and internal and state dependent (I-SD)
are defined as being incongruent in orientation.

**Perceptual-Expectancy Style (PES)** Tobacyk, Broughton, and Vaught (1975) suggested combining congruence-incongruence into a "higher order construct," perceptual-expectancy style. In this study the construct will be referred to as PES.

**Adjustment** For the purposes of this study, adjustment is defined as perceived ability to function and satisfaction with current levels of functioning. This will be evaluated in two ways: (a) through the use of a self-report inventory, the Social Adjustment Scale-Self Report (SAS-SR), in which the individual reports on his level of performance and on satisfaction with his performance in various social roles in which he is engaged, and (b) through the use of information supplied by a significant other (when available). The significant other reports on the observable behavior of the identified patient using the Katz Adjustment Scales, Relative form (KAS-R).

**Population** The population chosen for this study consists of male, active-duty Navy, Marine, or Coast Guard personnel newly admitted to the Alcohol Rehabilitation Services unit at the Naval Regional Medical Center (NRMC) in Portsmouth, Virginia.

All subjects are volunteers who gave their informed consent for participation in this study. Informed consent,
design issues, and ethical issues inherent in human subject study were studied and approved by both Navy authorities, on site and in Washington, D.C., and by The Human Subjects Committee at the College of William and Mary.

Population parameters, sources of bias, ethical considerations, and limitations resulting from population features are addressed in Chapter III.

Overview

Since the early 1960's, the traditional scientific models of alcohol abuse have been called into question by a variety of observational and empirical research studies (Davis, 1962; Pattison, Sobell, & Sobell, 1977).

The original work of E. M. Jellinek (1952, 1960) led to wide acceptance of alcoholism as a progressive disease caused by biological defect, and to viewing alcohol abusers as sick people (Roman & Trice, 1977). Unfortunately, the disease seemed to have no cure. More recently, the challenging of many of Jellinek's hypotheses, as reviewed by Pattison, et. al. (1977), has caused many to abandon the disease concept and to suggest that, by coming to conceptualize alcohol abuse as a problem and not a disease, new treatment possibilities might be explored (Robinson, 1972).

As a result of adopting a more behavioral and empirical orientation, unusual and often successful tech-
niques of treatment have been tried experimentally. Pattison, et. al. (1977) list 74 studies in which controlled drinking has been investigated and which report varying degrees of clinical success. Some of the more notable are: Caddy and Lovibond, 1976; Lovibond and Caddy, 1970; Marlatt, Demming, and Reid, 1973; Sobell, Schaffer, and Mills, 1972; Sobell and Sobell, 1973, 1978; Sobell, Sobell, and Christelman, 1972.

Despite the promise of this research towards helping the alcohol abuser deal with his or her problem, either through abstinence, better controlled drinking, or even attenuated (less destructive) drinking, very little work has yet been done in the area of theory building, theory-based matching of patient to treatment, or the investigation of clinically relevant subtypes within the abusing population.

During the years in which the disease concept exclusively dominated the field, most researchers sought to define an "alcoholic" or "addictive" personality type. Although much of this work has since been abandoned and some has been reoriented toward defining subtypes (Hittel, 1975; O'Leary, Donovan, Chaney, & O'Leary, 1980), a personality oriented theory base for the non-disease model of alcohol abuse treatment has been lacking. A comprehensive review of the literature will be found in Chapter II but, in general, treatment studies using cognitive-behavioral types
of treatment, otherwise well-designed and scrupulously followed up, appear to bypass the issue of personality theory by such stratagems as being behaviorally eclectic and being "prepared to adopt a deductive approach to development of a treatment paradigm" (Sobell & Sobell, 1978, p. 79), without providing an adequate explanation of what worked or why. The avoidance of theoretical models is not surprising; the research is of a pioneering nature and the alcohol treatment community has greeted nontraditional findings with more than a little resistance. However, if the new research findings are to be more than just esoteric experiments, a workable theory base must be built up. This study is directed towards that end. Specifically, the goal is to combine theory-based personality constructs with the nonmedical or "emergent" (Pattison, et. al., 1977) model of alcohol studies, to attempt to generate a theory base which can explain why some patient-to-treatment matches work better than others.

The employment of personality traits as a basis for prescriptive treatment is conspicuously absent from even the most promising large scale study of innovative treatment methods, that of Sobell and Sobell (1978). Rather, we see a shotgun approach. For example, in the Lovibond and Caddy (1970) and Caddy and Lovibond (1976) studies, it is impossible to determine which treatments are the "active ingredients." The 1970 study indicated that aversion
therapy coupled with a sort of biofeedback about blood alcohol levels was decisive, while the 1976 replication study suggests that the "individualized" but poorly described cognitive-behavioral therapy was the agent of change.

Some modalities appear to be more effective with one individual and some with another (Armor, Polich, & Stambul, 1976; Gibbs, 1980; Pattison, 1966), but the question of why or with whom remains largely unanswered. This study seeks to begin to answer these questions by categorizing alcohol abusers in groups according to specific personality traits.

In this study, two operationally defined constructs, from two well-developed areas of personality theory and research, are used in combination to define membership in one of four groups. Locus of control (LOC) will be defined by within-population performance on Rotter's (1966) I-E scale, and state dependence-state independence (SD-SI) will be defined by within-population performance on the Group Embedded Figures Test (GEFT) (Witkin, 1971). Each of these constructs, by itself, has been used in attempts to define the alcoholic personality. They have been used together in some nonclinical studies to investigate cognitive efficiency, social style, and self-concept with promising results. Here, they will be used in conjunction to define subtypes within an alcohol abusing population.

When LOC alone was employed in attempts to define the "alcoholic personality," various studies found that
alcoholics were extreme internals (Goss & Morosko, 1970; Oziel, Obitz, & Keyson, 1972), extreme externals (Butts & Chotlos, 1973; Palmer, 1971), and were no different than nonalcoholics in terms of LOC (Barnes, 1980; Donovan & O'Leary, 1975). In a recent review article on LOC research in alcohol abusing populations, Rohsenow and O'Leary conclude that:

The relationship of locus of control to alcoholism or the treatment of alcoholism has generally not been unambiguously demonstrated... There is a tendency for better designed studies to find no difference or externality in alcoholics... The multidimensional nature of alcoholism is most likely the major reason why research on alcoholics so often results in equivocal or contradictory results. (1978, pp. 73-74)

The contradictory results do, however, provide a tantalizing glimpse into the diversity of expectancy to be found within the alcohol abusing population as a whole. In addition, they raise the question of what role the variable of expectancy does play in alcohol abuse. At the present time, the only possible answer seems to be that it plays different roles for different people. Therefore, though alcohol abusers have been subtyped according to LOC orientation (Hittel, 1975), expectancy alone seems to give too limited a picture to have utility in patient-to-treatment match.

LOC orientation was never meant to provide a total
personality picture (Rotter, 1966). It seems likely that the resources one actually has available for dealing with the environment are at least as important as what one expects. Measuring the development of the perceptual field is one way to assess these resources: thus SD-SI is employed in this study, in combination with LOC, to isolate meaningful personality subtypes.

The use of SD-SI (also described as perceptual style, degree of psychological differentiation, or a passive-active dimension of perceiving) as a means of exploring personality was introduced by Witkin and Asch in 1948. It provides a model of human functioning along a continuum of increasing complexity, or differentiation. The level of perceptual complexity is also seen as indicating the development of psychological complexity in terms of body concept, and level of development of ego defenses and controls (Witkin, Dyk, Faterson, Goodenough, & Karp, 1962). The SD-SI construct also appears to relate strongly to the individual's ability to use cognitive resources and to profit from experience.

As with LOC, SD-SI was used in the hunt for the alcoholic personality. Witkin suggested that alcoholics were state dependent people: "The nonspecialized character of the defense which the use of alcohol represents is particularly clear" (1965, p. 376). Results of other research seemed to support this idea (Bailey, Hustmyer, & Kristofferson, 1961; Witkin, 1950, 1965). However, as was the
case with the LOC studies, still other research contradicts these findings and indicates a broad range of psychological differentiation in people labeled as alcoholics (Chess, Neuringer, & Goldstein, 1971; Karp, Kissin, & Hustmyer, 1970; Reilly & Sugerman, 1967).

In this study it is predicted that by using both LOC and SD-SI in combination to form four groups, two of which are "congruent" in terms of PES (state independent-interal LOC and state dependent-external LOC) and two (state dependent-interal LOC and state independent-external LOC) which are "incongruent," that meaningful subtypes will be defined.

This type of subgrouping is based on the assumption that the situation of congruency represents an expectation of control that is backed up by the assets of the personality. This supposition is supported by Lefcourt and Telegdi's (1971) finding that the performance by the two congruent groups on a series of cognitive tasks was significantly better than that of the two incongruent groups. Lefcourt and Telegdi interpret the apparently more efficient cognitive functioning of the congruent groups by relating congruence to "the degree to which one comes to terms with his own abilities" (1971, p. 56).

Thus, congruence appears to represent a realistic combination of expectation and abilities, while incongruence represents a faulty appraisal of ability. The incongruent
subject either expects too little control because he is unaware of his perceptual assets, or expects more control than these assets justify. In either case, incongruence appears to represent a distorted sense of self.

Tobacyk, Broughton, and Vaught (1975) confirm Lefcourt and Telegdi's findings: "As predicted, the two theoretically congruent groups demonstrated better personality adjustment on a real-self, ideal-self Q sort than did the incongruent groups" (1975, p. 81).

In various studies, PES consistently appears to predict various behaviors or performance on behaviorally oriented measures. PES has also been shown not to be related to performance on instruments which are state-trait oriented, or instruments which are criterion-indexed diagnostic tools. Both types of study are presented in depth in Chapter II.

These seemingly contradictory findings concerning the meaning of the personality styles defined by the PES construct are logically consistent with the idea that PES is not intended to be a measure of psychopathology per se. Instead, PES appears to be a means of describing how the personality is organized in terms of perceiving self, the organization and interpretation of experience, and one's relationship to others.

It therefore appears possible that the PES construct could be employed as an aid in understanding treatment needs of individuals who do evidence various behavioral pathologies.
That is to say that PES adds a dimension to diagnosis in which the individual personality style may be better understood and treatment more effectively prescribed.

The question of prescription is beyond the scope of this study, which is merely an attempt to understand the implications of PES within a single diagnostic category: individuals defined as alcoholics. It is predicted that, despite similarity in diagnosis, the within-group differences in PES will be found to relate to behavioral differences in terms of how the individual deals with daily life.

It is hypothesized that those whose PES is congruent will perceive themselves, and will be perceived by others, as being more efficient in terms of dealing with the vicissitudes of daily life, than those whose PES falls into the incongruent categories.

If this proves to be the case, then further research on PES and treatment will be stimulated for alcohol abusers, and perhaps for other clinical populations as well.

In this study, male inpatients (N = 91), who are active duly military personnel being treated at the Naval Regional Medical Center in Portsmouth, Virginia for alcohol abuse and who have been diagnosed as alcoholic, form the population under study. All subjects are volunters, although they may not necessarily be voluntary patients. An interesting feature is the relative youth of the population; the mean age is 25.62 years (SD = 6.34 years), which is
atypically young for an inpatient group carrying a diagnosis of alcoholism.

Details of design, sampling, and possible sources of bias are presented in detail in Chapter III. At this point it is perhaps best to indicate the instrumentation used, in order of presentation. Subjects are given Rotter's I-E scale, the Group Embedded Figures Test (GEFT), and the Social Adjustment Scale-Self Report (SAS-SR). A significant other—wife, girlfriend, relative, or close friend—rates the subject's behavior using the Katz Adjustment Scale, Relative form (KAS-R).

Groups are formed by median splits (with ties randomly assigned) of I-E and GEFT scores, forming four groups, two congruent and two incongruent.

Results are analyzed by an analysis of variance—by SPSS subprogram ANOVA—for the relationship between I-E (internal and external) and adjustment scores, SD-SI and adjustment scores, and congruence-incongruence and adjustment scores.

**Hypotheses**

It is hypothesized that subgroups formed on the basis of PES in the above-mentioned population will differ in levels of adjustment on the basis of their membership in one of four PES cells or groups.

These groups are: (G1) I-SI, (G2) I-SD, (G-3) E-SI,
Groups G1 and G4 are described as being congruent (C) in terms of PES, in that perceptual style (SD-SI) is in the same direction as LOC (E or I).

Groups G2 and G3 are described as being incongruent (InC) in that perceptual style (SD-SI) is in the opposite direction from LOC (I or E).

Subjects whose performance places them in groups G1 and G4 are expected to rate themselves, and to be rated by others, as better adjusted than those whose performance places them in groups G2 and G3. Therefore, adjustment ratings by self ($A_s$) and adjustment ratings by a significant other ($A_o$) are expected to reflect group membership.

G1 and G4 belong to the congruent supergroup (CG). G2 and G3 belong to the incongruent supergroup (InCG).

Therefore: $G1 \rightarrow G4 > G2$ and $G3$ for $A_s$ and $A_o$, or CG IncCG for $A_s$ and $A_o$, with $G1 > G4 > G2 > G3$ for $A_s$ and $A_o$.

If this is so, then a relationship does exist between the PES construct and pretreatment adjustment in the population under study.

Summary of Chapter I and Presentation of Succeeding Chapters

In Chapter I the problem addressed by this study, subclassification of individuals diagnosed as alcoholic, is briefly stated. The use of PES as a possible means of
classification is put forth and is followed by a definition of terms. Hypotheses are stated informally, and a brief overview of material presented in depth in later chapters is provided.

In Chapter II, the literature for alcohol studies, LOC, SD-SI, and PES is surveyed.

In Chapter III, methodology is addressed. Population is described and limitations, sampling procedures, ethical constraints, and other sources of bias discussed. Instrumentation is then described, as is the statistical design of the study. A formal statement of the hypothesis is made in null form.

Chapter IV is a presentation of results.

Chapter V is a discussion of results, followed by conclusions and recommendations.
Alcohology: A Field in Transition

Until the Davies (1962) study of normal drinking patterns in one-time alcoholics, which documented the successful return of some individuals diagnosed as alcoholic to nondamaging and controlled "social" drinking, the professional community's belief system concerning "alcoholism" appears to have been drawn almost entirely from the work of Jellinek (1952, 1960).

In a review of models and belief systems concerning drinking problems, in which belief systems of both the scientific and lay communities are described, Siegler, Osmond, and Newell (1968) detail eight models of alcoholism. Of these, three are in current usage in the professional and paraprofessional treatment communities. They are the "old" medical model, the Alcoholics Anonymous (A.A.) model, and the "new" medical model.

The "old" medical model defines alcoholism as "a serious, progressive and eventually fatal disease, which is incurred by the immoral behavior (i.e., excessive drinking) of the patient himself. (Siegler, et. al., 1968, p. 580)

Physical treatment for the damage done by drinking is recommended, as is help by A.A. and the clergy.

In the A.A. model, alcoholism is defined as:

An incurable, progressive and often fatal disease. Alcoholism is also a spiritual
problem for alcoholics. Alcohol is "poison" to an alcoholic, though not to others. An alcoholic is a person whose life has become intolerable through the use of alcohol. (Siegler, et. al., 1968, pp. 576-577)

The "new" medical model's definition of alcoholism somewhat deemphasizes spiritual and moral concerns, and emphasizes the idea of negative reinforcement caused by the pain associated with withdrawal. Furthermore, this model indicates that:

Alcoholism is a progressive, often fatal disease, possibly hereditary. Alcoholics are ill people whose body chemistry is such that they can become addicted to alcohol. Alcoholism must be distinguished from schizophrenia, depression, head injuries, and so forth. (Siegler, et. al., 1968, p. 581)

This model was endorsed by the American Medical Association in 1956, and apparently reflects A.A.'s influence and pressure.

It is apparent that the A.A. model, based on Jellinek's hypotheses concerning the inevitable progression of the disease of alcoholism, and both the new and old medical models define alcohol abuse as a disease whose principal attribute is its physical basis and, in the case of A.A.'s adaptation of the old medical model, one which also has a spiritual or moral component. Treatment has followed the models: spiritual treatment by A.A. or medical treatment for the disease, or both.

Neither form of the medical model makes any distinction between pharmacological addiction and serious alcohol abuse
by a nonaddicted person; both indicate that the condition is a chronic disease.

While the development of the concept that alcohol abusers are sick people has led to more compassionate treatment for some, it has also resulted in some measure of avoidance of alcohol abuse problems by most of the professional community. Counsellors and psychologists tend to avoid placing themselves in the position of trying to treat a disease with an organic base and even physicians, faced with the patient's denial and a poor prognosis, tend to take an attitude of neglect and avoidance:

The blind spot of physicians for diagnosing alcoholism is vividly demonstrated here; 80 percent of the cases of alcoholism [at a large New York City general hospital] were not so designated. Needless to say, very few of these patients, diagnosed or otherwise, were referred for specific treatment for their alcoholism. (Kissin, 1977, p. 60)

It is clear that reliance upon the medical model has created a paradoxical situation; alcohol abusers are defined as sick people, but physicians often avoid diagnosing them or referring them to treatment. In general, "treatment" has been carried out by nonprofessionals such as A.A., which provides spiritual guidance in a group-support, self-help format, and by paraprofessionals under the guidance of professionals who subscribe to either medical model, the A.A. model, or to some combination.

Alcoholics Anonymous keeps no systematic records, and varies tremendously from group to group. Although A.A.
has without a doubt aided many individuals, its actual effectiveness is unknown.

Alcoholic Anonymous is regarded by many professionals and laymen as the most useful treatment resource for problem drinking. . . . The hegemony of A.A. cannot be justified by reference to the scientific literature. Questions of the overall efficacy of A.A.'s approach and of specific indications and contraindications for its use remain largely unanswered (5). . . . A principal reason for the apparent discrepancy between the widespread use of A.A. and at best inconclusive results of evaluative studies is the lack of recognition that A.A. may be appropriate for only a minority of problem drinkers. (Ogborne & Glaser, 1981, pp. 661-662)

The classic medical model alcohol-treatment program, disease oriented and typically A.A. oriented, is staffed mostly by "ex-alcoholics" (Kalb & Propper, 1976) and appears to have had only limited success.

The National Institute of Alcohol Abuse and Alcoholism (1972) estimates that only 20% of all treated alcoholics maintain total abstinence for more than 3 to 5 years. If one considers total abstinence an index of successful treatment, then alcoholism would appear to be relapsing in most cases. (Parker, Winstead, & Willi, 1979, p. 1019)

This is especially true for people in their twenties and thirties, the age groups in which abuse is at its most extreme.

Since the late 1960's, empirical and clinical findings have led to conclusions which are at odds with the disease concept of alcohol abuse. These findings indicate that alcohol abuse is not a disease, that the craving for alcohol
among detoxified "alcoholics" is a myth, that "normal" people can be addicted to alcohol, and that many chronic and self-destructive alcohol abusers can indeed learn to drink in a nondestructive fashion (Pattison, et. al., 1977). These findings and the portions of the disease/medical model which they refute are here presented in table form 2.1., adapted from Pattison, Sobell, and Sobell's summary of the current literature, Emerging Concepts of Alcohol Dependence (1977).

The organization of the empirical work of many researchers into an "Emergent Model" (Pattison, et. al., 1977, pp. 189-211) clearly defines and empirically supports the idea that alcohol abuse is not a disease, and that the rehabilitative process needs to be individualized in terms of both treatment and goal. It is clear, then, that the assimilation and application of the emergent model to clinical practice should be approached by the behavioral scientist/practitioner.

There exists a great deal of evidence now that most problem drinkers can control their drinking in certain situations (Lloyd & Salzberg, 1975; Pattison, 1976). Sobell and Sobell list 80 studies that have demonstrated that controlled . . . . Thus a simple, straightforward interpretation of Jellinek's (1960) "loss of control" hypothesis can no longer be defended. . . . It should be pointed out, however, that controversies about controlled drinking, craving for alcohol, biological causes, etc., to a large extent consist of obscure and irrelevant questions. These are poorly defined concepts which are of little value in research and therapeutic practice. (Rönnberg, 1979, pp. 186-187)
<table>
<thead>
<tr>
<th>Traditional model</th>
<th>Emerging Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is a unitary phenomenon which can be identified as alcoholism.</td>
<td>There is no single entity which can be defined as alcoholism.</td>
</tr>
<tr>
<td>Alcoholics and pre-alcoholics are essentially different from non-alcoholics.</td>
<td>There is no clear dichotomy between either alcoholics and non-alcoholics or between pre-alcoholics and non-pre-alcoholics.</td>
</tr>
<tr>
<td>Alcoholics may sometimes experience a seemingly irresistible physical craving for alcohol, or a strong psychological compulsion to drink.</td>
<td>The developmental sequence appears to be highly variable.</td>
</tr>
<tr>
<td>Alcoholics gradually develop a process called &quot;loss of control&quot; over drinking, and possibly even an inability to stop drinking.</td>
<td>There is no evidence to date for a basic biological process that predisposes an individual toward dysfunctional use of alcohol.</td>
</tr>
<tr>
<td>Alcoholism is a permanent and irreversible condition.</td>
<td>The evidence suggests that alcoholic problems are reversible.</td>
</tr>
<tr>
<td>Alcoholism is a progressive disease which follows an inexorable development through a distinct series of phases.</td>
<td>Alcohol problems are typically interrelated with other life problems.</td>
</tr>
</tbody>
</table>

---

Adapted from *Emerging Concepts of Alcohol Dependence*, by E. Mansell Pattison, Mark B. Sobell, and Linda C. Sobell, 1977
The removal of alcohol abuse from the realm of disease and its re-definition as a behavioral problem, albeit one with medical consequences, has led to the possibility not only of better and more humane treatment for the millions of men, women, and children who harm both themselves and their families through their abuse of alcohol, but also offers the promise of help for many problem drinkers who would not be classified as alcoholics under the medical models.

As Sobell and Sobell (1978) note in their discussion of David Robinson's biting 1972 article, "The alcohologists addiction: Some implications of having lost control over the disease concept of alcohol":

Robinson (1972) among others, has discussed the consequences of reifying the disease concept of alcoholism. He concluded that the general acceptance of this ill-defined notion has probably led to the development of false expectations about the nature of alcohol problems, their treatment and their prognosis. At times, this reification has even appeared to function so as to hinder innovation and perhaps impede the development of more adequate and comprehensive services for individuals with alcohol problems. For instance, the need to develop appropriate services for persons experiencing minor problems with alcohol has been largely neglected or ignored. (1978, p. 12)

If, then, alcohol abuse is to be viewed not as a disease but as a behavioral problem, there is a great need for modification in both treatment and research. Innovative and successful research treatment programs employing a combination of behavioral, cognitive, and social strategies

Most of these studies and treatment programs have been conceptualized as being behaviorally eclectic (Lazarus, 1976). As a result, these treatment strategies tend to lie "within the province of learning principles and, more especially, social learning, cognitive processes, and behavior principles for which there is experimental evidence" (Lazarus, 1976).

**Need for Isolation of Subtypes**

In his excellent review of the literature, William Miller notes that Common social usage does not imply the scientific usefulness of a term. . . . Although the word alcoholic is extensively used to describe individuals in our society, it does not necessarily follow that "alcoholism" describes a meaningful entity (Mulford & Miller, 1960). . . . The present general lack of consensus regarding the definition of alcoholism (Chafety, 1972) and a large body of recent research (e.g. Albrecht, 1973; Merry, 1966; Pattison, Headley, Glesert, & Gottschalk, 1968; Sobell & Sobell, 1972; Wanberg and Horn, 1970; Marlatt, Note 1) cast serious doubt upon the integrity of a unitary disease concept of alcohol abuse. In spite of the uncertain validity and reliability of the diagnosis of alcoholism, however, the labeling process continues. (1976, p. 649)

Employing the usual schema of nosological descriptions to compare alcohol abusers with normals on personality
measures has consistently yielded inconsistent results. Examples of this are readily apparent in the large body of research which attempts to define "alcoholic" personality features using that mainstay of diagnostic discrimination, the MMPI.

The MMPI literature regarding the alcoholic personality, though inconclusive, is remarkably consistent in comparison to the findings of studies using other instruments. . . . One could conclude from this research that the average alcoholic is a passive, overactive, inhibited, acting out, withdrawn, gregarious psychopath with a conscience, defending against poor defenses as a result of excessive guilt and insufficient mothering. (Miller, 1976, p. 657)

As the meaning and usefulness of the alcoholic label as a diagnostic entity has been eclipsed, some research has changed to the investigation of subtypes:

A considerable body of research has demonstrated the marked heterogeneity of personality functioning within alcoholic populations (1, 2, 5, 6, 9, 10, 11, 13, 14, 15, 21). Research goals have shifted from identifying the alcoholic personality toward a more appropriate and clinically relevant goal, namely defining meaningful personality subtypes within the alcoholic population. Such a typology would aid in formulating more appropriate, specific, and cost effective therapeutic interventions. (O'Leary, Donovan, Chaney, & O'Leary, p. 478)

MMPI research has produced more moderately reliable data concerning subtypes in certain alcoholic populations (O'Leary, et. al., 1980). These studies indicate four possible subtypes: Type I, Pd-D-Hy (psychopathic); Type II, D-Pt-Sc-Pd-Hs-Hy (psychoneurotic); Type III, Pd-D-Ma (chronic
alcoholism with mixed psychopathic features); and Type IV, \textit{Pd-Ma-Pt} (alcoholism with secondary drug addiction and paranoid features). O'Leary, et. al. note, however, that only "the first two subtypes have been replicated consistently; the latter two subtypes have been less stable across studies" (1980, p. 475).

Although of interest, these studies do not appear to have directly stimulated an investigation of applications toward treatment modification of prescriptive use. Indeed, because of the vagueness and overall difficulty with diagnostic classification in general, little real understanding of individual treatment needs is gained from employing what is essentially a non-descriptive, atheoretical, classification system. Saying that a person is a Type III, and therefore suffers from "chronic alcoholism with mixed psychopathic features" (O'Leary, et. al., 1980), offers the practitioner little help in understanding treatment needs.

It cannot be stressed too much that the nature and treatment of alcohol abuse has been a particularly elusive and clouded issue. If the time for simplistic, monolithic, and morally tinged conceptualization and treatment is passing then research must take a different tack. Some progress has been made, but an examination of the newer, behaviorally oriented research also indicates the need for more clinical-
ly useful subtypes. Personality theory oriented, as opposed to nosologically oriented, subtyping would appear to have more applicability to future work because it could lead to prediction of individual treatment needs. Thus far, however, personality theory has been a consistently neglected element in the behaviorally eclectic studies. For example, "individualized treatment" is suggested by the Sobells in their provocative study conducted at the Patton State Hospital (1978). Problems with the interpretation of results are addressed, but not clarified:

In designing a large-scale study, we were also aware that studies which incorporated a variety of treatment components are often fraught with problems of interpretation. For example, if a study is successful, how does one determine which components were effective, which components were unnecessary, and which components, if any, detracted from treatment effect? For that matter, do synergistic effects exist among certain treatment components? Taken in perspective, however, the history of treatment innovation studies has been dismal. Therefore, we were prepared to adopt a deductive approach to the development of a treatment paradigm. (1978, p. 79)

As a result, the thoughtful reader cannot begin to answer the questions of what worked, for whom it worked, or why.

This problem is not peculiar to the Sobells, whose excellent treatment and follow-up study is a milestone for the field. Rather, this lack of ability to systematically individualize treatment for alcohol abusers appears to reflect the lack of a theoretical framework with which to differentiate the individual needs of the people being
In practice, treatment delivery for alcoholism tends to be based on one of two common policies (NIAAA, 1974). In some treatment centers, a single modality is available (e.g., disulfiram, traditional insight therapy, etc.) and is uniformly implemented with each patient seeking help. When the patient "fits" the treatment, he is helped; if the fit between patient and therapy is not met, the effort is presumably in vain. Other treatment centers employ an opposite strategy: patients are exposed to what the NIAAA report characterizes as a "salad-like mixture" (p. 145). This latter approach to treatment seems to derive from the vague notion that "something" may work, in which case a certain subset of patients will be helped. In both cases of treatment philosophy, there is a considerable waste of resources, both human and monetary. The necessity arises, therefore, for the development of a research model whereby the appropriate treatment or combination of treatments can be systematically matched to the individual alcoholic patient. (Armor, Policy, & Stambul, 1976, p. 23)

Studies such as the Sobells' and those by other "new wave" alcoholologists are based upon a disavowal of the patient uniformity myth (Kiesler, 1966), the pursuit of which has yielded little in the way of useful information about alcohol abusers except to give us Keller's "Law": "alcoholics are different in so many ways it makes no difference" (Keller, 1972, p. 1147). The success of these studies has, however, discouraged the continuation of the search for correlates of the "alcoholic personality type" and the comparisons between alcoholics and "normals" which have yielded such ambiguous and confusing results.

It is because of the lack of a relevant and readily
available classification schema for alcohol abusers, especially for younger, less deteriorated individuals, that this study proposes to examine what are hoped to be more clinically relevant subtypes.

These subtypes are defined in terms of perceptual-expectancy style (PES) and are expected to reflect actual ability to function in various areas of life, as well as pointing up areas of dysfunction. As will be illustrated in a review of the relevant literature, by combining two already well-defined personality constructs, locus of control (LOC) (Rotter, 1966) and field dependence (Witkin, Lewis, Hertzman, Machover, Meissner, Bretnall, & Wapner, 1954), various studies indicate that a "higher order" (Tobacyk, Broughton, & Vaught, 1975) construct, perceptual-expectancy style emerges.

PES, based on congruence-incongruence of expectancy for control (internal or external LOC) and perceptual style (state independent or state dependent) has, in a variety of studies, proved to be related to self-acceptance, cognitive efficiency, efficiency of response to autokinetik stimuli, humor production, interpersonal style, and inferentially, to the degree to which an individual is or is not in harmony in terms of expectations and assets. These studies, most of which employed college students as subjects, will be examined in detail later in the chapter.

The major goal of this study is to explore the
supposition that the subgroups formed by applying the PES construct to a population of hospitalized alcoholics will reflect the adaptive social functioning or adjustment of the group members.

It is expected that members of the congruent group will view themselves and be viewed by others as being better adjusted than those whose performance on the I-E and the GEFT place them in the incongruent group.

It is believed that the PES construct, based as it is on a perceptual-cognitive style, will have meaning to clinicians of various orientations and levels of training. Further, because of the clarity and operationally defined character of the construct, it is hoped that PES will act as a catalyst in terms of the apparently neglected area of patient-to-treatment match (Armor, et. al., 1976). This is a major consideration when one accepts the thesis that:

It is patently true that the most effective therapeutic approach for a given patient differs both from patient to patient and within a given patient at different points in his treatment career. (Goldstein & Stein, 1976, p. 6)

Alcohol abusers, as noted above, appear to be a group of people both difficult to describe and difficult to treat, and attempts to describe and treat them as a monolithic group have been only moderately successful. This study is conducted in the spirit of hopeful inquiry, in that it is an attempt to conceptualize the problem drinker along a personality continuum, and then to test the hypothesis that
this continuum is reflected in terms of overall adjustment.

**Adjustment as a Dependent Measure**

How meaningful the PES construct will be, when applied to alcohol abusers, is measured by how well the construct relates to adjustment. If there is found to be a relationship between adjustment and the personality types defined by PES, then the more "atheoretical" clinical research, such as the Sobells' Patton State Hospital Studies (1977) can be placed in a theoretical, rather than wholly "pragmatic" context.

It is the dimension of adjustment, or "life health," that Pattison, et. al. (1977) recommend as both the scale by which treatment outcome should be evaluated for treatment programs, and as the focus of the individual's treatment needs from the outset.

There is an urgent need to develop multiple treatment approaches. . . . This requires the implementation of initial differential diagnosis of the alcohol-dependent client to determine the areas and degree of disability and the individual's capacity for change in these areas. (Pattison, 1977, et. al., p. 212)

There are fairly strong indications in the treatment outcome literature, as reviewed in the "Rand Report" (Armor, Policy, & Stambul, 1976) that people with different levels of social competence or social class respond better to different types or mixes of treatment.

It is hypothesized that if the PES variable, with its
interesting and well-defined theoretical properties, can be demonstrated to relate to social competencies vis-à-vis adjustment to the social matrix, that it will be possible to understand how to match treatment modality to individuals on the basis of personality.

Thus, if PES is shown to relate to level of adjustment, it may provide a theoretical framework which could help the treatment community make better informed and more effective clinical decisions.

The importance of adjustment as a major pre- and post-treatment variable, as opposed to the old model's sober/not sober (binary) system, is only recently being recognized and explored. As Pattison, et. al. (1977) point out, a person may be abstinent but may not be functioning very well in his or her life. Conversely, a person may be drinking responsibly (in a controlled fashion) or even occasionally bingeing (attenuated drinking), but still have made great strides from pretreatment levels in terms of adjustment.

Adjustment, as a global concept, is not a reflection of alcohol consumption or nonconsumption alone.

In a recent research project, patients from an A.A. oriented inpatient treatment unit (31 males, 7 females, mean age 45.5 years) were evaluated during treatment as to previous drinking patterns, using the Alcohol Use Inventory (AUI). The patients were evaluated again one year after
discharge.

The follow-up evaluation consisted of the administration of the Adaptive Skills Battery (ASB); the Treatment Outcome Assessment (TOA), which is a structured interview modeled after Marlatt's Drinking Profile; and information supplied by significant others on a five-point rating of drinking severity (for 12 of the 38 subjects). The TOA and significant other ratings were found to be related ($r = .82$). ASB and TOA scores were also found to be significantly related ($r = -.52$, 38 df, $p < .001$). A comparison of the original scores on the AUI with ASB scores at the one-year follow-up indicates "no relationship between severity of pretreatment drinking problems and adaptive skills a year later" (Jones & Lanyon, 1981, p. 524).

The above study does not address the issue of pretreatment adjustment; in a population of this age the process of "bottoming out," that is, of losing social and vocational roles could be expected to be well advanced.

In the study being proposed here, using a much younger population (mean age 25.6), all of whom are employed, the bottoming-out process should be less in evidence, and social and vocational roles more intact.

The issues of adjustment, of how well a person is able to function, despite the presence of severe maladaptive behaviors, is an important one. It is obvious that often people who drink abusively function very poorly. It is less
obvious, but equally true, that some people who drink abusively function comparatively well in daily life.

If level of adjustment and/or areas of difficulty with daily life can be shown to relate to the PES construct, then these differences in adaptation can be conceptualized in a theoretically meaningful manner which may be employed in treatment design.

The rest of this chapter will be concerned with a survey of the LOC and SD-SI constructs separately, and then together as the single construct PES. It will be argued that, by combining LOC and SD-SI to form a congruence-incongruence dichotomy, the resulting subtypes (internal-state independent, internal-state dependent, external-state independent, and external-state dependent), will reflect "life health," (Pattison, et. al., 1977) i.e., the level of adjustment to life.

The Expectancy Variable: Locus of Control (LOC)

LOC is an expectancy variable that relates to how the individual perceives the degree of his or her control over external reinforcement. In addition, this perception of degree of control, or noncontrol, also appears to affect which behaviors or cognitions are reinforced.

Since alcohol abuse appears to relate to issues of control, either of self through becoming intoxicated, of
others through drunken comportment, or as a way of altering expectancy—"If I'm drunk, I (or you) will expect less of me"—much research has been generated over the year that relates to the control orientation of "alcoholics."

Before considering how LOC has been conceptualized in terms of alcohol abuse in particular, an explanation of the concept and its evolution is in order.

The concept of LOC grew out of the social learning model in the early 1960s. One aspect of social learning theory is "an attempt to account for human behavior in relatively complex social situations" (Rotter, Chance, & Phares, 1972).

Social learning theory as a model of personality, (Rotter, 1954) attempts to combine the behavioral theories of Hull and Thorndyke with the cognitive or field theory of Lewin (Rotter, et. al., 1972). It is an attempt to place stimulus-response theory within a rich enough context to create a more wholistic personality theory. Social learning theory therefore places man within his phenomenological-perceptual field as well as within a behavioral matrix, bringing together the person and his or her meaningful environment (Rotter, et. al., 1972).

Through acknowledging the diversity and variety of the meaning of events, social learning theory attempts to describe not only the relationship between reinforcement history and behavior, but also the individual value that a
Given environmental event may have for a specific person.

In this formulation the importance of expectancies is not secondary to values. It is this equal emphasis upon value, expectancy of reinforcement, and situational specificity that makes Rotter's theory unique among theories which, more commonly, accentuate only the value or motive end of predictive formulas. (Lefcourt, 1976, p. 27)

The concept of LOC is one of generalized expectancy, and is the major one of the four variables considered by the social learning model, the other three being behavior, reinforcement, and psychological situation (Rotter, 1975).

The expectancy of control appears to have a tremendous effect on the perception, and thus the reinforcement value of environmental events.

An event regarded by some persons as a reward or reinforcement may be differently perceived and reacted to by others [and] . . . . depends upon whether or not the person received a causal relationship between his own behavior and the reward. (Rotter, 1966)

Thus, the direction of expectancy of control, from within (internal) or without (external), affects which behaviors and which expectancies are being reinforced. In this respect, expectancy may also be described as having a "gatekeeper" or mediation function, in that different individuals may then, if the expectancy of control varies enough, perceive a given event as being under or not under their control. This would, in turn, cause these individuals to respond differently to that event. Rotter notes this effect of expectancy and its pervasive influence:
A generalized attitude, belief, or expectancy regarding the nature of the causal relationship between one's own behavior and its consequences might affect a variety of behavioral choices in a broad band of life situations. (1966, p. 2)

The determination of an individual's locus of control—internal (I) or external (E)—using Rotter's (1966) I-E scale, cannot predict behavior per se, nor can it predict or indicate psychopathology, although various investigators have sought to employ it in one or both of these functions (Joe, 1971; Rotter, 1975).

The Perceptual Factor:
State Dependence—State Independence (SD-SI)

Like LOC, perceptual style was at one time used by researchers attempting to define the "alcoholic personality." Perceptual style was first described by Asch and Witkin (1948a, 1948b) and Witkin and Asch (1948a, 1948b).

Originally Witkin and Asch were working to understand "the basis of perception of the upright" (Witkin and Goode-nough, 1981) by using two types of stimuli simultaneously: the organization of the visual field and the direction of gravity through internal perception of vestibular, tactile, and kinesthetic stimuli. Several measures of investigating the perception of the upright were developed, the Body Adjustment Test (BAT), the Rod-and-Frame Test (RFT), and the Rotating Room Test (RRT). In each of these tests an interaction between visual and gravitational cues is present.
The next major conceptual step was the elimination of the gravitational cues by using a purely visual test of disembedding ability, the Embedded Figures Test (EFT). This led to a formulation of an active-passive dimension in terms of how the field is experienced:

The tendency to leave the stimulus material "as is" or to act upon it (break up the organized pattern so as to expose the embedded figure), as observed in the EFT, may be expected to show itself in congruent fashion when people have to deal with a field that lacks clear inherent organization. The expectation that field-independent people would impose structure on such a field, and therefore experience it as organized whereas field-dependent people would not, was supported in many studies. (Witkin & Goodenough, 1981, p. 17)

The style of "acting upon" or leaving "as is," that is, disembedding or restructuring ability vs. nondisembedding as a style of cognition, came to be viewed by Witkin and his colleagues as an indication of ego development. Thus, the development of a more linear, articulated, and organized perceptual style was seen to reflect a more organized, better defended ego which was increasingly more differentiated (had stronger boundaries), both internally and externally.

To characterize a system as more differentiated implies, first of all, segregation of self from nonself, or self-nonself polarity. Boundaries have been formed between an inner core, experienced as the self, and nonself. Boundaries are not as definite in a less differentiated system, where there is greater connectedness with others. (Witkins & Goodenough, 1981, p. 19)

Originally, the level of differentiation was also hypothesized
to be related directly to psychopathology.

The differential hypothesis proposes an association among the characteristics of greater or more limited differentiation, identified in the comparison of early and later functioning in each of several psychological areas; degree of articulation of experience of the world; degree of articulation of experience of the self, reflected particularly in nature of the body concept and extent of development of a sense of separate identity; and extent of development of specialized, structured controls and defenses. Implicit in this hypothesis is the view that greater inner differentiation is associated with greater articulation of experience of the world. (Witkin, Dyk, Patterson, Goodenough, & Karp, 1962, p. 16)

A variety of clinical research appeared to support the idea that (in an adult) a global style equated with pathology and a linear style with adjustment. Psychopathology was expected to diminish as degree of differentiation increased. (Witkin, Lewis, Hertzman, Machover, Meissner, & Wapner, 1954).

This viewpoint was later modified, and by 1965 Witkin was indicating that degree of differentiation was not related to the presence or absence of psychopathology or level of adjustment per se. At this same time, Witkin still believed that "alcoholics have been found to present a consistent picture of marked field dependence (Witkin, 1965).

Currently, Witkin has modified his interpretation of the meaning of the SD-SI continuum to be based solely upon the "dimension of individual differences in the extent of autonomy of external referents" (Witkin & Goodenough, 1981,
Thus, the hypothesis that SD-SI relates directly to ego development and differentiation has been abandoned in favor of a style or function dimension.

In several ways this dimension may be seen to conform with the concept of style (manner of moving toward a goal) rather than the concept of ability (competence in goal attainment). (Witkin & Goodenough, 1981, p. 58)

In its newer form, the concept of SD-SI has become one of style, of being in the world, of character.

This suggests that the field-dependence-independence dimension is bipolar with regard to level. . . it does not have clear "high" and "low" ends. Its bipolarity makes the dimension value-neutral. (Witkin & Goodenough, 1981, p. 59)

The SD-SI dimension enables us to describe an individual's style of cognitively experiencing self in the world and of interacting with the environment. In addition, it must be remembered that social interaction, the perception of and value ascribed to social cues, is probably very much a reflection of cognitive style. Another way to look at cognitive style and social interaction is to remember that the individual who is relatively SI requires less external information to order experience than does the relatively SD individual, and therefore needs less social feedback.

As Witkin points out, each style potentially has a certain cost or advantage socially.

Judged by social-desirability criteria, the field-dependence-independence dimension does not appear to have any value bias either. Thus, field-independent people show the
usually valued characteristic of developed cognitive restructuring skills, but they also show such commonly less valued attributes as "rude," "inconsiderate," "manipulate people as a means of achieving ends," "cold." Field-dependent people, in contrast, while having less developed cognitive restructuring skills, show such desirable characteristics as "tactful," "warm," "accomodating," "accepting of others." . . . Real development occurs along both routes; there is no implication of arrest of development. (Witkin & Goodenough, 1981, pp. 59-60)

At this time, the SD-SI continuum is thought to represent a value-neutral bipolar process variable which can be described as a cognitive style. This style essentially relates to the ability to cognitively restructure, to overcome embeddedness.

Witkin and Goodenough indicate that, while individual autonomy is associated with the cognitive restructuring style (SI), greater interpersonal competencies are associated with the "as is" style (SD). Further, they indicate their belief in a hierarchy in which "autonomous functioning, in both perception of the upright and in interpersonal behavior" are at the top tier as a "superordinate construct," with "cognitive restructuring skills and interpersonal competencies as subsidiary constructs, at a level below the apex" (1981).

According to Witkin and Goodenough (1981), BAT, RFT, and RRT would thus be direct measures of superordinate functions. Tests that relate purely to the overcoming of embeddedness, which do not involve vestibular and kinesthetic
cues, such as the EFT, are then secondary to measures of the "apex" effect.

The secondary level functions are conceived of as manifestations of the primary or "apex" effect: "At the next lower level are to be found specific cognitive-restructuring and interpersonal competence variables" (Witkin & Goodenough, 1981, p. 49).

It appears that this emphasis on the use of nonvisual cues reflects an interest of the authors in the possibility of neurological/physiological correlates of perceptual style (e.g., Levy, 1969, 1974, cited in Witkin & Goodenough, 1981; Witkin, Goodenough, & Oltman, 1979) in which the relationship of SD-SI to hemispheric dominance is studied. At present this interest in direct neurological relationships to various aspects of cognitive style is at best rather vague; such concerns are, in any case, well beyond the bounds of this study.

In this study, it is the so-called "secondary level," the "specific cognitive-restructuring and interpersonal-competence variables" (Witkin & Goodenough, 1981, p. 49) that are of interest. The use of a purely visual instrument, a version of the EFT, is therefore employed, since such instruments are well proven to relate to these variables: To represent the cognitive restructuring domain, EFT should surely be included. . . its relation to tests of other constructs of our model is well documented. (Witkin & Goodenough, 1981, p. 60, footnote 7).
It is the goal of this study to use the SD-SI cognitive-style dichotomy, along with the LOC expectancy-style construct to describe subtypes within an alcohol abusing population. Previous research on SD-SI in alcohol abusing populations will now be reviewed.

Alcohol and SD-SI

It has been suggested by various authors that "alcoholic" patients are markedly more field dependent than other groups of psychiatric patients or normal subjects (Bailey, Hutt, & Kristofferson, 1961; Witkin, 1959). In addition, SD-SI has been perceived as a feature of adult personality that is stable over time and not susceptible to therapeutic intervention (Witkin, 1962).

These results, particularly with regard to alcohol abusers, have been challenged by Chess, Neuringer, and Goldstein (1971) and Reilley and Sugerman (1967), who found a wide range of scores on measures of SD-SI in alcohol abusing populations. Change in the perceptual orientation of alcohol abusers in terms of SD-SI (as well as LOC) in the course of treatment has also been reported (Chess, Neuringer, & Goldstein, 1971; O'Leary, Donovan, & Kasner, 1975). In the case of the O'Leary, et. al. study, a shift in the type and level of defense mechanisms employed was also observed as a response to treatment. Further differences in response to therapeutic intervention, apparently related
to state dependence or independence in alcohol abusing populations, have also been noted by Kissin, Rosenblatt, and Machover (1968).

Ogborne and Glaser, in a review article, support the view that perceptual orientation varies within populations diagnosed as alcoholic:

Problem drinkers have been among the groups most extensively studied with such measures of cognitive style [RFT and EFT]. Over time there has been an evolution of the conclusions drawn from these studies. Early investigations (4, 22, 35, 53, 66) were interpreted as showing that problem drinkers were strongly (and very likely irrevocably) field dependent. It has become clear, however, that problem drinkers vary considerably, and field-independent samples of problem drinkers have been identified (9, 28), while evidence has also developed that field dependence is not necessarily a fixed attribute but varies over time and may be decreased by abstinence, therapy, or other means (23, 32, 44). (1981, p. 665)

The same authors also note that A.A. affiliation and state dependency have been shown to be related in several studies, although there are also contradictory findings (1981).

As is the case with LOC research, there is currently, in the area of state dependence, a movement away from the study of alcohol abusing populations in terms of seeking intragroup variation. Again, this parallels the abandonment of a monolithic unitary disease concept of alcoholism, and the concomitant trend toward delineating and conceptualizing various subtypes within the alcohol abusing population so as to effectively evaluate treatment strategies and apply those which are appropriate and scientifically based.
Combining LOC with SD-SI to Produce a Higher-Order Construct: Congruence-Incongruence or PES

Despite the apparent similarity of the expectancy of control over environmental forces described by Rotter's LOC concept and the perceptual variable of SD-SI, attempts to find a statistically significant correlational relationship between the two concepts have failed. Rotter, in his original monograph (1966) makes reference to an unpublished study in which he attempted to discover a relationship between his I-E scale and the Gottschaldt Figures Test, which Witkin adapted to create the Embedded Figures Test (1950a). No significant correlation was found, and the literature continues to show a lack of significant correlation between the I-E scale and SD-SI as measured by a variety of instruments.

No correlation has been found between locus of control and measures of field dependence for college subjects (Feather, 1967; Lefcourt & Telegdi, 1971; McIntire & Dryer, 1973) or alcoholics (Chess, et. al., 1971; O'Leary, et. al., 1974a, Query, 1972). Chess, et. al. (1974) administered tests of field dependence (Witkin's Rod-and-Frame Test) and locus of control (Rotter's I-E) four times during seven weeks of treatment. The correlation between the two tests at any given administration was nonsignificant. (Rohsenow & O'Leary, 1979, p. 217)

The lack of relationship between Rotter's I-E and SD-SI is also confirmed by other sources: Bloomberg and Soneson (1976); Chance and Goldstein (1967); Deever (1967);
Despite the lack of psychometric relatedness between SD-SI and LOC, their apparent theoretical similarity attracts the interest of researchers. Witkin and Goodenough address this to some extent in their most recent survey work:

Whereas field dependent-independence is a process variable, representing degree of autonomous functioning in assimilating information from self and field, locus of control is an atheoretical or belief variable, representing expectancies of internal or external control of reinforcement, of greater or less fatalism as an outlook toward life. (Witkin & Goodenough, 1981, p. 48 footnote)

Even so, similarity in direction of prediction by the two constructs continues to be noted:

In several studies, locus of control and field dependence have been found to predict similar criteria . . . ascribed assertiveness on Thematic Apperception Test characters (Bax, 1966), reliance on one's own reinforcement history as opposed to others' norms (Deever, 1967), and the response to autonomy in reaction time tasks (Lefcourt & Siegal, 1970). (Lefcourt & Telegdi, 1971, p. 53)

Deever's study is of special interest because of his interpretation and speculation upon his results, and will be reviewed in some detail. Deever, using a population of 100 college women, hypothesized that:

Given an experimental situation wherein there is a choice between reliance upon a personal performance record or a reported record of performance of others when setting future personal expectancy of success on a task, field inde-
pendent and internally controlled persons will tend more than field dependent and externally controlled persons to use personal success history rather than reports of the performance of others in setting future expectancies of success. Persons described as field independent and those described as internally controlled will find reports of other performances by other persons less potent as an anchoring influence when setting personal expectancies. (1967, p. 24)

Deever divided his I-E and EFT groups on the basis of median splits and assigned "ties" randomly. Each instrument, separately, significantly predicted subject performance in evaluating "personal performance and setting future goals" (1967). No information on combined interaction of I-E and EFT scores on performance is provided. Correlation between EFT and I-E scores was $r = .017$, which Deever describes as "strikingly not significant" (1967, p. 34).

In discussing the lack of significant relationship between these two constructs despite the "theoretical congruities" (1967) between them, Deever suggests:

One final possible explanation would be to view EFT and I-E scales as subtests or as parts of a "battery" aimed at tapping a quite general dimension as yet undefined, but probably related to social independence. . . . Both contribute to the general dimension of social independence (thus allowing for the significant differences in behavior found in the present study) but could summate as relatively non-overlapping subtest contributions. (1967, p. 37)

Unfortunately, Deever did not pool the LOC and state dependence data to investigate this hypothesis (Deever, 1967; Pottinger, 1971). Other studies that use both
constructs, but do not examine pooled interaction effects are: Dengerink, O'Leary, and Kasner (1975); Lefcourt and Siegal (1970); and Willoughby (1967).

Lefcourt and Telegdi do follow up on the similarity of prediction between the two constructs in their study of LOC and SD-SI interaction as a predictor of cognitive functioning (1971).

Lefcourt and Telegdi used Rotter's I-E scale to measure LOC and a portable RFT to measure SD-SI in a population of 90 male undergraduates. Median splits of I-E and RFT scores were used to create four groups of unequal size: internal-state independent, n = 21; internal-state dependent, n = 24; external-state dependent, n = 20; and external-state independent, n = 25. Each group was then given various tests of cognitive activity: Mednick's Remote Associations Test, Barron's Human Movement Threshold Inkblot Test, and Rotter's Incomplete Sentence Blank.

Lefcourt and Telegdi expected the two internal LOC groups to do better than the two external groups. Instead, performance on the cognitive tasks related to the congruence between LOC and SD-SI. On all measures, the internal-state independent subjects performed the best (which Lefcourt and Telegdi predicted) but, contrary to expectations they were closely followed by the external-state dependent subjects. The remaining two groups, those incongruent in terms of LOC and SD-SI, performed significantly poorer than the congruent
groups.

In discussing these unexpected results, Lefcourt and Telegdi suggest that performance on the cognitive tasks appears to express the degree of congruence between the subjects' expectancies and their perceptual abilities. Further, Lefcourt and Telegdi suggest that congruent persons, whether in the direction of internality or externality, have come to better terms with themselves, their abilities, and their expectations, and thus have made the most of what they have:

Perhaps congruent Ss are those who have come to better terms with themselves, having developed self estimations and judgments that are more easily manageable in view of the kinds of perceptual skills at their disposal. Since such skills as those involved in being field independent are stable and enduring characteristics, the perceived locus of control may act as a measure of the degree to which one comes to terms with his own abilities, and it is perhaps this "coming to terms" with oneself as a field-dependent or field-independent person which may produce the fluidity in thought processes noted for congruent Ss in this study. (1971, p. 56)

In a study investigating "hypothesis formation in a task that contains an increasing number of dissonant elements which alter the apparent meaning of the experiment," a double entendre word association task, Lefcourt, Gronnerud, and McDonald (1973) claimed that:

Overall, the present investigation provides support for a previously hypothesized but weakly tested assumption about cognitive processes and locus of control...
strengthens the nomological network that includes cognitive activity, resistance to persuasion, and the maintenance of autonomy associated with internal locus of control. The usefulness of two theoretically congruent measures such as I-E and field dependence seems self-evident. Without the field dependence measure, many of the results obtained would not have been observed through the behavioral correlates of the incongruent combinations (internal-field dependent and external-field independent) are as yet undefined. (1973, p. 171)

Lefcourt, et. al. used a population of male undergraduates (N = 65) and divided them according to LOC orientation on the basis of Rotter's I-E scale, and SD-SI using a portable RFT. The authors chose subjects with extreme scores, 0 - 8 internals, and 10 and above externals on the I-E; 28 and above state dependent, and 0 -26 state independent on the RFT. A variety of data was gathered, some related to LOC and performance, some to state dependence and performance, and some related to both. Only data related to both is reported here.

Ss were . . . compared on response content, this score indicating the first double entendre word to elicit a non-ambiguous sexual response. . . . A strong interaction term (F = 8.30, p < 0.001) showed that internal-field dependent Ss were latest (M = 16.33) and internal-field independent Ss were the earliest (M = 3.08) in giving sexual responses to the double entendres. External-field dependent Ss also gave sex responses late (M = 10.42). Nevertheless, internal-field dependent Ss were significantly later even than that group (F = 5.91, p < 0.05). (1973, p. 167).

Unfortunately, the response times of the external-field independent group are not reported.
The investigators also look at "puzzlement" response, and conclude that the "puzzlement [based on visible reactions and facial expressions] measure varied among internals as a function of field dependency" (1973). Data on externals is not reported. Internal-field independent subjects appeared to experience the least puzzlement, and internal-field dependent subjects the most. Lefcourt, et. al. reason that this results from how perceptual orientation interacts with expectancy:

It may be more characteristic of the internal-field independent person to rely on inner promptings since he may enjoy greater confidence in his own cognitive abilities. Internal-field dependent persons, on the other hand, may suffer from a lack of self-trust since their abilities may not support their self conception as much as they would like. . . . Internals, then, may be described as being more cognitively alert than externals, and field-independent internals may be said to be more at ease in testing their hypotheses than their more field dependent counterparts. (Lefcourt, et. al., 1973, p. 170)

Of special interest in this study was the finding that, for field independents, body weight was significantly related to perceptual field orientation ($F = 6.62, p < 0.025$), with internal-field independents being "markedly thin" and external-field independents being "heavy" (1973). Alcohol abuse and obesity are of course similar, in that both involve overconsumption.

Although focused on internals, and thus omitting data on external-state independents and external-state dependents,
the results of this study tend to support the idea ex-
pressed by Lefcourt and Telegdi (1971) that the congruence-
incongruence dimension between LOC and SD-SI is an important
one.

In a study on humor response and production, Lefcourt,
Antrobus, and Hogg (1974) report mixed support for their
hypothesis that internals

would prove to be both more responsive and
productive with regard to humor as they en-
gage in role playing emphasizing success
or failure. . . . If failures are indeed
more difficult to assimilate, the difference
favoring internals should be even greater
with failure than success role enactments.
(1974, p. 634)

The authors, however, note that Lefcourt, Sordoni,
and Sordoni (1974) found field dependence to be unrelated
to humor response frequency. They cite Telegdi (1972) as
having indicated, in a study of role playing ability, that

the adequate portrayal of a happy person was
predicted by an interaction between locus of
control and differentiation. Internal-field
independent subjects proved most able to role
play a happy student, euphoric with social
success. (Lefcourt, et. al., 1974, p. 635)

Lefcourt, et. al. concluded that neither the LOC nor
SD-SI variables appeared to significantly influence the
response to humorous stimuli. Humor productions for the
external groups, both state dependent and state independent,
were not significantly different from each other and were
below that of the internal subjects, as predicted. For the
internals, there were significant differences in humor
production in different conditions.

Both variables interacted in predicting humor production. . . . Internal-field independent subjects proved to be the primary jesters with serious failure. . . . this same group exceeded all others in jesting. . . . Success roles seemed to have affected the internal-field dependent individuals in the opposite fashion . . . . increased joke making to serious comments with success roles. Conceivably, internal-field dependent individuals find it difficult to believe in their ability to attain success. (Lefcourt, et. al., 1974, p. 647)

The authors concluded that they had confirmed earlier findings that internals produced more joking behavior than externals and that state dependency per se is unrelated to joke production. A strong interaction effect between internal LOC and SD-SI was noted. Thus, based upon perceptual orientation, two types of internals were isolated. The internal-state dependent (incongruent) subjects expected personal control, but apparently did not expect to gain success.

It should be noted that a modified scoring for I-E was used, in which only items relating to personal control were counted. This system, in which the I-E scale is considered to have two factors, only one of which relates to personal control (Factor I), is reviewed in Chapter III.

Lefcourt, Antrobus, and Hogg note that by using only Factor I the magnitude of their results was increased, but that unmodified I-E results showed the same trends (1974). Their study, therefore, supports the idea that LOC and SD-SI,
while independent, when used together provided a higher level of discrimination than either used alone.

Roodin, Broughton, and Vaught (1974) failed to find a relationship between birth order or family size and either LOC or SD-SI. Regrettably, LOC and SD-SI data was not pooled so interaction effects, if any, were not discovered.

In fascinating work aimed directly at studying the interaction of LOC and SD-SI as a personality variable, "Effects of congruence-incongruence between locus of control and field dependence on personality functioning" (1975), Tobacyk, Broughton, and Vaught's findings appear to directly support Lefcourt and Telegdi's (1971) findings.

Using a population of male and female undergraduates (59 males and 73 females), Rotter's I-E scale and the standard RFT were administered. Five males and five females "with extreme scores were selected for each of the four groups" (1975, p. 83).

After assignment to groups on the basis of I-E and RFT scores, the subjects engaged in a Q sort and an autokinetic task. The Q-sort task consisted of 60 cards selected at random from an 80-card deck "developed by Butler and Haigh (1951) and thought to measure the discrepancy between actual self-concept and the ideal self-concept" (1975). An electronically scored autokinetic task, in which the apparent amount of movement of a spot of light in a darkened room is recorded in terms of time to response and degree of
movement, followed the Q-sort procedure.

Lefcourt and Telegdi (1971) had hypothesized that congruence indicated a "coming to terms" with oneself. Tobacyk, et. al. therefore attempt to:

evaluate this speculation empirically. It asks the questions, are the incongruent groups different in their personality and adjustment (how they come to "terms with themselves") and can these differences be shown to exist in other, more ambiguous, areas of behavior? (1975, p. 82)

Tobacyk, et. al. (1975) found that the congruent groups' correlations on the Q sorts, between real and ideal, was .81 as opposed to the incongruent groups' .67, a significant difference, with $t(38) = 2.01, p < .05$. Group means and correlations are as follows:

Field-independent internals (.85), field-dependent externals (.76), field-dependent internals (.76), and field-independent externals (.55). A significant difference was found between the first group and the last one, $t(18) = 2.96, p < .01$. The mean latencies for each group were: field-independent internals, 10.26; field-dependent externals, 9.47; field-dependent internals, 5.83; and field-independent externals, 4.96. Only the field-independent internal mean was significantly different from the field-independent external mean, $t(18) = 2.28, p < .05$. (1975, p. 84)

Similar results are reported for autokinetic duration scores with the congruent group mean of 12.27 seconds being significantly less than the incongruent group mean of 18.31, thus indicating greater suggestibility. In addition, the field independent-internal group mean was significantly shorter in duration than either the field independent-external
They conclude that congruent subjects were less influenced by the autokinetic effect.

This finding is of special interest since susceptibility to autokinesis has been found to relate positively to successful affiliation with A.A. (Voth, 1965).

Tobacyk, et al. conclude that they have confirmed both Deever's (1967) and Lefcourt and Telegdi's (1971) contention that LOC and SD-SI represent "empirically unrelated, but theoretically relevant variables" (1971) and that

the combination of these two particular variables resulting in groups that are either congruent or incongruent might be combined into a higher order construct such as a "perceptual-expectancy style." (1975, p. 85)

This higher order construct, perceptual-expectancy style (PES), based on congruence between cognitive efficiency and self-ideal, may thus be seen as bridging the dimensions of cognitive-perceptual efficiency and psychological adjustment. As Carl Rogers notes:

This proposition may be put several different ways. We may say freedom from inner tension, or psychological adjustment, exists when the concept of self is at least roughly congruent with all the experiences of the organism. . . . the feeling of reduction of inner tension is something that clients experience as they make progress in "being the real me." (1951, p. 513)

The dimension of PES appears to measure not only self-acceptance, but also efficiency of functioning. If this is so, then it could add needed depth to the totally
behavioral assessment which characterizes programs like the Sobells' (1978), and augment and compliment a purely behavioral analysis of a client.

This increase in depth which the dimension of personality adds to the assessment picture could well have far-reaching implications for treatment, especially for the younger, less deteriorated alcohol abuser who has been largely neglected by medical model treatments.

Bloomberg and Sonenson (1976) investigated the relationship between LOC and SD-SI with regard to performance on Kohlberg's Moral Judgment Interview (KMJI). They used Rotter's I-E scale as the LOC measure, and a portable RFT to measure SD-SI in a population of 36 female undergraduates. Subjects were assigned group membership on the basis of median splits. A two-way analysis of variance was performed. Results indicate that the field-independent internals scored significantly higher on the KMJI than the other three groups, which were not significantly different from each other. The authors speculate whether this indicates higher moral development for the field-independent internals, or merely better cognitive skill. Combined data concerning the congruence-incongruence dimension was not reported, but this study again supports the idea that a person who is internal with regard to LOC performs differently if she is either, additionally, state independent or state dependent.
In an ambitious study, Gormanous (1976) attempted to relate the congruence-incongruence construct to performance on what he defined as measures of adjustment: the State-Trait Anxiety Inventory (STAI), and the Eysenck Personality Questionnaire (EPQ).

His population consisted of 94 undergraduates: 46 males and 48 females. Rotter's I-E was employed to measure LOC and the Group Embedded Figures Test (GEFT) used to measure perceptual orientation. Groups were formed on the basis of median splits, but this was done separately for male and female subjects.

Gormanous' results did not support his contention that the congruence-incongruence dimension would be reflected by level of adjustment as indicated by STAI and EPQ performance. Instead,

locus of control and the cognitive state tended to cancel out each other. This cancelling out process is indicated by internals having lower anxiety and neuroticism scores than externals and by field independents having lower anxiety and neuroticism scores than field dependents. (1976, p. 55)

Gormanous suggests that this may relate to a similarity between introversion—SI and extroversion—SD, or that group formation should have been on the basis of extreme I-E and GEFT scores, as was done by Tobacyk, et al. (1975).

An alternate explanation might be that the vigorous results of Lefcourt, Gronnerud, and McDonald (1973), Lefcourt
and Telegdi (1971), and Tobacyk, et al. (1975), were all obtained by more direct measures of behavior, e.g., cognitive performance or an autokinetic task. Gormanous uses inferential measures which are supposed to measure the strength or presence of certain traits. The results of this study will be considered, along with similar results in a clinical population, later in the chapter.

In a study aimed at examining interpersonal correlates of PES, Ehrlich, Broughton, and Vaught (1977) attempted to extend the findings of Lefcourt and Telegdi (1971) and Tobacyk, et al. (1975). Their study focused on two areas:

1. those involving interpersonal distance and
2. self-reports of interpersonal behaviors.

The following hypotheses were investigated:
- congruent subjects would use less interpersonal distance in four different interaction settings and they would reflect interpersonal needs to a lesser degree in interpersonal settings.

(Ehrlich, et al. 1977, p. 66)

Ehrlich, et al. selected 60 undergraduate students from a pool of 138 on the basis of extreme scores on Rotter's I-E scale and performance on the portable RFT. The selected subjects were then given Duke and Norwicki's (1972) Comfortable Interpersonal Distance Scale (CID) and Schutz's (1966) FIRO-B self-report questionnaire to assess interpersonal needs.

Performance on the CID was significantly different for congruent and incongruent groups for all four conditions (p < .05) with the congruent groups consistently employing
less interpersonal distance. The order of the mean scores for each group was maintained in the four CID conditions: external-field dependent, internal-field independent, external-field independent, internal-field dependent. (Note that the external-field dependents and external-field independents are listed first in their respective groups, reversing the usual order.)

Results on the FIRO-B performance was somewhat less clear cut; it had been expected that the congruent subjects would rate themselves as having fewer interpersonal needs than the incongruent subjects. The trend was in the expected direction, however, \( p < 0.10 \). Ehrlich, et. al. noted that their subjects "did not respond to the questionnaire in the manner predicted by Schutz," in terms of intrascale consistency, and thus the results may be an artifact of response bias.

Ehrlich, et. al. believe that their findings "do support the contention that the construct of congruence-incongruence is indeed a useful one for the prediction of interpersonal distancing behavior" (1977). Further, they are enthusiastic about the congruence-incongruence construct:

The successful application of "empirically unrelated but theoretically relevant" variables (Lefcourt & Telegdi, 1971, p. 65) to the interpersonal sphere of functioning demonstrates the utility of the congruence-incongruence construct for predicting "independence-related behaviors" (1971, p. 56). (Ehrlich, et. al., 1977, p. 70)
In so saying, they also appear, apparently unwittingly, to be endorsing Deever's idea about congruence-incongruence:

One final possible explanation would be to view the EFT [Embedded Figures Test] and I-E scale as subtests ... tapping a quite general dimension ... probably related to social independence. (1967, p. 37)

The results of the studies cited above, which indicate a relationship between PES and the ability to use cognitive resources efficiently (Lefcourt & Telegdi, 1971), resistance to persuasion and maintenance of autonomy (Lefcourt, et. al., 1973), humor production (Lefcourt, et. al., 1974), self-acceptance (Tobacyk, et. al., 1975), and interpersonal distancing behavior (Ehrlich, et. al., 1977), are both striking and provocative, although not completely parallel to data which reflect the types of situations and internal states which lead to relapse in treated and abstinent problem drinkers.

Marlatt found that two interpersonal and two intrapersonal categories accounted for approximately 80% of the relapses ... a) the individual's becoming frustrated and angry without being able to express his feelings (29% of relapses) and b) an inability to resist social pressure exerted by others for him to drink (23%) ... a) negative emotional states such as depression, anxiety, and boredom (10%) and b) intrapersonal tensions analogous to craving (21%). Chaney (55) and Chaney, et. al. (56) found that these four categories accurately accounted for 91% of the relapses found in a sample of alcoholics, suggesting that these are situations that reliably represent a high risk of relapse among alcoholics. (Donovan & Marlatt, 1980,
It is apparent that many of the factors which appear to be related to PES also may be related to relapse among abstaining problem drinkers.

Having completed a review of the general literature related to the perceptual-expectancy interaction, it is now pertinent to proceed to a discussion of studies investigating how this construct relates to alcohol abuse in particular.

**Alcohol and PES**

O'Leary, Donovan, and Hague (1974) sought to investigate the relationship between I-E and two measures of SD-SI, the Group Embedded Figures Test (GEFT) and the Interpersonal Discrimination Test (IDT). They administered these tests to 50 male patients in a veterans hospital, mean age 47.7 years (SD = 8.0), having no "physical or cognitive residuals of acute intoxication" (1974). They employed median splits to form an internal and an external group, and four state-dependent or state-independent groups: two based upon GEFT scores and two based upon IDT scores.

O'Leary, et. al. report no significant correlation between I-E and GEFT (r = .18) or between I-E and IDT (r = .13), demonstrating that the lack of correlation between LOC and SD-SI shown so often also holds true for alcohol-abusing subjects. The two scales which measured field dependence did correlate significantly with each other.
In a somewhat more ambitious study, Erickson, Smyth, Donovan, and O'Leary (1976) examined the relationship of PES to psychopathology and defensive style. The subjects for this study were 168 males who had been admitted to an alcohol treatment unit in a veterans hospital 1-1/2 weeks prior to their inclusion in the study. Age and other characteristics, aside from being veterans and alcoholic, are not given.

Subjects were assigned to groups based upon performance on the I-E scale and the GEFT. Subjects who were above the third quartile and below the first quartile on each test were assigned to one of the four groups. Group size was \textit{n} = 15.

Psychopathology was assessed by eight (out of nine) clinical scales of the MMPI, and performance on the Taylor Manifest Anxiety Scale (AT) and the Defense Mechanism Inventory (DMI).

The results indicate, once again, a lack of significant correlation between the I-E and GEFT (\textit{r} = .07). The comparison of congruent and incongruent groups on MMPI, DMI, and AT scores yielded no significant difference.

Erickson, et. al.'s study does support earlier findings (Goss & Morosko, 1970) that internal alcoholics used higher-order defenses, compared to external alcoholics, when I-E scores were correlated with MMPI, DMI, and AT data.
similar results with field dependency data are also reported. The field dependent alcoholics employed less-developed defense mechanisms than the field independent alcoholics, when compared to the criterion measures. Erickson, et. al. do note that even these findings are questionable because the degree of significance is "unimpressive" (1976). They conclude that:

Our failure to find significant differences between congruence and incongruent alcoholics casts some doubt on the generalizability of the Lefcourt and Telegdi and Tobacyk, Broughton, and Vaught findings to clinical populations. (1976, p. 53)

Erickson, et. al.'s findings of a lack of significant relationship between PES and the criterion-index-derived MMPI or the MMPI-based AT appear similar to and support Gormanous' (1976) findings.

Gormanous found that the congruence-incongruence construct did not relate significantly to performance on either the State-Trait Anxiety Inventory (STAI) or the Eysenck Personality Questionnaire (EPQ). The STAI is based on "Cattel's IPAT anxiety scale, Taylor's Manifest Anxiety Scale and the Welsh Anxiety Scale" (1976). The EPQ is a factor-analytically derived instrument and is, in some ways, similar to MMPI-type instruments in construction, rationale, and orientation toward a sick/well dichotomy.

While there is still relatively little data, it would appear that the characteristics related to PES do not
correlate strongly with factorally derived instruments, criterion-indexed instruments, or instruments which combine both methods of construction. PES has, however, been shown to relate strongly to behaviorally oriented measures, which appear to be of much greater utility in terms of the population under study.

For example, the usefulness of the MMPI alcoholism scales for more than basic diagnostic--as opposed to descriptive--purposes, appears not to be supported by the literature. As Apfeldorf reports in his stimulating review article, "Alcoholism scales of the MMPI: Contributions and future directions" (1978):

This review, indicating that alcoholics in many different settings are consistently differentiated from controls on two alcoholism scales, the McAndrew and Holmes, justifies the strategy of studying alcoholics with alcoholism scales and suggests that alcoholics have symptoms and personality characteristics that distinguish them from other psychiatric patients. . . . The diagnosis of alcoholism does not by itself permit an assessment of the vicissitudes of living that individual alcoholics undergo and the variety of life styles possible to alcoholics. (1978, p. 48)

While it is not being suggested that alcohol abuse is not made up of recognizable patterns of behavior to some degree, or that a criterion keyed test such as the MMPI cannot differentiate extreme alcohol abusers from other populations, it is the "various vicissitudes" which are related to behavior and sense of self that are of importance if we are to develop individualized treatment strategies.
In a recent study, Abbott and Gregson (1981) investigate the relationship of cognitive function to relapse in ex-inpatient alcoholics. The results of this study are somewhat difficult to evaluate because of the use of novel instrumentation; the authors use their own unpublished instrument, the Booklet Rod and Frame Test (BRF). They desire to study the relationship between the BRF and the Patterned Cognitive Impairment Test (PCIT) (Abott & Gregson, 1981), which the authors cite as having demonstrated prediction of relapse for male alcohol abusers (Gregson & Taylor, 1977).

Abbott and Gregson also appear to define their study as one of cognitive deficiency. Since current thinking about the SD-SI dichotomy is that these are bipolar constructs not in-and-of-themselves related to pathology or dysfuction (Witkin & Goodenough, 1981), it is unclear if the BRF is, as a version of the RFT, intended to be a measure of SD-SI at all.

Administration of the I-E was also nonstandard. It was administered once in the fifth or sixth week after admission, within a day or two after the BRF and PCIT, and a second time (unspecified) during the course of treatment.

The population studied was an inpatient group of 74 men (mean age 42.0 ± 13.7) and 32 women (mean age 46.7 ± 12.4). Five were Maori, the rest of European ancestry. Individuals who refused to participate, were mentally sub-
normal, were otherwise unavailable, or who left the program against medical advice (26) were not included in the study.

Although the treatment was strongly A.A. oriented, the researchers had two success categories, abstinence and controlled drinking, as well as the relapse category, which consisted of individuals who were drinking at pretreatment levels. Outcome was evaluated three months after discharge and again after one year, using a combination of self-report information, supplied by a significant other, and rumor from the "A.A. grapevine" (1981).

The authors conclude that "BRF has discriminant validity in relation to PCIT" (1981). In terms of the relation of cognitive measures to relapse, the authors conclude that "the performance of relapsed ex-patients was associated with poorer performance on the cognitive measures than was the performance of abstainers and controlled drinkers" (Abbott & Gregson, 1981, p. 239).

Interestingly enough, a regression analysis of weeks to relapse time was performed. Ten of the 35 variables were found to be significantly related to number of weeks to relapse. One of these was BRF (test 2) x I-E (test 2) t = -2.09 (p < .05). Although the relationship of BRF to the more traditional measures of SD-SI is unclear, the interaction of BRF and I-E as one of the predictors of time to relapse is of interest. Also interesting is the finding
that the DRIE (drinking-related locus of control), the BRF (test 1), history of drinking behavior, a self-rating of drinking problems, and the I-E (test 1) were the five variables (although none were statistically significant) judged by the authors to be most useful "for predictive purposes" (1981) in terms of relapse rates.

While it is difficult to evaluate various aspects of this study, the authors' conclusions are intriguing:

The major finding of the present study is the association between cognitive dysfunction and poor treatment outcome. That measures of cognitive dysfunction emerged as significant predictors when different forms of analysis, different sets of independent variables, different measures of outcome, and different periods of follow-up were used supports the view that these dimensions play a significant role in mediating relapse. . . . Although not a major focus of the present study, measures of control (I-E, DRIE) were sufficiently independent from indices of cognitive dysfunction to be sensibly added to predictive models of relapse. Generalized locus of control did not appear to be an important predictor of drinking outcome, but the results of the stepwise regression analysis suggest that the relationship of this measure to treatment outcome might be obscured unless interactions beween control orientation and other relapse-mediating variables are considered. (Abbott & Gregson, 1981, pp. 239, 242)

It could be argued that the "poor treatment outcome" noted above, when referring to one form of treatment, is rather overstepping the limitations of the population under study. In addition the authors have not addressed the fact that 21.6% of the 74 person "success" group are engaging in either controlled drinking or occasional binge drinking and
would presumably not be seen by the people who treated them as successful cases. How the subjects saw themselves is not addressed.

Despite problems with definition and design, the Abbott and Gregson study certainly indicates the possibility that PES may have predictive value in the study and treatment of alcohol problems.

In the present study, PES is hypothesized to relate to general social adjustment and ability to function in the world. The I-E as a measure of LOC is employed both because it is supposed to measure LOC as a general effect (Rotter, 1966) and because it has been used, in one form or another, in all reported PES studies.

The Group Embedded Figures Test (GEFT) as a measure of the SD-SI dichotomy of cognitive style is used because of its convenience in terms of availability and administration, and because it is very clearly a measure of the most socially important aspect of SD-SI: the ability to overcome embeddedness.

Care also has been taken to choose instruments that rate adjustment in terms of self-perceived or observed behaviors, rather than instruments which are related to diagnostic or rationally derived factor analytic categories. As noted above, the PES (congruence-incongruence) construct appears to be related more to self-image; performance on cognitive tasks; various behaviors, such as humor-response
production; or preference for behaviors, such as desired interpersonal distance, than to diagnostic or trait criterion-index type measures.

Summary

The review of the literature indicates that combining Rotter's concept of LOC, as measured by the I-E scale, with Witkin's SD-SI, measured in a variety of ways, yields the higher-order construct of congruence-incongruence, or PES.

PES appears to have discriminative and predictive features with regard to cognitive efficiency (Lefcourt & Telegdi, 1971), response to hidden sexual stimuli (double entendre words) (Lefcourt, et. al., 1973), self-concept vs. ideal self (Tobacyk, Broughton, & Vaught, 1975), and the use of interpersonal distance (Ehrlich, Broughton, & Vaught, 1977).

Studies consistently support Rotter's (1966) contention that LOC and SD-SI are independent of one another, despite their theoretical similarity (Deever, 1967; Ehrlich, et. al., 1977; Gormanous, 1976; Lefcourt & Telegdi, 1971; Pottinger, 1971; Rohsenow & O'Leary, 1978; Rotter, 1966; and Tobacyk, et. al., 1975).

Significant relationship of congruence-incongruence to anxiety, as measured by the State-Trait Anxiety Inventory, or to the personality factors measured by the Eysenck Personality Questionnaire, was absent (Gormanous, 1976).
Significant lack of relationship to the Taylor Manifest Anxiety scale and the MMPI was also noted (Erickson, et al., 1976).

The evidence suggests that PES is a robust construct relating to social, cognitive, perceptual, and intrapsychic factors which, in turn, may be related to adjustment to life in a global sense. In addition, both of the variables which form the congruence-incongruence construct have been shown to be changeable through various treatment interventions (Chess, et. al., 1971; Costello & Manders, 1974; O'Leary, et. al., 1975; Smith, 1976).

Because PES can be modified through treatment, the divining of subtypes within an alcohol abusing population may have important heuristic and prescriptive implications for treatment and program planning. The utility of this construct is defined through its relationship to adjustment to life. Presently, adjustment per se is seen as the most important treatment choice variable (Armor, et. al., 1976). If differences in adjustment can be shown to relate to differences in character style, as operationally defined by PES, then it may become possible to better fit program and treatment strategies to the various needs of individuals.

It is for this reason that an effort is made in this study to relate PES to two behaviorally oriented adjustment scales, which are presented in the instrumentation section of the next chapter.
It is hypothesized that congruent subjects will evidence significantly different patterns of adjustment from incongruent subjects on both adjustment scales. It is further hypothesized that congruent subjects will be shown to be better adjusted than incongruent subjects, despite the fact that members of both groups have been abusing alcohol to such a degree that they were labeled as alcoholics.

Issues related to treatment and program design will be addressed in the fifth chapter, on the basis of the obtained results.
CHAPTER III
POPULATION, SAMPLE, PROCEDURES, AND HYPOTHESES TO BE TESTED

Population Under Study

The population from which a sample was drawn for purposes of this study was active-duty military personnel confined to the Alcohol Rehabilitation Service (ARS) unit at the Naval Regional Medical Center (NRMC), Portsmouth, Virginia.

The ARS accepts referrals from medical officers, commanding officers, and military chaplains, as well as self-referrals. Criteria for admission are informally defined, but appear to meet DSM-III criteria for alcohol abuse (305.01 and 305.02) and alcohol dependence (303.91 and 303.92). In terms of the latter category, tolerance rather than withdrawal was most usual; less than 5% of total admissions required medically supervised detoxification and treatment for withdrawal of alcohol from the system.

Patients are screened for gross organic and psychiatric impairment prior to admission. Admissions occur at two-week intervals in groups or classes of up to 14 individuals, although often fewer than the maximum number are admitted. The course of treatment lasts six weeks.

Both men and women are considered for admission, but only two beds are available for women, and these often go
Potential admissions are often forced to be on a waiting list for periods of time up to two months, and are often provided with Antabuse (disulfiram) while awaiting their admission date. Consumption of this commonly used alcohol antagonist appears rather variable and many newly admitted patients appear not to have complied with this regime.

The nature of a given S's admission status, voluntary or involuntary, is often uncertain, since an individual who is ordered to report for treatment may make the best of the situation and elect to change his or her status to "voluntary." For the first two weeks, patients are confined to the service; they then become eligible for limited liberty.

Patients who are admitted to the ARS are diagnosed as alcoholic. This label, as noted above, is somewhat imprecise and for purposes of this study will be considered a social label having medical, psychological, legal, and organizational implications. Polysubstance abuse among these patients is not uncommon, especially when alcohol is unavailable because of duty conditions. The ARS is not, however, a drug (illegal or controlled substances) treatment facility. Its target population is clearly those whose difficulty is related to alcohol consumption.

Men and women of various ages and ranks are admitted for treatment. Although potentially any member of the uniformed services can be treated at the ARS, only Navy,
Marine, and Coast Guard personnel were admitted during the nine-month period during which this population was sampled (August, 1981 - May, 1982).

Since demographic information is available only for the obtained sample, the demographic differences between population and sample are not known.

The ARS was closed in May, 1982, necessitating an end to sampling.

Sample and Procedure

The population described above was sampled either on the day of admission, after medical clearance, or within 72 hours of admission (to accommodate late arrivals). Classes were sampled consecutively, at two-week intervals throughout the nine-month period.

Sampling Procedure

Only male members of the population were recruited (see limitations section). The potential subjects were usually interviewed on the afternoon of their admission day, after medical clearance. Occasionally this procedure had to be varied because of tardiness in presenting for admission, illness, intoxication, or administrative problems. In such cases, patients were, if possible, approached within 72 hours of their admission dates or, if this was not possible, not approached.
The male members of each new class were assembled in the wardroom, which was isolated by a sliding door from the rest of the unit. The wardroom was equipped with tables and chairs, was well lighted, and free of distractions.

The experimenter (E) was usually introduced by a member of the ward staff, but occasionally introduced himself. E then explained the voluntary nature of participation and the nature of the tasks that participation required, and answered questions. E then asked those not wishing to volunteer to leave the wardroom.

E next distributed consent form A (Appendix A), the face sheet (Appendix B) and, where appropriate, a letter on Department of the Navy letterhead addressed to the significant other (Appendix C). The GEFT (Appendix D) was then administered to the group. Next, the I-E (Appendix E) was administered, followed by the SAS-SR (Appendix F). Questions concerning the protocol were then answered, if possible.

After obtaining patient protocols, E attempted to contact the significant other, when the name and address were provided. If the significant other was in the Tidewater area, he or she was contacted by phone. It was explained to these potential subjects the circumstances of their being contacted and the voluntary and confidential nature of their participation. Those that agreed to participate were met by E in their homes or places of business, or in E's office. If the designated significant other was outside the immediate
area, or preferred contact by mail, the KAS-R (see Appendix G), consent form B (see Appendix H), the form letter from the Pt (see Appendix C), a personalized cover letter, and a stamped return envelope were sent to them.

Description of Obtained Sample

The ARS population appeared to be a reflection of the Navy, Marine Corps, and Coast Guard in general: men of various ranks, from E-1 to O-6, who are natives of all regions of the country. For unknown reasons, few blacks are admitted to the ARS and only three blacks are included in the study.

Years of education range from 8 to 20, with a mean of 12.06.

25.27% (n = 23) are married, 57.14% (n = 52) are single, 8.79% (n = 8) are separated, and 8.79% (n = 8) are divorced.

The mean of the subjects who volunteered to participate in this study was 25.6 years, with a range of from 18.0 - 47.0 years (SD = 6.34). This population is unusually young when compared to the alcohol abusing populations in studies cited earlier. For example: Apfeldorf and Hunley (1975), $\bar{x} = 58.9$ (V.A. inpatients); Caddy and Lovibond (1976), $\bar{x} = 43.8$, (outpatients); Donovan and O'Leary (1975), $\bar{x} = 49.9$ (V.A. inpatients); Karp, Witkin, and Goodenough (1965), $\bar{x} = 40.8$,
(county hospital inpatients); O'Leary, Donovan, and Hague (1974), $\bar{x} = 47.7$ (V.A. inpatients); Sobell and Sobell (1973), $\bar{x} = 41.3$ (state hospital inpatients).

The comparative youth of the population under study is an obvious limitation in terms of ability to compare the findings of this study to studies employing much older and therefore probably more chronic, more socially and physically deteriorated populations. It appears that older, more deteriorated populations tend to reflect having "hit bottom," that is, a drift downward in social class, loss of social support systems, loss of occupational position, and a greater degree of physical impairment resulting from a longer period of time spent drinking abusively.

The lower mean age of the ARS patients is believed to result from the fact that they are active-duty personnel whom the military establishment wishes to salvage and return to work. The military is in a unique position to be aware of an abuse problem and to insist upon treatment. Civilian alcohol inpatient treatment populations, on the other hand, tend to contain few alcohol abusers of this age group who are employed and are not grossly deteriorated.

While the mean age difference poses some difficulty in terms of generalizing the results of this study to older, more "bottomed out" populations, there is a real advantage in the comparative youth and vocational position of the population which is the subject of this study.
Over time, chronic alcohol abuse increasingly affects the personality, damages health, alters neurological structure, and often causes change in vocational position. While this process is undoubtedly at play in the population under study, there has been much less time for such effects to manifest themselves. Since the goal of this study is to define treatment-applicable subtypes related to personality, it is desirable to study Ss before this "leveling effect" has progressed too far.

It is also important to study younger populations because some authorities, e.g. Pattison, Sobell, & Sobell (1977), believe that younger alcohol abusers are an underserved population. Their less-deteriorated condition makes them less likely to affiliate with A.A. or to seek A.A. oriented professional treatment. Additionally, alcoholics who have not "hit bottom" are often perceived as less likely to benefit from medical model/A.A. oriented treatment programs. Since the vast majority of treatment programs are of this type, this population tends to stand in need of increased access to treatment.

Limitations Resulting from Procedure and from Characteristics of Obtained Sample

Gender It was decided to exclude the small portion of the total population which was female from the population under study. Thus only male patients were asked to volunteer
to take part. There are several reasons for this. (a) Female patients potentially made up 14% of the patient population. Actually the numbers tended to be much lower, about 7%. Often an entire class would have no female members. Female patients, therefore, represented a small sub-sample of the population on the ward. (b) Female performance on measures of SD-SI has often been reported to differ from that of males. This difference has lessened over the years and is now thought to reflect cultural values, rather than biological differences reflected in differences in perception. Even so, it was decided to eliminate possible variation resulting from sex differences.

Limitations resulting from sampling procedure Since only volunteers took part in the study, or could be approached for information, those who did not volunteer represent an unavoidable source of sampling bias.

Anecdotal evidence from staff members indicates that those who did volunteer were generally perceived as being more cooperative and more responsive to treatment.

Anecdotal evidence gained through unsolicited encounters with nonvolunteers indicates that nonvolunteers did not want to take part in the study because they were angry and did not feel very cooperative at the time of their admission.

The rate of volunteering varied greatly; 25% to 100% of each class volunteered to take part in the study.
An unexpected limitation on sample's ability to provide corroborative data. When the protocol was designed, it was supposed that almost all Ss would be willing and able to provide the name of a significant other to provide corroborative data on the S's day-to-day functioning. However, an unexpectedly large number of Ss (n = 14) either felt that they were so isolated socially that they had no significant others or did not wish those close to them contacted. In the case of the latter group, the reason for not wishing friends or family contacted was usually a wish to avoid "involving" them in the S's problems.

Both groups who could not or would not allow contact with a significant other represent a possible source of bias in the data since social isolation or distance has significance in terms of the dependent measure(s) of social adjustment. This significance, however, is difficult to quantify.

A rather large number of significant others either could not be located or refused to participate (n = 34); of the total sample (N = 91), 52.7% of cases lack corroborative data (n = 48).

Ethical Considerations

When doing research on a confined population, the question of informed voluntary consent for participation in research is a sensitive issue.
Protocols of this study were submitted to the Human Subjects Committee at the College of William and Mary and to Navy authorities, both at the NRMC and in Washington, D.C. Oversight of protection of patients' rights was provided by the senior ward personnel and by an off-site Navy medical officer.

Consent forms, both for the patients and the nonpatient informants designated by the patients, were strict contracts in terms of voluntariness, confidentiality, and possible risk. Proper handling of consent procedures was regularly checked by a medical officer from another NRMC service (see Appendices A and H).

Instrumentation

The instruments employed in this study fall into two classes, as defined by their function in the project: those related to PES and those related to adjustment.

PES

Rotter's I-E Scale

The I-E scale was devised by Julian Rotter, one of the originators of the social learning approach to personality. It measures locus of control (LOC), which represents a generalized expectancy of either internal control (I)—control by the self over external events and reinforcements—or external control (E)—control by others, by luck, or by
chance.

Expectancy is one of the four main variables in social learning theory which describe and predict behavior. The others are behaviors, reinforcements, and psychological situations.

Rotter feels that the less structured the situation, the greater the role of expectancy in determining behavior. The I-E scale, as a result, was designed to measure this generalized expectancy whose potency is enhanced by ambiguity.

In other words, it was developed as a broad gauge instrument—not as an instrument to allow for very high prediction in some specific situation. . . . but rather to allow for a low degree of prediction of behavior across a wide range of potential situations. (Rotter, 1975, p. 62)

The I-E scale (Rotter, 1966) consists of 29 items. Twenty-three are active; six are fillers. It is a forced-choice test in which the subject chooses either answer (a) or (b) for each question. It is designed for use with a sixth grade reading level. The scale is bi-polar, with higher scores in the external direction.

The I-E scale has been used in a variety of studies with various populations. Review articles indicate a test-retest reliability (for various samples and various times) of between .49 and .83 (Hersch & Scheibe, 1967; Joe, 1971); and .65 - .79 overall; 1 month, .74; 2 months, .55 (Rohsenow & O'Leary, 1978); and .65 - .79 (Rotter, 1966).

The I-E was designed to minimize social desirability
as a source of response bias. Some success is reported in
this area: $r = -.39$ with $N = 28$ (Lichtman & Julian, 1966,
cited in Lefcourt, 1966), and $r = -.10$ with $N = 84$ (Feather,
1967). Both studies used the Marlow-Crowne Social Desirabil-
ity Scale.

In his review of the LOC literature, Joe (1971) cites
a number of studies which indicate a lack of significant
correlation between I-E and the Marlow-Crowne Social
Desirability Scale (Strickland, 1965; Tolor, 1967), and
others which do show a significant correlational relation-
ship (Altrocchi, Palmer, Hellmann, & Davis, 1968; Feather,
finding a significant correlation of I-E with the Edwards
Social Desirability Scale.

Intelligence is usually not considered to be a
significant source of response bias in the I-E (Cardi,
cited in Rotter, 1966; Ladvig, cited in Rotter, 1966) and,
in their review article on LOC, Hersch and Scheibe (1967)
consider that the relationship is weakly negative, with
internals scoring higher in intelligence.

Lefcourt indicates that social factors, race, and
socioeconomic class play a greater role in LOC than
intelligence, except in extreme cases; for retardates,
intelligence significantly correlates with externality
(Rotter, 1966).

Of the two social factors, race appears to have a
more pronounced effect than social class. In fact, one investigation (Battle & Rotter, cited in Rotter, 1966,) reported an inverse relationship, lower class Blacks with high I.Q.s being more external than middle class Whites with lower I.Q.s.

Expectancy of control appears to reflect class and caste experiences:

In all the reported ethnic studies, groups whose social position is one of minimal power either by class or race tend to score higher in the external-control direction. Within the racial groupings, class interacts so that the double handicap of lower-class and "lower-caste" seems to produce persons with the highest expectancy of external control. Perhaps the apathy and what is often described as lower-class lack of motivation to achieve may be explained as a result of the disbelief that effort pays off. In short, the "oppressed" groups can be described as analogous to Mower's rats whose "fear of fear" led to nonsurvival behavior. (Lefcourt, 1966, p. 212)

As has been noted in Chapter II, the I-E scale, despite its apparent theoretical similarity to SD-SI, has been regularly found to be independent of it (Feather, 1967; Pottinger, 1971; Rohsenow & O'Leary, 1979; Rotter, 1966; Witkin & Goodenough, 1981, etc.). In terms of other instruments, some interesting relationships have been noted. Hersch and Scheibe (1967) note that 23 adjectives in the Adjective Chest List (ACL) are found to significantly correlate with internality (p < .05): clever, efficient, egotistical, enthusiastic, independent, self-confident,
ambitious, assertive, boastful, connected, conscientious, deliberate, persevering, clear thinking, dependable, determined, hard headed, industrious, ingenious, insightful, organized, reasonable, and stubborn. Only self-pitying correlated to the same degree with externality.

I-E has also been found to relate to the California Personality Inventory (CPI).

On the CPI the internal scorer is higher on the Dominance, Tolerance, Good Impression, Sociability, Intellectual Efficiency, Achievement via Conformance, and Well-Being scales. The converse relationship may be said to hold for the external scorer. (Hersch & Scheibe, 1967, p. 634)

Joe, in his general review of the I-E literature, indicates that:

The most significant evidence for construct validity of the internal-external control variable lies in the area of personality functioning. While findings are not remarkably consistent, generally, data tend to support Rotter's contention that the internal-external control concept is a generalized expectancy operating across many situations. (1971, p. 634)

LOC in alcohol abusing populations LOC for alcohol abusers has been studied extensively. Rohsenow and O'Leary (1978) review 24 such studies, 23 since 1970. Of these, eight involve the use of Rotter's I-E scale on a total of 828 alcoholics with 1,667 controls. The mean I-E score for alcoholics is 6.43 and for controls 7.97 (scored in external direction).
In addition, Rohsenow and O'Leary indicate that I-E performance "correlates with many measures including anxiety, dogmatism, mistrust, maladjustment, social influence, use of birth control, smoking" (1978).

Of special interest is the Goss and Morosko study (1970) which was cited above in regard to its finding (contrary to the authors' predictions) of internality among individuals labeled as alcoholics. Goss and Morosko found that the internally scoring alcoholics reported less anxiety, depression, and less of a sense of helplessness overall. These alcoholic internals also appear to be less pathological in terms of MMPI performance. The authors speculate that, for internals, the abuse of alcohol may represent a means for obtaining expected control over internal states (Goss & Morosko, 1970).

**I-E as a multidimensional test**  In a study of the I-E performance of 159 male and 157 female undergraduates, Mirels, by performing a Verimax rotation, isolated two factors:

- Items loading high on Factor I concern the respondent's inclination to assign greater or lesser importance to ability and hard work than to luck as influences which determine personally relevant outcomes. . . . Factor II focuses on the respondent's acceptance or rejection of the idea that a citizen can exert some control over political and world affairs. (1970, pp. 227-228)

Mirels reports that, for males, Factor I accounts for
10.9% of the variance and Factor II for 8.6%. For females Factor I accounts for 12.1% and Factor II for 6.7%. Overlap between scales was $+ .30$ or less per item (1970).

Mirels' findings are supported by Reid and Ware (1973), who worked with a sample of obese women, $n = 130$, and 85 undergraduates whose sex and weight was not reported. As with Mirels, a Verimax rotation was employed to tease out the two factors, Factor I (fatalism) and Factor II (social systems control or SSC). Due to difficulty in "interpreting the factor structure" (1973), the I-E was modified for the second part of the study, the section using undergraduate subjects. Reid and Ware reworded nine items, added eight new items, and dropped one of the original items. As a result of these modifications the results are difficult to interpret, although the authors feel that they have supported Mirels' findings with regard to Factors I and II.

Since the central research on the congruence-incongruence construct of PES has been done using the unaltered I-E handled as a unidimensional factor to measure LOC orientation, it would appear best not to employ the multi-dimensional option at this time. The I-E is scored in the external direction; higher scores indicate relatively greater externality.

**Group Embedded Figures Test (GEFT)**

The GEFT (Witkin, Oltman, Raskin, & Karp, 1971), is a group-administered form of the earlier, individually
administered Embedded Figures Test (EFT) (Witkin, 1950).

Both individually and group-administered forms are measures of SD-SI, and were evolved from Gottschaldt's original figures (Witkin & Goodenough, 1981).

As noted in Chapter II, the SD-SI dichotomy of perceptual style was originally defined by performance in three individually-administered laboratory spatial orientation procedures, each requiring S to adjust an object (in certain instances his own body) to the upright in the face of conflicting information from visual and proprioceptive modalities. (Jackson, Messick, & Myers, 1964, p. 178)

The use of measures of SD-SI which do not involve gravitational cues, but are purely visual in nature (EFT, GEFT) are strongly related to style of goal attainment, perception of the environment, how problems or goals are approached, and social competencies (Witkin & Goodenough, 1981).

In its most current form, the GEFT (Witkin, et. al., 1971) contains 18 active items; seven items are given initially for practice. The 18 items are presented in two nine-item sections with five minutes allowed for each section. Total time for administration is 15 minutes.

Split-half reliability (undergraduates, males, N = 80; females, N = 97) using the Spearman-Brown Prophecy Formula was .82 (Witkin, et. al., 1971).

Validity estimates are also quite high. Again using
an undergraduate population, when compared to the EFT, the result for females was $r = -0.82$ and for males $r = -0.63$ ($r$'s should be negative, because tests are scored in reverse fashion) (Witkin, et. al., 1971).

Relationship of scores obtained on human figure drawings (Articulation of Body Concept, ABC) to GEFT performance was $r = 0.71$ for undergraduate males and $r = 0.55$ for undergraduate females (Witkin, et. al., 1971).

The relationship between GEFT performance and performance on the portable Rod-and-Frame test (RFT) (which employs gravitation as a cue to overcoming embeddedness) was present but not as strong: $r = -0.39$ for male undergraduates and $r = -0.34$ for female undergraduates.

GEFT is generally considered equivalent to EFT, both psychometrically and in content:

The GEFT has been modeled as closely as possible on the individually administered EFT with respect to mode and format. It contains 18 complex figures, 17 of which were taken from the EPT. (Witkin, et. al., 1971, p. 26)

Within-group correlations between group-and individually-administered embedded-figures tests, with order of presentation counterbalanced, indicated sufficiently high agreement to warrant substitution of group for individual forms. (Jackson, et. al., 1964, p. 190)

The relationship between the cognitive styles of SD and SI and intelligence, as defined by conventional I.Q. measures such as the Wechsler, has been investigated.
EFT, RFT, and BAT appeared on a Wechsler perceptual-organization factor, loaded by the Wechsler Block Design, Object Assembly and Picture Completion Subtests, all of which require restructuring, but not on a verbal-comprehension factor (loaded by Wechsler Vocabulary, Information and Comprehension Subtests) or on an attention-concentration factor (loaded by the Wechsler Digit Span, Coding, and Arithmetic Subtests), neither of which involve restructuring. (Witkin & Goodenough, 1981, p. 61)

Restructuring ability appears to be psychometrically related to several subtests in the performance portion of the Wechsler intelligence tests (forms unspecified), but not to the verbal section and not to all of the performance section.

GEFT performance is scored in the SI direction; higher scores indicate a greater degree of state independence.

Measurement of Social Adjustment

The Social Adjustment Scale-Self Report (SAS-SR)

The SAS-SR is a self-report rating scale which is derived from an earlier structured interview form (SAS), which was itself a derivation of the Structured and Scaled Interview to Assess Maladjustment (SSIAM) (Weissman, Prusoff, Thompson, Harding, & Myers, 1978).

The SAS-SR contains 54 items, of which a given subject will usually respond to between 40 and 42.

In general, the questions fall into four major categories: the patient's
performance at expected tasks; the amount of friction with others; finer aspects of interpersonal relations; and inner feelings of satisfaction. Each question is rated on a five-point scale with a higher score indicating impairment. . . . The self-report takes 15 to 20 minutes to complete. (Weissman & Bothwell, 1976, p. 1112)

The SAS-SR represents an attempt to combine self-report with behavioral assessment. Adjustment is defined both in terms of function and satisfaction with function. Since it is a self-report inventory, it relies on the individual to assess his or her activities by his or her own standards which, while admittedly subjective, are certainly important.

It is within the interpersonal as well as the intrapersonal spheres that Weissman views adjustment as measured by this instrument:

Social adjustment is a reflection of the patient's interactions with others, satisfactions and performance in roles, which are more likely modified by previous personality, cultural, and family expectations. (Weissman, 1975, p. 357)

Despite the SAS-SR's reliance on self, therefore subjective, report it appears to have many desirable properties as a research instrument. Edwards, Yarvis, Mueller, Zingale, and Wagman (1978) studied five adjustment scales of various types, using both outpatients and nonpatients tested three times at two-week intervals. The data for SAS-SR indicated no practice effects and did indicate a high degree
of discrimination between patient and nonpatient groups ($p < .001$). A test-retest reliability of .81 was reported, with a standard error of measure of 0.151 ($SD = 0.257$) (Edwards, et. al., 1978). In their original presentation of the SAS-SR instrument, Weissman and Bothwell noted an overall correlation to the criterion measure, an interview, of $r = .72$ as well as a paired $t$-test between SAS-SR means and those of the criterion measure: $t = 4.03, p < .001$ (Weissman & Bothwell, 1976).

The authors also caution that the measure's validity and reliability could be compromised if the individual subjects had too few social roles. This would be the case in "bottomed out" or skid-row type alcohol abusers, but should not be a factor with the subject population used in the present study.

The SAS-SR yields an overall adjustment score which is the sum of all items actually responded to. Individual role area means are also derived, based upon the subject's identification of roles active in his or her life. Overall adjustment scores and satisfaction with social and leisure activities will be compared across groups in this study.

**The Katz Adjustment Scales (KAS)**

The relative ($R$) forms of the KAS are designed "to focus on specific behaviors and to avoid placing relatives in the position of judging the patient" (Katz & Lyerly,
There are five parts of the KAS $R_1$ scales which are designed for use by a relative in reporting the subject's adjustment and social functioning. Norms, validity, and reliability data are available for the $R_1$ forms, parts I, II, IV, and V.

The $R_1$ form, parts I and II, of the KAS is made up of 127 items relating to symptomatic and social behaviors. Items are presented in everyday language and call for an evaluation of a behavior as occurring (1) almost never, (2) sometimes, (3) often, (4) almost always. These 127 items yield 13 clusters or scales. Further factor analysis of intercorrelations of the 13 Symptom and Social Behavior Clusters yields three factors, which account for 57% of the total variance: (1) Social Obstreperousness, (2) Acute Psychoticism, (3) Withdrawn Depression (Katz & Lyerly, 1963). The $R_1$ scales have a discriminant validity for the general psychiatric populations studied of .79 and .69 (Katz & Lyerly, 1963). Normative data for each sub-scale of the KAS $R_1$ forms, excepting $R_1$, part III, is available (3% systematic random sample for Carral County, Md., $N = 450$), with analysis of variance performed for independent demographic variables: age, sex, social class, marital status, level of anxiety. Age was found to account for the most variance, sex the least (Hogarty & Katz, 1971).

$R_1$, part III relates to physical complaints and yields
Using KAS scores to perform an ex post facto "psychological autopsy" on male suicides (N = 16) and male drivers in fatal single car crashes (N = 25), Shaffer, Perlin, Schmidt, and Himelfarb (1972) found that the suicide group scored significantly higher (less well adjusted) than the car crash group on ten of the thirteen KAS R₁ (Parts I and II) scales (p < .05). As could be expected, the suicide group was also rated as being significantly less well adjusted than the Hogarty and Katz norms (1971) on nine of the thirteen R₁ scales (p < .05) and the driver fatality group was rated as more poorly adjusted, as compared to the norms, on five of the R₁ scales (Shaffer, et. al., 1971).

In a later replication of the car crash portion of the study, Shaffer, et. al. found no statistically significant differences between the car crash sample in the first study (N = 25) and that in the replication study (N = 25) on any demographic or situational variables. Comparing the total sample (N = 50) with the normative data for the 18 KAS scales (R forms parts I, II, IV, and V) and using a multivariate analysis (Hotelling's T-square statistic), the two groups were found to be significantly different at the .05 level of probability (Shaffer, Towns, Schmidt, Fisher, & Zlotowitz, 1974).
The KAS has proved to be a highly reliable and valid means of using the perception of relatives (or significant others) to assess the social adjustment of both patient and nonpatient groups. The availability of normative data makes it an ideal instrument in a study such as the one proposed here, in that it permits not only comparison between groups, but also comparison of the sample to the norm.

KAS-R \textsubscript{1} parts I-III will be used in this study to assess the level of social adjustment of each subject as rated by others. The KAS scales and the overall adjustment and role area mean score for social and leisure satisfaction from the SAS-SR will be used to investigate the relationship of adjustment, both as perceived by self and by others, to PES.

Previous research has indicated that some, but not all of the KAS-R scales will discriminate between different groups. A good example of this is found in the "psychological autopsy" study cited above (Shaffer, et. al., 1972). In that study, which compared male suicides and male driver fatalities, 9 of the 18 R \textsubscript{1} (parts I, II, IV, and V) scales from the KAS-R were found to be significantly different between the two groups at a level of significance of .05 or better. The scales that significantly discriminated between the groups were: Helplessness, Suspiciousness, Anxiety, Withdrawal-Retardation, General Psychopathology, Nervousness, Bizarreness, and Dissatisfaction with Socially Expected Activities.
In this study, a between-groups comparison is made on the basis of KAS-R₁, parts I-III, which yields 14 scales: Belligerence, Verbal Expansiveness, Negativism, Helplessness, Suspiciousness, Anxiety, Withdrawal-Retardation, General Psychopathology, Nervousness, Confusion, Bizarreness, Hyperactivity, Stability, and Health. The 13 R₁ (parts I and II) scales also yield three factors: Social Obstreperousness, Acute Psychoticism and Withdrawn Depression. These factors are usually excluded from studies of nonpsychotic hospital populations, and normative data for these factors is not available.

Data from the 13 KAS-R₁ (parts I and II) scales, as well as the three factors, will be compared between subgroups formed on the basis of PES, and to the normative data. Normative data is also available for the SAS-SR, for both nonpatients and a small sample of alcohol patients, and will be compared to the results obtained in the present study.

In this way a comparison between levels of adjustment in various areas, using two different types of instruments, is used to investigate the relationship between PES among groups of alcohol abusers and their ability to function, to adjust to life.

As noted above, e.g., Bowen (1974) and Pattison, et. al. (1977), adjustment to life appears to be the most im-
portant predictor of treatment outcome. If this variable also proves to be related to PES, then treatment oriented toward different PES styles can be further explored as a means of facilitating patient-to-treatment match.

**Research Design and Data Analysis**

This is a descriptive study, the goal of which is to attempt to identify the differences between theoretically based clinical subtypes on a set of theoretically relevant dependent measures. A two-way analysis of variance is employed to investigate these relationships. It is planned that significant results on the 2 x 2 interaction effect (the PES subgroups) will be further analysed with an a posteriori contrast test: a Scheffé. This a posteriori test would permit a contrast of congruent vs. incongruent subgroups, provided significant differences in the dependent measures are present. Statistical significance is defined by $p$ or alpha values of < .05.

All protocol items—GEFT, I-E, SAS-SR, and KAS-R—were hand scored by E. Groups were formed on the basis of median splits with "ties" randomly assigned to either appropriate group.

The obtained data was processed on a Digital Equipment Corp. computer, model PDP-II/34A, operating system RST/E U7.0, statistical package SPSS-II, Release 4.0.

Hand calculations of two-tailed $t$-tests were also
performed in order to compare KAS-R and SAS-SR obtained data to some available norms. These results are presented as additional findings at the end of Chapter IV.

Relationship between the independent measures was analyzed through the use of a Pearson Correlation coefficient ($r$).
Hypotheses

Hypothetical formulations are stated below in null form:

**A Effect**

$H_{01}^\neg$: No difference will be found on SAS-SR scores between state dependent and state independent subjects.

$H_{02}^\neg$: No difference will be found on KAS-R scores between state dependent and state independent subjects.

**B Effect**

$H_{03}^\neg$: No difference will be found on SAS-SR scores between internal and external subjects.

$H_{04}^\neg$: No difference will be found on KAS-R scores between internal and external subjects.

**A x B (Interaction) Effect**

$H_{05}^\neg$: No difference will be found on SAS-SR scores between congruent and incongruent subjects.

$H_{06}^\neg$: No difference will be found on KAS-R scores between congruent and incongruent subjects.
CHAPTER IV
RESULTS

Presentation of the Analysis of the Data

Data was gathered and processed in accordance with the procedures outlined in Chapter III.

There are two independent measures, I-E and GEFT. Internal (I) subjects (Ss) were separated from External (E) Ss and state dependent (SD) from state independent (SI) Ss on the basis of I-E and GEFT scores, respectively, through the use of median splits. Ties at the median were randomly assigned. Four groups were thus formed, each representing different levels of performance with regard to the independent measures. (See Figure 4.1.)

A two-way analysis of variance was then performed to ascertain the degree of difference between the subgroups on the dependent measures. This analysis yielded results for an SD vs. SI (A Effect) and an I vs. E (B Effect) contrast, as well as the interaction of SD-SI and I-E (A x B Effect).

The interaction effect examines the degree of relatedness between groups G1, G2, G3, and G4, which are either congruent (G1 and G4) or incongruent (G2 and G3).

Before presenting the results of the analysis of the data in terms of each null hypothesis, it is desirable to
Cells Formed by Median Splits of I-E and GEFS Scores (SD-SI),
Based on Obtained Data

<table>
<thead>
<tr>
<th></th>
<th>SI</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (C)</td>
<td>n = 27</td>
<td></td>
</tr>
<tr>
<td>2 (Inc)</td>
<td>n = 23</td>
<td></td>
</tr>
<tr>
<td>3 (Inc)</td>
<td>n = 18</td>
<td></td>
</tr>
<tr>
<td>4 (C)</td>
<td>n = 23</td>
<td></td>
</tr>
</tbody>
</table>

Total n = 43
(48 missing cases)

<table>
<thead>
<tr>
<th></th>
<th>SI</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (C)</td>
<td>n = 16</td>
<td></td>
</tr>
<tr>
<td>2 (Inc)</td>
<td>n = 13</td>
<td></td>
</tr>
<tr>
<td>3 (Inc)</td>
<td>n = 9</td>
<td></td>
</tr>
<tr>
<td>4 (C)</td>
<td>n = 5</td>
<td></td>
</tr>
</tbody>
</table>

Total n = 91
(no missing cases)
examine the correlation between I-E and SD-SI. The Pearson correlation coefficient between I-E and GEFT results \( r = -0.1714, p = 0.104 \) is consistent with the lack of statistical relationship found in the literature.

Age is a potent variable and before considering the data in terms of the null hypotheses it is important to know how the formation of the groups has affected the distribution of subject ages across groups. As shown in Table 4.1., it is apparent that age does not vary significantly between I or E, SD or SI, or for the interaction (A x B) effect groups G1-G4. The \( p \) values for I vs. E (\( p = 0.111 \)), for SD vs. SI (\( p = 0.661 \)), and for the interaction (A x B) effect (\( p = 0.333 \)) indicate that group membership is not significantly related to age at the .05 level of probability.

Results of Analysis of Variance
Presented for Each Hypothesis

Each of the six null hypotheses are presented, in groups of two (for the A Effect, B Effect, and A x B Effect). Each group deals with the relationship of either an independent measure's relationship to the two dependent measures, or the relationship of the interaction effect to the two dependent measures, first to the SAS-SR (total, and Social and Leisure Satisfaction scale) and second to the KAS-R (Scales 1-14 and Factors I-III).
Table 4.1
Relationship of Age to Group Membership
for A Effect, B Effect, and A x B Effect

<table>
<thead>
<tr>
<th>A Effect</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total $\bar{X}_{SD-S1}$</td>
<td>$\bar{X}_{S1}$</td>
<td>$\bar{X}_{SD}$</td>
<td>$n$</td>
<td>variance</td>
<td>$F$</td>
</tr>
<tr>
<td>A Effect</td>
<td>25.62</td>
<td>26.02</td>
<td>25.22</td>
<td>91</td>
<td>7.899</td>
<td>0.199</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B Effect</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total $\bar{X}_{1-E}$</td>
<td>$\bar{X}_{1}$</td>
<td>$\bar{X}_{E}$</td>
<td>$n$</td>
<td>variance</td>
<td>$F$</td>
</tr>
<tr>
<td>B Effect</td>
<td>25.62</td>
<td>26.60</td>
<td>24.41</td>
<td>91</td>
<td>100.752</td>
<td>1.452</td>
</tr>
</tbody>
</table>

| A x B Effect |          |          |          |          |          |          |
| A x B Effect | Total $\bar{X}_{AxB}$ | $\bar{X}_{1}$ | $\bar{X}_{2}$ | $\bar{X}_{3}$ | $\bar{X}_{4}$ | $N$ | variance | $F$ | $p$ |
| A x B Effect | 25.62 | 26.33 | 26.91 | 25.56 | 23.52 | 91 | 38.043 | 0.957 | 0.333 |
Results of the ANOVA for the A Effect

\( H_{O1} \): No difference will be found on SAS-SR scores between state dependent and state independent subjects.

\( H_{O2} \): No difference will be found on KAS-R scores between state dependent and state independent subjects.

Results are presented in Table 4.2.

No significant results appear for \( H_{O1} \). SAS-SR scores do not appear to differ significantly at the .05 level.

In regard to \( H_{O2} \), the results, as presented in Table 4.2, show that the results for scales 1, 2, 3, 5, 6, 7, 10, 11, 12 and 13, as well as Factor II and Factor III, were not statistically significant as the \( p < .05 \) level. The \( p \) values for the remaining scales and Factor I are: scale 4 \( (p = .042) \), scale 8 \( (p = .015) \), scale 9 \( (p = .038) \), scale 14 \( (p = .004) \), and Factor I \( (p = .040) \). These values fall well within the \( p < .05 \) level set for statistical significance.

Results of the ANOVA for the B Effect

\( H_{O3} \): No difference will be found on SAS-SR scores between internal and external subjects.

\( H_{O4} \): No difference will be found on KAS-R scores between internal and external subjects.

Results are presented in Table 4.3.

The results presented in Table 4.3 for \( H_{O3} \) indicate
Significant at the .05 level

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>2.63</td>
<td>7.19</td>
<td>25.92</td>
<td>2.87</td>
</tr>
<tr>
<td>Stability</td>
<td>1.52</td>
<td>7.09</td>
<td>22.85</td>
<td>2.70</td>
</tr>
<tr>
<td>Hyperactivity</td>
<td>6.63</td>
<td>7.00</td>
<td>6.52</td>
<td>2.79</td>
</tr>
<tr>
<td>Bizarreness</td>
<td>6.79</td>
<td>7.69</td>
<td>6.60</td>
<td>2.61</td>
</tr>
<tr>
<td>Confusion</td>
<td>10.07</td>
<td>1.09</td>
<td>7.00</td>
<td>2.61</td>
</tr>
<tr>
<td>Nervousness</td>
<td>8.01</td>
<td>2.67</td>
<td>6.52</td>
<td>2.61</td>
</tr>
<tr>
<td>Psychopathology</td>
<td>6.92</td>
<td>2.67</td>
<td>6.52</td>
<td>2.61</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>7.00</td>
<td>2.61</td>
<td>6.52</td>
<td>2.61</td>
</tr>
<tr>
<td>Anxiety</td>
<td>6.21</td>
<td>2.61</td>
<td>6.52</td>
<td>2.61</td>
</tr>
<tr>
<td>Suspiciousness</td>
<td>6.23</td>
<td>2.61</td>
<td>6.52</td>
<td>2.61</td>
</tr>
<tr>
<td>Helplessness</td>
<td>4.00</td>
<td>2.61</td>
<td>6.52</td>
<td>2.61</td>
</tr>
<tr>
<td>Negativism</td>
<td>6.21</td>
<td>2.61</td>
<td>6.52</td>
<td>2.61</td>
</tr>
<tr>
<td>Explanatives</td>
<td>2.16</td>
<td>2.61</td>
<td>6.52</td>
<td>2.61</td>
</tr>
<tr>
<td>Believable</td>
<td>1.37</td>
<td>2.61</td>
<td>6.52</td>
<td>2.61</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KAS-R Scales</th>
<th>Social &amp; Leasure Satisfaction</th>
<th>SAS-5R Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dependent Measures of Adjustment: SAS-5R and KAS-R

Results of the SI vs. SD contrast (A, Effect) for the

Table 4.2
### Table 4.3

<table>
<thead>
<tr>
<th>KAS-R Factors</th>
<th>Social Adjustment</th>
<th>Dependent Measures of Adjustment: SAS-SR and KAS-R</th>
<th>Total X</th>
<th>X ( \overline{\text{X}} )</th>
<th>( \overline{\text{R}} )</th>
<th>( \overline{\text{E}} )</th>
<th>( \overline{\text{u}} )</th>
<th>( \overline{\text{V}} )</th>
<th>( \overline{\text{F}} )</th>
<th>( \overline{\text{p}} )</th>
<th>( \overline{\text{n}} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Social Adjustment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Social Obstreperoness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Psychopathology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Stability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Anxiety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Neuroulines</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Intelligence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Militarism</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Emphasis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Expressiveness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. SAS-5A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant at the <.05 level

Dependent Measures of Adjustment: SAS-SR and KAS-R

Results of the I vs. E contrast (b effect) for the

Table 4.3
p values of .024 for the SAS-SR total adjustment score and .023 for the SAS-SR Social and Leisure Satisfaction subscale. Since both scores fall within the p < .05 level, there appears to be a significant difference between internal and external Ss on SAS-SR scores and the null hypothesis HO₃ may not be accepted at the p < .05 level.

The results presented in Table 4.3 indicate no p value for KAS-R scores less than .05. Thus the null hypothesis HO₄ may be accepted at the .05 level.

Results of the ANOVA for the A x B (Interaction) Effect

HO₅: No difference will be found on SAS-SR scores between congruent and incongruent subjects.

HO₆: No difference will be found on KAS-R scores between congruent and incongruent subjects.

The A x B effect results from combining the I-E and SD-SI (A and B Effects), permitting the formation and contrasting of groups G₁, G₂, G₃, and G₄. Groups G₁ and G₄ are congruent (I-SI and E-SD); groups 2 and 3 are incongruent (I-SD and E-SI). The degree of relatedness of A x B is expressed in Table 4.4.

No significant p values appear for either SAS-SR scores or KAS-R scores. Thus HO₅ and HO₆ may both be accepted at the .05 level of probability.
<table>
<thead>
<tr>
<th>KAS-R Factors</th>
<th>Social Obstrenousness</th>
<th>Belligerence</th>
<th>Experiencing</th>
<th>Anxiousness</th>
<th>Social &amp; Leisure Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>71.09</td>
<td>6.63</td>
<td>2.13</td>
<td>2.49</td>
<td></td>
</tr>
<tr>
<td></td>
<td>21.44</td>
<td>6.54</td>
<td>2.04</td>
<td>2.31</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16.00</td>
<td>7.00</td>
<td>1.99</td>
<td>2.27</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20.06</td>
<td>7.20</td>
<td>2.17</td>
<td>2.59</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15.97</td>
<td>7.33</td>
<td>2.33</td>
<td>2.74</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14.93</td>
<td>7.33</td>
<td>91</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>43</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>43</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>158.13</td>
<td>4.247</td>
<td>0.264</td>
<td>0.206</td>
<td></td>
</tr>
<tr>
<td></td>
<td>23.63</td>
<td>0.806</td>
<td>0.195</td>
<td>0.192</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.760</td>
<td>0.221</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.4

Results of the AxB (Interaction) Effect Groups G1, G2, G3, and G4 for the Dependent Measures of Adjustment: KAS-R and SAS-SR.
Had statistically significant results occurred at the .05 level on the analysis of variance of the interaction effect, a Sheffe with an alpha value of .05 would have been performed in order to explore the meaning of the significant difference in terms of congruence-incongruence of PES. Since no statistically significant results were found a Sheffe, an a posteriori contrast between groups to localize and explore the significant differences between the groups, cannot be performed.

Additional Findings

There is no validity data available for either dependent measure for the population which was sampled in this study, i.e., active-duty military alcohol abusers confined to an inpatient treatment facility. It is desirable, therefore, to compare the performance of the sample under study to SAS-SR and KAS-R normative data from community samples available for SAS-SR (Weissman, Prusoff, Thompson, Harding, & Myers, 1978) and KAS-R (Hoagarty & Katz, 1971), and to normative data from the alcoholic sample available for SAS-SR (Weissman, et. al., 1978).

A two-tailed \( t \)-test was used to detect the degree of relationship between this apparently abnormal group and a presumably normal sample, and between this sample and a sample of males diagnosed as alcoholic. The \( t \)-test results are presented in Tables 4.5 and 4.6.
| * - Significant at >.01 |
|---|---|---|---|
| * | 4.47 | 2.44 | 35 | 0.462 |
| 3.28 | 2.17 | 35 | 0.258 |
| 2.98 | 1.83 | 205 | 0.462 |
| 9.879 | 1.56 | 205 | 0.258 |

**Weissman, et. al. Alcoholic Sample**

| * | 4.47 | 2.44 | 35 | 0.462 |
| 3.28 | 2.17 | 35 | 0.258 |
| 2.98 | 1.83 | 205 | 0.462 |
| 9.879 | 1.56 | 205 | 0.258 |

**Weissman, et. al. Community Sample**

| * | 4.47 | 2.44 | 35 | 0.462 |
| 3.28 | 2.17 | 35 | 0.258 |
| 2.98 | 1.83 | 205 | 0.462 |
| 9.879 | 1.56 | 205 | 0.258 |

**ARS Obtained Sample**

| * | 4.47 | 2.44 | 35 | 0.462 |
| 3.28 | 2.17 | 35 | 0.258 |
| 2.98 | 1.83 | 205 | 0.462 |
| 9.879 | 1.56 | 205 | 0.258 |

The Weissman, et. al. (1978) Community and Alcoholic Samples
Two-tailed f-Test Comparisons of SAS-89 Obtained Results to

Table 4.5
<table>
<thead>
<tr>
<th></th>
<th>Variance</th>
<th>n</th>
<th>Variance</th>
<th>n</th>
<th>Variance</th>
<th>n</th>
<th>Variance</th>
<th>n</th>
<th>Variance</th>
<th>n</th>
<th>Variance</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>1*12.770</td>
<td>15</td>
<td>1.888</td>
<td>5</td>
<td>1.619</td>
<td>5</td>
<td>1.776</td>
<td>5</td>
<td>1.624</td>
<td>5</td>
<td>1.637</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>0.85</td>
<td>3</td>
<td>1.13</td>
<td>3</td>
<td>3.09</td>
<td>3</td>
<td>3.69</td>
<td>3</td>
<td>3.96</td>
<td>3</td>
<td>5.69</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>1.74</td>
<td>2</td>
<td>1.51</td>
<td>2</td>
<td>1.59</td>
<td>2</td>
<td>1.54</td>
<td>2</td>
<td>1.56</td>
<td>2</td>
<td>5.26</td>
<td>2</td>
</tr>
<tr>
<td>4.</td>
<td>6.26</td>
<td>1</td>
<td>2.8</td>
<td>1.1</td>
<td>6.57</td>
<td>1.1</td>
<td>6.49</td>
<td>1.1</td>
<td>6.49</td>
<td>1.1</td>
<td>6.48</td>
<td>1.1</td>
</tr>
<tr>
<td>5.</td>
<td>6.29</td>
<td>1</td>
<td>1.15</td>
<td>1</td>
<td>2.827</td>
<td>1</td>
<td>1.15</td>
<td>1</td>
<td>2.827</td>
<td>1</td>
<td>1.15</td>
<td>1</td>
</tr>
<tr>
<td>6.</td>
<td>6.40</td>
<td>1</td>
<td>2.81</td>
<td>1.1</td>
<td>6.48</td>
<td>1.1</td>
<td>6.49</td>
<td>1.1</td>
<td>6.49</td>
<td>1.1</td>
<td>6.48</td>
<td>1.1</td>
</tr>
<tr>
<td>7.</td>
<td>1.37</td>
<td>1</td>
<td>1.81</td>
<td>1</td>
<td>1.81</td>
<td>1</td>
<td>1.81</td>
<td>1</td>
<td>1.81</td>
<td>1</td>
<td>1.81</td>
<td>1</td>
</tr>
<tr>
<td>8.</td>
<td>1.74</td>
<td>1</td>
<td>1.51</td>
<td>1</td>
<td>1.51</td>
<td>1</td>
<td>1.51</td>
<td>1</td>
<td>1.51</td>
<td>1</td>
<td>1.51</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 4.6

Two-tailed t-test comparison of KAS-R obtained results and Hoagarty and Katz (1971) Community Normative Sample

Significant at .01

Significant at .001
The comparison between the ARS alcoholic sample and the Weissman, et. al. (1978) community sample indicates that, in terms of both total adjustment and satisfaction with social and leisure activities, the men in the ARS rated themselves as significantly less well adjusted and less satisfied with their social and leisure activities than the normative male sample ($p < .01$). When the ARS sample was compared to the Weissman, et. al. (1978) sample of male alcoholics, no significant difference was found on either total rating of adjustment or social and leisure time satisfaction.

These results would appear to indicate that the SAS-SR has a high degree of discriminant validity in terms of the sample under study, since the ARS Ss are found to evaluate themselves as significantly less well adjusted than the nonpatient sample, but not significantly different than a male alcoholic sample.

Results of a comparison of KAS-R data from the obtained ARS sample to the results of the Hogarty and Katz (1971) community sample (males) follows the same pattern as the SAS-SR. Every scale, except 6 (anxiety) and 9 (nervousness), is significantly different, with the ARS sample being rated as less well adjusted ($p < .01$). As with the SAS-SR, the KAS-R appears to possess a high degree of discriminant validity for the sample under study.

The $t$-test comparisons between the obtained results
on the dependent measures and various samples in the literature would appear to indicate that these instruments are appropriate measures of adjustment for the population under study.

Summary

In this chapter the correlation between the independent measures, the relationship between age and group membership, and the relationship between independent measures and group membership are presented. These results are presented as an aid in understanding the analyses of variance of the data relating to the six null hypotheses.

Results of statistical tests of the null hypotheses are presented in table form, showing means, variance, $n$, $F$, and $p$. Significant results were not obtained for the A x B (interaction) Effect. It was therefore not possible to perform the planned a posteriori contrast of congruence-incongruence. These results will be discussed in Chapter V.

Results of t-tests between obtained data and normative data found in the literature are also presented to aid in the evaluation and discussion of the obtained results.

Discussion, conclusions, and recommendations follow in the next chapter.
CHAPTER V
DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

As noted in Chapter III, various limitations are imposed on the ability to generalize from the obtained results. The major limitations are (a) bias due to sampling error; only volunteer Ss could be included in the sample. (b) Because female members of the population under study were few, they were not asked to volunteer; the sample is all male. (c) Sample size was smaller than expected due to the smallness of the population being sampled and lack of volunteers (81 out of 145 volunteered). Increase of sample size by acquiring more Ss was not possible, as the ARS was closed in the ninth month of sampling. (d) The number of KAS-Rs obtained was smaller than expected because of the surprisingly large number of Ss who felt they had no significant other or who did not want to "involve" those closest to them in their treatment, or whose significant other either refused to volunteer to participate or could not be reached (n = 48). (e) Since the obtained sample is homogeneous with regard to vocation, generalizations to nonmilitary populations are somewhat limited.

The obtained sample is young (\( \bar{x} \) age = 25.6) and relatively well-educated (\( \bar{x} \) years of schooling = 12.06).
The sample is made up of men who have abused alcohol to such a degree as to have caused enough dissatisfaction or concern either within themselves, their commanders, chaplains, or the medical authorities to be referred to and accepted by the ARS.

The sample is of particular interest because (a) due to their relative youth and stable vocational status, Ss more resemble untreated alcohol abusers in the community than the aged, deteriorated Ss most frequently studied on the wards of VA and state mental hospitals and reported in the literature. (b) Because the ARS program is only for people whom the service wishes to continue on active duty, no individuals whose drinking has irreparably damaged them, either neurologically or in other physiological ways, are admitted. Individuals who are psychotic are also screened out prior to admission.

These characteristics were a major factor in the choice of the population to be sampled because, in order to measure levels of adjustment, there must be different levels to compare. Aged, deteriorated Ss are less likely to retain enough different areas of function to permit the use of an instrument like the SAS-SR, or to have somebody close to them who can evaluate their behavior.

An unexpectedly large number of the Ss in this sample were so isolated as to have no significant other, others who could not be reached, or who could not or would not pro-
vide a KAS-R evaluation of behavior.

Discussion of Results

While the main goal of this study is to investigate the relationship of the PES construct to adjustment in the population under study, the relationship to adjustment of the independent measures used to form the PES construct is also of interest.

Discussion of the A Effect

As indicated in Chapter IV, self-ratings of adjustment, as measured by the SAS-SR, appear unrelated to either state independence or state dependence. SD-SI, however, appeared strongly related to adjustment as measured by several KAS-R scales and one KAS-R factor. Table 5.1. contains more detailed information on those KAS-R results which appear significantly related to state dependence or state independence. Higher KAS-R scores (for all the listed scales) indicate a greater degree of maladjustment as evaluated by a significant other. Greater mean size indicates the direction of the effect. The ETA² value indicates the strength of the effect, which appears to account for between 9.6% and 17.6% of the variance being accounted for by group membership for scales 4, 8, 9, and 14, and Factor I.

The SD-SI variable appears to be related to adjustment as perceived by a significant other in a manner which is
consistent with its theory base. The SI Ss are rated as being significantly different (less maladapted) than SD subjects in terms of the scales listed in Table 5.1.

Table 5.1.

Significant Results for the A Effect

<table>
<thead>
<tr>
<th>Relative ( \bar{x} ) of Group</th>
<th>Scale or Factor</th>
<th>( \eta^2 )</th>
<th>( F )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD &gt; SI</td>
<td>4</td>
<td>.096</td>
<td>4.317</td>
<td>.042</td>
</tr>
<tr>
<td>SD &gt; SI</td>
<td>8</td>
<td>.130</td>
<td>6.325</td>
<td>.015</td>
</tr>
<tr>
<td>SD &gt; SI</td>
<td>9</td>
<td>.109</td>
<td>4.515</td>
<td>.038</td>
</tr>
<tr>
<td>SD &gt; SI</td>
<td>14</td>
<td>.176</td>
<td>9.392</td>
<td>.004</td>
</tr>
<tr>
<td>SD &gt; SI</td>
<td>FI</td>
<td>.090</td>
<td>4.434</td>
<td>.040</td>
</tr>
</tbody>
</table>

Scale K4 (Helplessness) is made up of items which describe overt behavior which could encourage others to take charge, e.g., items I-3 "Cries easily," and I-74 "Acts helpless." Since relatively SD people are described as dependent upon others for social cues and information and are less planful than SI individual, these results are in keeping with the current interpretation of perceptual style (Witkin & Goodenough, 1981).

Scale K8 (General Psychopathology) contains items related to maladaptive, noxious, and asocial behaviors, e.g., items I-73 "Behavior is childish," and II-74 "Acts as if he can't get certain things out of his mind." This finding
appears to support Witkin's earlier version of the meaning of the SD-SI dichotomy, in which state dependence is seen as an indication of poor ego development. This lack of development, which is often referred to as lack of psychological differentiation, is thought to relate to an undifferentiated, diffuse perceptual field, as well as to the employment of more primitive, less adaptive defense mechanisms (Witkin, Dyk, Paterson, Goodenough, & Karp, 1962).

Scale K9 (Nervousness), which contains items related to overt expressions of anxiety such as I-21 "Jittery," and I-22 "Worries or frets," can be interpreted as indicating either dependent, information-seeking behavior, or as a manifestation of poor defenses against anxiety. According to significant others, SD Ss exhibit these traits to a much greater degree than do SI Ss. This finding, therefore, can be seen as supporting either the earlier or more current version of Witkin's theory.

Scale K14 (Health) is a scale on which the frequency of occurrence of various physical complaints is noted. The items, such as II-4 "Weakness in parts of the body," can be seen as relating either to excessive somatic concerns or to actual poor health. As with the other KAS-R scales, the Health scale deals with the subject's actual behavior, in this case informing the significant other of these negative body states or sensations.
Since the SD and SI groups do not vary significantly in terms of age, are relatively young, and are fit for active military duty, it appears rather unlikely that an actual difference in objective health is being measured. Rather, it is the amount of communication about somatic states and sensations, either real or imagined, that is being reported.

The findings would seem to indicate that SD Ss tend to engage in more active communication about themselves than SI Ss. Should the SD Ss behave this way in order to obtain feedback through social cues, it would give support to the current version of Witkin's theory (Witkin & Goodenough, 1981). On the other hand, if the results are interpreted as being related to excessive somaticization and hypochondriacal concerns, the primitive defense version of the theory is supported. (Witkin, et. al., 1962)

The three KAS-R factors, which in a general psychiatric population were found to account for 57% of the variance on parts I and II (Katz & Lyerly, 1963), were included in the data analysis. These factors are often omitted from studies, and normative data is not available.

Factor I (Social Obstreperousness) is formed by combining scores from scales K1 (Belligerence), K3 (Negativism), K2 (Verbal Expansiveness), and K8 (General Psychopathology). This factor is described as "a general dimension of social obstreperousness, ranging from manifest belligerence and
boisterousness through negativism and covert hostility" (Katz & Lyerly, 1963).

Clearly, this finding would support the psychological differentiation version of Witkin's theory by suggesting that the SD Ss are seen as significantly more apt to act out hostile and aggressive impulses behaviorally. This, in turn, indicates a less well defended and less differentiated ego (Witkin, et al., 1962).

It was noted earlier, in discussiong HO^, that the SD and SI groups did not differ to a significant degree on SAS-SR scores. This appears to indicate that, while the SD Ss are perceived by others as acting out and creating a greater degree of interpersonal difficulty than the SI Ss, the SD Ss themselves do not report having greater difficulty in life.

Since it is clear that the relatively SD Ss are perceived by others as more dependent and more difficult to get along with than the relatively SI Ss, there remains the question of how to interpret the similarity of self-rating of adjustment by SD and SI Ss on the SAS-SR. The SD-SI theory base, in its current (1981) form, suggests that the SI individual tends to be less concerned about the evaluations of others and would, therefore, tend to rate himself only in terms of his own internal evaluation. The obtained data would appear to substantiate this view in that the SI S's self-evaluation is not reflected in the presumably
more objective KAS-R results. This same bi-polar version of SD-SI theory would seem to predict that the SD Ss would be more tuned in to the perceptions of those closest to them. If those close to them, therefore, see them as relatively poorly adjusted, the theory would predict that the S himself would be aware of this evaluation and reflect it in his view of himself. This prediction is not supported by the obtained results.

The earlier version of the theory, in which state independence represents a greater degree of ego development and differentiation, would suggest that relatively SD individuals, due to their global and diffuse perceptual field, might well be unaware of the evaluations of others and/or might tend to avoid acknowledging such awareness using more primitive defense mechanisms (Witkin, et. al., 1962).

The latter interpretation appears to fit the findings relative to the obtained results of this study and would therefore suggest that the SD Ss are either less aware of how poorly they are functioning and/or defending themselves from acknowledging the perceptions of others through such lower level defenses as denial, projection, or displacement.

That the SI Ss are perceived as less noxious, dependent, complaining, and troublesome to be with than the SD Ss would also appear to indicate that they are less likely to get themselves in trouble with those around them. How
then, did they come to be on an inpatient ward? The answer is unclear. As noted in Chapter III, conditions of referral and admission status (voluntary or involuntary) are difficult to ascertain, and level of alcohol consumption was not ascertained as a variable in this study. It may be that admission status and/or amount of consumption would reflect the obtained differences in adjustment as rated by others. If, for instance, the SI Ss were found to be more often actual self-referrers, had more insight into the fact that they were engaged in self-defeating behavior, or if they drank significantly more than SD Ss, the apparent differences in social adaptation as rated by others and the sameness in self evaluation might be explained. Since such data is unavailable, this idea is purely speculative. The theory base (Witkin, et. al., 1962) would suggest the first possibility: that, due to having a better developed ego, the SI Ss are more able to engage in self-reflection and observation, can better control impulses, and are more insightful and intrapunitive in general.

These questions and speculations, of course, reach far beyond the data base of the present study, but are suggested by the obtained results related to the A Effect.

Overall, the obtained results for the A Effect, in terms of the dependent measures, appear to support the psychological differentiation (Witkin, et. al., 1962) version of the theory of personality organization, as defined by
perceptual field organization, rather than the newer "bipolar," "value free" version (Witkin & Goodenough, 1981).

Discussion of the B Effect

The pattern of results in terms of the B Effect—the relationship between I and E groups and ratings of adjustment on the dependent measures—is directly opposite that found in terms of the A Effect.

While no KAS-R scales or factors were found to be significantly different on the basis of internality or externality, both the total SAS-SR adjustment self-ratings and the social and leisure satisfaction self-ratings were found to vary significantly, with internals consistently rating themselves as better adjusted than externals. This information is presented in Table 5.2.

As with the KAS-R scores reported above, a higher score indicates a lower level of adjustment. In Table 5.2., relative size of the means of each group are indicated, as is the $\eta^2$, $F$ value, and $p$ level.

Table 5.2.

Significant Results for the B Effect

<table>
<thead>
<tr>
<th>Relative $\bar{x}$ Of Group</th>
<th>$\eta^2$</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>E &gt; I</td>
<td>0.058</td>
<td>5.169</td>
<td>0.024</td>
</tr>
<tr>
<td>E &gt; I</td>
<td>0.063</td>
<td>5.290</td>
<td>0.023</td>
</tr>
</tbody>
</table>
The ETA^2 values for the B Effect indicate that 5.8% and 6.3% of the variance is accounted for solely on the basis of the independent measure. This is slightly less than the amount of variance accounted for by significant results for the A Effect.

It is clear that the self-ratings of adjustment by the internal Ss are not supported by the perceptions of their significant others, who do not see the internal Ss as being significantly different from the external Ss.

This result could be considered an artifact of the SAS-SR and KAS-R instruments tapping into radically different facets of adjustment, despite their apparent similarity. However, social learning theory, the theory base from which the I-E construct is drawn, offers another possible interpretation of these results.

Social learning theory would suggest that since internal Ss perceive more relationship between their own actions and what happens in their lives than do external Ss, the internals could be expected to rate their adjustment as better and more satisfying than would external Ss, who tend to experience themselves as the victims or beneficiaries of fate or chance. Thus, the externals might be freer to note areas of self-inflicted difficulty precisely because they do not acknowledge that they are self-inflicted.

These results are of special interest because they suggest a reason for a phenomenon noted in both the general
psychiatry (Archer, 1980) and the alcohol treatment literature, i.e., that internal patients tend to drop out of treatment programs at a significantly higher rate than external patients.

The relationship between internal locus of control and attrition is supported by the 3 previous studies which found internal locus of control correlated with attrition or treatment failure for alcoholics. 15, 17, 18 These results seem to imply that alcoholics who believe that they are in poor control of their lives may be more willing to accept continuing help from treatment programs than alcoholics who believe, unrealistically, that they are in control. (O'Leary, Rohsenow, & Chaney, 1979, p. 192)

On the basis of the results obtained in this study, it would appear that the greater dropout rate of internals reflects an unrealistically high self-evaluation of adjustment and an inability to realistically assess difficulties in life.

The obtained results also tend to support the finding that successful A.A. affiliates tend to be externals (Ogborn & Glaser, 1981) since self-perception of adjustment as being poor, of hitting bottom, and of being out of control are desirable qualities for a potential A.A. member. It is also possible that, for alcohol abuse patients, internality may be related to denial and a false belief that abusive drinking is not causing damage to their lives and relationships.

When they are hospitalized, the apparent tendency of
the internal Ss to perceive themselves as better adjusted than do external Ss, and thus to see themselves as less in need of treatment than their external wardmates, may cause the internal Ss to be seen as less cooperative and attractive patients by the ward staff. Subjective helplessness has been shown to be related to perceived attractiveness and positive attribution by staff on an alcohol treatment ward (O'Leary, Speltz, & Walker, 1980). This relationship between subjective helplessness and attractiveness was reversed for general psychiatric patients and appears to reflect the surrender orientation of the medical model/A.A. philosophy of alcohol treatment (O'Leary, et. al., 1980).

Discussion of Results for the A x B Effect

As indicated in Chapter IV, there is no significant relationship between either SAS-SR or KAS-R scores and membership in the groups formed on the basis of PES: congruent groups (G1 and G4) and incongruent groups G2 and G3).

It is clear (Table 4.4.) that no p value approaches the .05 level in terms of the interaction effect. The lack of significant findings prevents the employment of the planned a posteriori contrasts; the congruent vs. incongruent contrast, G1 and G4 vs. G2 and G3, would have been of special interest.

This lack of significant findings in terms of the cells formed on the basis of PES would appear to indicate
that this construct is not meaningfully related to adjustment in the population under study.

If it is concluded that PES cannot be said to relate to adjustment, either as rated by self (defined through SAS-SR results), or as rated by a significant other (defined through KAS-R results), then PES cannot be considered a viable means of subtyping alcohol abusers.

It was hypothesized that because PES had been found to relate to various cognitive, interpersonal, and self-perceptive variables which appeared to be related to adaptive functioning, that the construct would also be found to relate to adaptive functioning. The goal of this study has been to investigate this possibility in terms of a specific clinical sample: male inpatient alcohol abusers at the NRMC. Since support, either in terms of F value or strong trends in the non-statistically significant data is lacking, it may well be that the differences in abilities and characteristics associated with differences in PES described in the nonclinical literature cannot be generalized to clinical populations, at least as far as alcohol abusers of the type represented in the obtained sample are concerned.

This interpretation of the obtained results is supported by (a) the apparent relationship between the independent measures I-E and GEFT, and the dependent measures SAS-SR and KAS-R respectively, (b) the comparison of obtained results for the dependent measures and normative samples, and (c)
the comparison of obtained results to the alcoholic sample available for SAS-SR.

The two independent measures each appear to relate to adjustment, either in terms of self-evaluation or evaluation by a significant other. Each independent measure was found to be statistically unrelated to the other, and to reflect, exclusively, different sorts of perceptions of adjustment, by self vs. by another.

The two dependent measures appear to discriminate this patient group from non-patient community samples in a manner consistent with the characteristics of the population under study. The SAS-SR alcoholic sample appears not to be significantly different from the obtained ARS sample.

Since each component construct behaved in a manner consistent with its theory base, it would be reasonable to have expected the PES higher-order construct to also behave as hypothesized and to relate meaningfully to adjustment.

The PES theory base appeared to suggest that a combined effect (in this case A x B) would form a discriminative gestalt having greater and more profound relatedness to adjustment than either the A Effect or B Effect alone. This hypothesis concerning the greater sensitivity of the A x B Effect (PES) has not been supported psychometrically in this study.

It is possible, of course, that uncontrolled sample bias and/or smallness of n for each of the four groups formed
on the basis of A x B (especially for KAS-R data), have resulted in a type-II error. If one of these possibilities should account for the lack of significant results, then the relationship of PES to adjustment is being overlooked.

Since neither of these possibilities can be either eliminated or proved, hypotheses concerning the relationship of PES to adjustment and speculations relating to the use of PES in treatment planning cannot be meaningfully discussed at this time.

Conclusions

The main hypothesis of this study, concerning the relationship between PES subtypes and adaptive functioning, has not been supported by the obtained results.

However, results obtained in terms of the two psychometrically unrelated but theoretically similar variables upon which the PES construct is based, I-E and SD-SI, do appear to be related to performance on the dependent measures, SAS-SR and KAS-R respectively, in a manner consistent with the theory base of each.

These results in terms of PES, I-E, and SD-SI are similar to those reported by Erickson, Smyth, Donovan, and O'Leary (1976), in a study of alcoholics (\( \bar{x} \) age unspecified) on a VA treatment ward. Erickson, et. al. found that, based upon I-E scale performance, "external locus of control is associated with more psychopathology
on the MMPI (D, Pt, Sc, and At). Internal alcoholics tend to use more avoidance oriented, more functional defenses than external alcoholics" (1976, p. 52). Erickson, et. al.'s report on defense mechanisms is based upon the Defense Mechanism Inventory (attributed to Glesser & Ihilevich, 1969). Erickson, et. al.'s findings also parallel those of this study in terms of SD-SI (as based on GEFT) results. The authors conclude that

Field-dependent alcoholics appear to use less sophisticated defenses than field-independent alcoholics. . . . turning against self, denial, turning against object, and projection. (1976, p. 52)

No significant results are reported for comparison of "congruent and incongruent groups on MMPI and Defense Mechanism Inventory" (1976, p. 52).

In this study the SD-SI construct, as defined by GEFT performance, appears to be strongly related to how others evaluated adjustment. KAS-R data clearly indicate that, for attributes often associated with the behaviors of alcohol abusers--appearing to others as anxious, dependent, obstreperous, physically unhealthy, helpless, maladapted, belligerent, covertly and overtly hostile, as well as generally less mentally healthy--the SD Ss were seen as being significantly less well adjusted to life than the SI Ss.

These findings related to the A Effect, therefore, appear to support the idea that relatively SD people tend
toward overt expression of impulses, especially hostile and dependent impulses, in a manner consistent with the theory of psychological differentiation. This theory suggests a strong relationship between ego development, including defense mechanisms, and perceptual style. The relatively SD individual would be expected to have a more global, less articulated view of the world, to see cause and effect less clearly, and to behave in a less controlled, more impulsive manner. These behavioral manifestations are tied theoretically to less well developed defense mechanisms for channeling impulsive material from the depths of the psyche. As noted above, this version of perceptual style theory (Witkin, et. al., 1962) has been modified recently (Witkin & Goodenough, 1981).

The obtained results can also be interpreted purely in light of the "bipolar, value-free" version (Witkin & Goodenough, 1981), but not as satisfactorily, since in the value-free model neither style is expected to be associated with greater or less ability to function. Indeed, the newer version would lead to the expectation that SD Ss would be seen as more enjoyable socially than SI Ss because they are perceived as warmer and more involved with others (1981). This has not proven to be the case, since SD Ss were seen as significantly more noxious and troublesome, as well as less well adapted than SI Ss.

It can therefore be concluded that although SD and
SI Ss do not perceive themselves as significantly different in terms of their abilities and social functioning, others do see them as significantly different. Furthermore, this difference appears to be related to what could be considered a clinical stereotype of "the alcoholic" as a poorly controlled, dependent, aggressive, nervous, and attention-seeking individual.

These findings are certainly not value-free; there is a clear indication that the SD-SI subgroups within this population are perceived by others to differ in level of adjustment. These differences militate for a consideration of different treatment approaches.

Specifically, the SD Ss might well benefit more from the traditional types of treatments for alcohol abusers, which rely on peer pressure, reality testing, and direct confrontation of such low-order defenses as denial, projection, and impulsive behavior. Support and instruction of significant others in behavioral management and helping the drinker maintain active contact with his or her support group would also be indicated. Thus, traditional A.A., Alanon, and Alateen programs would appear to be appropriate for the SD alcohol abuser.

KAS-R results indicate that SI Ss are perceived as having significantly less trouble in these areas than SD Ss. It may be concluded, in terms of the psychological differentiation theory base, that the SI Ss have somewhat
better-differentiated egos, that their defense mechanisms are of a higher order, and their behavior under somewhat better control. That they do not see themselves as doing better in life than their SD peers can be interpreted to mean that they have some degree of insight into their difficulties.

Relatively SI Ss would therefore seem to be candidates for more insight oriented and/or cognitively based forms of treatment. They would seem to be the sort of patients that are perceived as candidates for what could be described as traditional psychotherapies. In general, this type of treatment stresses relationship to the therapist, interpretation of the here and now, cognitive change or insight, and the removal or control of maladaptive behaviors (control of impulses and the acting out of conflicts).

The question seems to be one of how difficulties are experienced: either felt within the person, or expressed through noxious (acting out) behavior causing discomfort for others. The obtained results appear to indicate that others are not made as uncomfortable by SI Ss as by SD Ss. This trend can be conceptualized as relating to degree of ego development.

These conclusions are supported by the literature, which indicates that experienced psychotherapists, when accepting patients labeled as alcoholic for insight-oriented psychotherapy, tend to select SI individuals over SD
individuals to a significant degree (p < .01) (Karp, Kissin, & Hustmyer, 1970). SI individuals also tend to remain in traditional psychotherapy, rather than dropping out (p < .01) (Karp, et. al., 1970).

The I vs. E results for the B Effect indicate that self-evaluation, as measured by SAS-SR performance, does not necessarily relate to the perception of significant others, at least as measured by the KAS-R. However, expectancy of control does appear to relate to how adjustment is self-perceived. Internal Ss appear to see themselves as doing better and being more satisfied with their lives generally, and with their social and leisure functioning, than do their relatively more external peers.

If it is assumed that evaluation by the significant other is more objective and less subject to self-serving interpretation, then B Effect results would indicate an overestimation of level of adjustment on the part of I Ss. If this overestimation is interpreted as a denial of the seriousness or depth of difficulty in living, it would explain why relative internals tend to be less likely to complete a course of inpatient treatment or to successfully affiliate with A.A. (Ogborne & Glaser, 1981).

Ss whose I-E scale performance indicates that they are relatively external in orientation would appear to be the best candidates for A.A. treatment. The sense of being under external control, of being a passive victim of chance
or fate, and of feeling less in control of whatever difficulties are being experienced, appear to be in keeping with the A.A. custom of viewing drinking as being out of control for the abusive drinker. Perception of self as having made a mess out of life, of having "hit bottom," or of being in an out-of-control downhill spiral is also considered desirable in the potential A.A. affiliate and this, too, would seem to better fit the external Ss' view of self.

The literature lends some support to this idea. In comparing internal and external alcoholics in terms of defensive style, O'Leary, Donovan, and Hague conclude that:

The data would suggest that internal Ss, who perceive themselves to be in control of life events and reinforcement contingencies, repress those aspects of a conflict that threaten their perceived control. . . . External Ss, on the other hand, who perceive life events and reinforcement as controlled by external forces, appear to deal with stressful or conflictual situations by confronting the real or presumed source of conflict. (1975, p. 362)

As indicated by the O'Leary, et. al. findings, the internal alcohol abuser could be expected to be much less receptive to either viewing his or her life as being in a bad state, or to admitting to feeling out of control. The obtained results in this study appear to support this point of view concerning the tendency of internals to minimize or to avoid perceiving their degree of impairment.

It may be that a treatment whose philosophy was less of an anathema to the internal's point of view, and which
stressed personal control and responsibility for appropriate management of anxiety and impulses, would be more appropriate for the internal abusers. Controlled drinking is a possibility in some cases, and would certainly appear to fit better with an internal point of view.

Although no treatment strategy relative to PES has emerged from this study, it is apparent that both the I-E and SD-SI constructs, and their respective theory bases, may be potent indicators of treatment considerations. When personality traits within the population under study are examined, it seems clear that the placement of all individuals in the sample into a single treatment setting would appear to be less than optimally effective.

Since the actual effects of a patient-to-treatment match based upon the personality traits demonstrated here to relate to adjustment are beyond the scope of the present work, further suggestions for investigation and applications will be addressed in the recommendations section.

The question of how to match the treatment to the needs of the individual can be dealt with in a variety of ways. The obtained results of this study suggest that being relatively I or E and being relatively SD or SI is reflected in how adjustment is rated by self or by others. Since adjustment to life is thought by many investigators to be the central pre- and post-treatment variable for alcohol abusers (Armor, Polich, & Stambul, 1976; Pattison, Sobell, & Sobell, 1977), the interaction of personality traits with
the perception of adjustment may also be a potent indicator of how patients should be matched to treatments.

If it is assumed that SD-SI is a measure of psychological differentiation (ego development), and I-E is a measure of expectancy of control, and each appears to be related to perceived adjustment in a different manner, then the question of interpreting these results in terms of treatment models may be entertained.

Brickman, Rabinowitz, Karuza, Coates, Cohn, and Kidder (1982) suggest that various psychotherapeutic treatment models and strategies are based upon both the attribution of responsibility for a problem and the attribution of responsibility for a solution.

Various treatment strategies which could be or are related to the treatment of alcohol abuse problems are presented by Brickman, et. al. These models and the corresponding types of treatment are: (a) The moral model—rational-emotive therapy and existential psychotherapy, (b) medical model—classical psychoanalysis, (c) enlightenment model—A.A., (d) compensatory model—cognitive behavior therapy (1982).

The Brickman et. al. analysis of the enlightenment model, of which they consider A.A. the most successful and benign example, appears to address both the problems of the psychologically undifferentiated (SD) and/or externally oriented (E) abusive drinker:
Under the enlightenment model, we suggest, actors see themselves and are seen by others as guilty or sinful, or at least as responsible, by their past behavior, for suffering or a problem that they must endure in the present. It is their own impulses—to eat, drink, lie, cheat, steal—that are out of control. To control these impulses, people must submit to the stern or sympathetic discipline provided by agents... of the community. Since the solution to these problems lies outside the person, the solution can be maintained only so long as the relationship with this external authority or spiritual community is maintained. (1982)

The question of what model(s) might best suit the relatively more psychologically differentiated (SI) and/or internally oriented (I) abusive drinker is less clear. PES data, had there been a significant effect, would have been especially illuminating at this point.

As noted above, SI Ss, with presumably better-differentiated ego functions and defenses, were chosen by dynamically oriented therapists in one study of patient-therapist match and dropout rates (Karp, et. al., 1970). Presumably this choice reflects the ability of SI individuals to deal with relatively demanding concepts and to make constructive use of such treatment. These assets would also seem to make SI alcohol abusers relatively good candidates for any of the three remaining types of therapy suggested by the Brickman, et. al. model. Specifics, however, are beyond the scope of this study.

The relationship between internality and treatment modality is even less clear, because the relationship
between personality assets and expectancies is in this case obscure. Again, the potential role of PES to provide greater understanding is obvious. The medical model and the enlightenment model would both seem to be unattractive alternatives, to require a greater sense of helplessness than an internally oriented individual is likely to have. Some version or combination of the compensatory and/or moral model might be more effective.

While the findings in this study are not conclusive in terms of using a theory base to engender specific patient-treatment matches for young male alcohol abusers, the finding of significant differences on the dependent measures of adjustment relative to one of the personality constructs would appear to support the idea that alcohol abuse is not a unitary illness. Different traits, which appear related to different types and levels of adjustment, appear to point towards different treatment needs.

The findings support the idea that personality theory is an important source of guidance and sustenance in seeking to understand the basis and treatment of emotionally based problems and behavioral pathology, as well as the formulation of treatment interventions.

The lack of onmiverous consideration of various theoretical models has been a major flaw in the understanding and treatment of alcohol abuse. The passion of the alcohol treatment community for one-shot, biological, or disease-oriented models has obscured the problems of alcohol
abusers as individuals.

The unquestioned popularity of these same unitary models has discouraged the general clinical community from applying its usual standards and critiques to the treatment of alcohol abuse, and this has, in turn, led to a "sacred cow" atmosphere that has only recently begun breaking down.

While the results of this study, and the conclusions reached, are neither unequivocal nor terribly profound, it is to be hoped that they freshen the debate and engender further exploration.

Recommendations

Since performance on both the I-E scale and the GEFT were found to be significantly related to adjustment, but to adjustment defined as either a self-perceived or other-perceived attribute, each would appear to have some contribution to make in terms of understanding the treatment needs of alcohol abusers. While specific treatment recommendations have not, for the most part, been possible because of the limited scope and findings of this study, the obtained results may encourage other researchers.

It is recommended that the I-E and SD-SI constructs and their theory bases continue to be employed in alcohol abuse treatment research and, since they are related theoretically but appear to tap into different functions,
that they be used in concert. The issue of I-E and SD-SI being combined into the PES construct, while not supported by this study, should continue to be investigated.

It is also recommended that the relationship of adjustment to I-E, SD-SI, and to the elusive PES be investigated in other clinical populations, perhaps using other measures of adjustment, or different criteria of validity.

The issue of adjustment, as defined by the self-report SAS-SR and the other-reported KAS-R, is unclear. Research into how the two instruments relate to one another would certainly be interesting.

**Summary**

In this chapter the obtained results are discussed. These results appear to indicate that self-evaluated adjustment, for the sample under study, is related to the I-E construct, while adjustment rated by another appears to reflect the level of organization of the perceptual field (SD-SI). No significant results were obtained for either dependent measure of adjustment in relation to the PES construct. These inconclusive findings may reflect either a lack of relationship between adjustment and PES or a type-II error.

Although the ability to generalize from the obtained results is limited by certain aspects of sampling procedure, population, and the population parameters of gender, vocation, and age, various models of treatment were discussed.
The models of treatment were based upon Brickman, et. al.'s (1982) analysis of treatments in terms of attribution of responsibility.

It is recommended that research in the area of subtypes in alcohol abusing populations continue. Recommendations include continued study of I-E, SD-SI, and PES in relation to adjustment, and continued study of the adjustment measures themselves.
NAVAL REGIONAL MEDICAL CENTER  
PORTSMOUTH, VIRGINIA

CONSENT TO PARTICIPATE VOLUNTARILY IN A  
CLINICAL INVESTIGATION PROGRAM

DATE:  ________________

I, (name)__________________________, hereby volunteer  
to participate as a subject in a clinical investigation con­  
ducted under Program #CI 81 08 1612. Work Title:  
"Personality and Alcohol Abuse." I understand that the pro­  
cedures involved in this study are of a purely pencil and  
paper nature and subject me to no known risk, to the best  
knowledge of the investigator, but there may be risks not  
yet identified.

The nature and purpose of this study has been explained  
to me, and I understand as follows:

I will, as a volunteer, be asked to fill out a face  
sheet stating age, rank, marital status, years of service,  
occupation; and to give the name, address, and telephone  
number of a person close to me (wife, roommate, girl-friend,  
other).

I will then be asked to fill out two questionnaires  
and to take a brief perceptual test.

I also give permission for the investigator to contact  
the person listed as close to me and ask her or him to fill  
out a questionnaire describing my behavior just prior to  

Initials:  __________
my entering treatment at this facility.

I understand that this study is related to helping develop a better understanding of alcoholism and the personality of those who engage in alcohol abuse.

Since I am currently being treated for alcoholism, I, by participating in this study, will be helping the investigator to test out some ideas about how alcoholics function, their views on various issues, and their ability to perform a visual task.

The total time taken to complete the two forms and the visual task is usually less than one hour.

The close other (wife, girl-friend, roommate, or other) that I give my consent to contact will also be asked to fill out a brief form describing my behavior prior to admission for treatment. This form should take less than one hour to complete.

I understand that, on the basis of the investigator's study of these research tools, that no risk to either myself or the close other is expected for any reason. There may be other risks not yet identified.

I am also informed that, once all forms are filled out, my name and the name, address, and telephone number of the close other will be stripped from the record and destroyed. Only the investigators will be aware of my responses to the protocol.

I further understand that these tests will not benefit

Initials: ____________
me directly, but may provide additional knowledge and understanding of the problem of alcoholism and its treat-
ment.

I also understand that I may decline to participate in this study and still get the best standard care available.

I understand that I may withdraw from this study at any time and continue to get the best standard care available.

I understand that if any complications arise from this study, care will be provided by the Navy Regional Medical Center, Portsmouth, Virginia.

I understand that throughout the study, my privacy will be maintained and in any publication resulting from the study, I will not be identified in any way, not even by initials, but that my name will be known to the investi-
gators.

I understand that treatment is not a part of this study, and my treatment will be unaffected by this study.

In making my decision to volunteer, I am not relying upon any information or representation not set forth in this document. My consent is given as an exercise of free will, without any force or duress of any kind. I understand that I am encouraged to ask any further questions or to dis-
cuss this protocol with Dr. Mather (398-5652) or Mr. Berns (446-5178) if I desire.

Initials: ________
Signed: _______ Date: _______

Witness/Date

Printed Name: ____________________

Date of Birth: ____________________

Witness/Date

I have explained the above to the subject on the above date.

Principal Investigator: _______

Date: ___________________________
APPENDIX B
Face Sheet

Name

Age: __________
Years in Service: ______
Rank: ________________
Occupation: ______________________
Education: ______________________
Marital status (circle One): Single Married
Separated Divorced Widowed
If married, give name, address, and telephone number of wife:

Name                      Address and phone number

If single, give name, address, and telephone number of a person close to you—girlfriend, roommate, close friend—who can provide some data on your recent behavior:

Name                      Address and phone number

What is your relationship? (circle one): girlfriend roommate close friend other (specify) ________
Dear

I have volunteered to participate in a research project at the Naval Regional Medical Center, Portsmouth, VA and have granted my permission for you to disclose the information requested about me.*

*This letter originally appeared on Department of the Navy letterhead.

The test itself, in the form of a 32 page booklet, as well as the manual and the scoring key (Herman A. Witkin, Philip K. Oltman, Evelyn Raskin, & Stephen A. Karp, 1971), are available to qualified researchers from the publisher.
APPENDIX E
Instructions

This is a questionnaire to find out the way in which certain important events in our society affect different people. Each item consists of a pair of alternatives lettered a or b. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you are concerned. Be sure to select the one that you actually believe to be more true rather than the one you think you should choose or the one you would like to be true. This is a measure of personal belief: obviously there are no right or wrong answers.

Please answer these items carefully, but do not spend too much time on any one item. Be sure to find an answer for every choice. Circle the letter a or b of the statement which you choose to be more true.

In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you're concerned. Also try to respond to each item independently when making your choice: do not be influenced by your previous choices.
1. a. Children get into trouble because their parents punish them too much.

       b. The trouble with most people nowadays is that their parents are too easy with them.

2. a. Many of the unhappy things in people's lives are partly due to bad luck.

       b. People's misfortunes result from the mistakes they make.

3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.

       b. There will always be wars, no matter how hard people try to prevent them.

4. a. In the long run people get the respect they deserve in this world.

       b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

5. a. The idea that teachers are unfair to students is nonsense.

       b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

6. a. Without the right breaks one cannot be an effective leader.

       b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7. a. No matter how hard you try some people just don't like you.

       b. People who can't get others to like them don't understand how to get along with others.

8. a. Heredity plays the major role in determining one's personality.

       b. It is one's experiences in life which determine what they're like.
9. a. I have often found that what is going to happen will happen.
   
   b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10. a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
    
   b. Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
    
   b. Getting a good job depends mainly on being in the right place at the right time.

12. a. The average citizen can have an influence in government decisions.
    
   b. This world is run by the few people in power, and there is not much the little guy can do about it.

13. a. When I make plans, I am almost certain that I can make them work.
    
   b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

14. a. There are certain people who are just no good.
    
   b. There is some good in everybody.

15. a. In my case getting what I want has little or nothing to do with luck.
    
   b. Many times we might just as well decide what to do by flipping a coin.

16. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
    
   b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.

17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
    
   b. By taking an active part in political and social affairs the people can control world events.
18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
   b. There really is no such thing as "luck."

19. a. One should always be willing to admit mistakes.
   b. It is usually best to cover up one's mistakes.

20. a. It is hard to know whether or not a person really likes you.
   b. How many friends you have depends upon how nice a person you are.

21. a. In the long run the bad things that happen to us are balanced by the good ones.
   b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22. a. With enough effort we can wipe out political corruption.
   b. It is difficult for people to have much control over the things politicians do in office.

23. a. Sometimes I can't understand how teachers arrive at the grades they give.
   b. There is a direct connection between how hard I study and the grades I get.

24. a. A good leader expects people to decide for themselves what they should do.
   b. A good leader makes it clear to everybody what their jobs are.

25. a. Many times I feel that I have little influence over the things that happen to me.
   b. It is impossible for me to believe that chance or luck plays an important role in my life.

26. a. People are lonely because they don't try to be friendly.
   b. There's not much use in trying too hard to please people, if they like you, they like you.
27. a. There is too much emphasis on athletics in high school.
   b. Team sports are an excellent way to build character.

28. a. What happens to me is my own doing.
   b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29. a. Most of the time I can't understand why politicians behave the way they do.
   b. In the long run the people are responsible for bad government on a national as well as on a local level.
**SOCIAL ADJUSTMENT SELF REPORT QUESTIONNAIRE**

We are interested in finding out how you have been doing in the last two weeks. We would like you to answer some questions about your work, spare time, and your family life. There are no right or wrong answers to these questions. Check the answers that best describe how you have been in the last two weeks.

### WORK OUTSIDE THE HOME

Please check the situation that best describes you.

I am
- 1 □ a worker for pay
- 2 □ a housewife
- 3 □ a student

Do you usually work for pay more than 15 hours per week?
- 1 □ YES
- 2 □ NO

Did you work any hours for pay in the last two weeks?
- 1 □ YES
- 2 □ NO

Check the answer that best describes how you have been in the last two weeks.

1. How many days did you miss from work in the last two weeks?
   - 1 □ No days missed.
   - 2 □ One day.
   - 3 □ Missed more than half the time.
   - 4 □ I did not work any days.
   - 5 □ I did not work any days.
   - 6 □ On vacation all of the last two weeks.

If you have not worked any days in the last two weeks, go on to Question 7.

2. Have you been able to do your work in the last 2 weeks?
   - 1 □ I did my work very well.
   - 2 □ I did my work well but had some minor problems.
   - 3 □ I needed help with my work and did not do it well about half the time.
   - 4 □ I did my work poorly most of the time.
   - 5 □ I did my work poorly all of the time.

3. Have you been ashamed of how you do your work in the last 2 weeks?
   - 1 □ I never felt ashamed.
   - 2 □ I felt ashamed most of the time.
   - 3 □ I felt ashamed all the time.

4. Have you had any arguments with people at work in the last 2 weeks?
   - 1 □ I had no arguments and got along very well.
   - 2 □ I usually got along well but had minor arguments.
   - 3 □ I had more than one argument.
   - 4 □ I had many arguments.
   - 5 □ I was constantly in arguments.

5. Have you felt upset, worried, or uncomfortable while doing your work during the last 2 weeks?
   - 1 □ I never felt upset.
   - 2 □ Once or twice I felt upset.
   - 3 □ Half the time I felt upset.
   - 4 □ I felt upset most of the time.
   - 5 □ I felt upset all of the time.

6. Have you found your work interesting these last two weeks?
   - 1 □ My work was always interesting.
   - 2 □ Once or twice my work was not interesting.
   - 3 □ Half the time my work was uninteresting.
   - 4 □ Most of the time my work was uninteresting.
   - 5 □ My work was always uninteresting.

### WORK AT HOME – HOUSEWIVES ANSWER QUESTIONS 7-12. OTHERWISE, GO ON TO QUESTION 13.

7. How many days did you do some housework during the last 2 weeks?
   - 1 □ Every day.
   - 2 □ Once or twice I did the housework.
   - 3 □ I did not do the housework.
   - 4 □ I was completely unable to do housework.
   - 5 □ I was away from home all of the last two weeks.

8. During the last two weeks, have you kept up with your housework? This includes cooking, cleaning, laundry, grocery shopping, and errands.
   - 1 □ I did my work very well.
   - 2 □ I did my work well but had some minor problems.
   - 3 □ I needed help with my work and did not do it well about half the time.
   - 4 □ I did my work poorly most of the time.
   - 5 □ I did my work poorly all of the time.

9. Have you been ashamed of how you did your housework during the last 2 weeks?
   - 1 □ I never felt ashamed.
   - 2 □ Once or twice I felt a little ashamed.
   - 3 □ About half the time I felt ashamed.
   - 4 □ I felt ashamed most of the time.
   - 5 □ I felt ashamed all the time.
### SOCIAL ADJUSTMENT SELF REPORT QUESTIONNAIRE (Page 2 of 6)

10. Have you had any arguments with salespeople, tradesmen or neighbors in the last 2 weeks?
   - 1 □ I had no arguments and got along very well. (26)
   - 2 □ I usually got along well, but had minor arguments.
   - 3 □ I had more than one argument
   - 4 □ I had many arguments.
   - 5 □ I was constantly in arguments.

11. Have you felt upset while doing your housework during the last 2 weeks?
   - 1 □ I never felt upset. (27)
   - 2 □ Once or twice I felt upset.
   - 3 □ Half the time I felt upset.
   - 4 □ I felt upset most of the time.
   - 5 □ I felt upset all of the time.

12. Have you found your housework interesting these last 2 weeks?
   - 1 □ My work was almost always interesting. (28)
   - 2 □ Once or twice my work was not interesting.
   - 3 □ Half the time my work was uninteresting.
   - 4 □ Most of the time my work was uninteresting.
   - 5 □ My work was always uninteresting.

14. Have you been able to keep up with your class work in the last 2 weeks?
   - 1 □ I did my work very well. (31)
   - 2 □ I did my work well but had minor problems.
   - 3 □ I needed help with my work and did not do well about half the time.
   - 4 □ I did my work poorly most of the time.
   - 5 □ I did my work poorly all the time.

15. During the last 2 weeks, have you been ashamed of how you do your school work?
   - 1 □ I never felt ashamed.
   - 2 □ Once or twice I felt ashamed.
   - 3 □ About half the time I felt ashamed.
   - 4 □ I felt ashamed most of the time.
   - 5 □ I felt ashamed all of the time.

16. Have you had any arguments with people at school in the last 2 weeks?
   - 1 □ I had no arguments and got along very well. (33)
   - 2 □ I usually got along well but had minor arguments.
   - 3 □ I had more than one argument.
   - 4 □ I had many arguments.
   - 5 □ I was constantly in arguments.
   - 8 □ Not applicable; I did not attend school.

17. Have you felt upset at school during the last 2 weeks?
   - 1 □ I never felt upset. (34)
   - 2 □ Once or twice I felt upset.
   - 3 □ Half the time I felt upset.
   - 4 □ I felt upset most of the time.
   - 5 □ I felt upset all of the time.
   - 8 □ Not applicable; I did not attend school.

18. Have you found your school work interesting these last 2 weeks?
   - 1 □ My work was almost always interesting. (35)
   - 2 □ Once or twice my work was not interesting.
   - 3 □ Half the time my work was uninteresting.
   - 4 □ Most of the time my work was uninteresting.
   - 5 □ My work was always uninteresting.

**FOR STUDENTS**

*Answer Questions 13-18 if you go to school half time or more. Otherwise, go on to Question 19.*

What best describes your school program? (Choose one)
- 1 □ Full Time (29)
- 2 □ 3/4 Time
- 3 □ Half Time

Check the answer that best describes how you have been the last 2 weeks.

13. How many days of classes did you miss in the last 2 weeks?
   - 1 □ No days missed. (30)
   - 2 □ A few days missed.
   - 3 □ I missed about half the time.
   - 4 □ Missed more than half time but did make at least one day.
   - 5 □ I did not go to classes at all.
   - 8 □ I was on vacation all of the last two weeks.
### SOCIAL ADJUSTMENT SELF REPORT QUESTIONNAIRE (Page 3 of 6)

**SPARE TIME - EVERYONE ANSWER QUESTIONS 19-27.**

Check the answer that best describes how you have been in the last 2 weeks.

19. How many friends have you seen or spoken to on the telephone in the last 2 weeks?
   1. Nine or more friends. (36)
   2. Five to eight friends.
   3. Two to four friends.
   4. One friend
   5. No friends.

20. Have you been able to talk about your feelings and problems with at least one friend during the last 2 weeks?
   1. I can always talk about my innermost feelings. (37)
   2. I usually can talk about my feelings.
   3. About half the time I felt able to talk about my feelings.
   4. I usually was not able to talk about my feelings.
   5. I was never able to talk about my feelings.
   8. Not applicable; I have no friends.

21. How many times in the last two weeks have you gone out socially with other people? For example, visited friends, gone to movies, bowling, church, restaurants, invited friends to your home?
   1. More than 3 times. (38)
   2. Three times.
   3. Twice.
   4. Once.
   5. None.

22. How much time have you spent on hobbies or spare time interests during the last 2 weeks? For example, bowling, sewing, gardening, sports, reading?
   1. I spent most of my spare time on hobbies almost every day. (39)
   2. I spent some spare time on hobbies some of the days.
   3. I spent a little spare time on hobbies.
   4. I usually did not spend any time on hobbies but did watch TV.
   5. I did not spend any spare time on hobbies or watching TV.

23. Have you had open arguments with your friends in the last 2 weeks?
   1. I had no arguments and got along very well. (40)
   2. I usually got along well but had minor arguments.
   3. I had more than one argument.
   4. I had many arguments.
   5. I was constantly in arguments.
   8. Not applicable; I have no friends.

24. If your feelings were hurt or offended by a friend during the last two weeks, how badly did you take it?
   1. It did not affect me or it did not happen. (41)
   2. I got over it in a few hours.
   3. I got over it in a few days.
   4. I got over it in a week.
   5. It will take me months to recover.
   8. Not applicable; I have no friends.

25. Have you felt shy or uncomfortable with people in the last 2 weeks?
   1. I always felt comfortable. (42)
   2. Sometimes I felt uncomfortable but could relax after a while.
   3. About half the time I felt uncomfortable.
   4. I usually felt uncomfortable.
   5. I always felt uncomfortable.
   8. Not applicable; I was never with people.

26. Have you felt lonely and wished for more friends during the last 2 weeks?
   1. I have not felt lonely. (43)
   2. I have felt lonely a few times.
   3. About half the time I felt lonely.
   4. I usually felt lonely.
   5. I always felt lonely and wished for more friends.

27. Have you felt bored in your spare time during the last 2 weeks?
   1. I never felt bored. (44)
   2. I usually did not feel bored.
   3. About half the time I felt bored.
   4. Most of the time I felt bored.
   5. I was constantly bored.

Are you a Single, Separated, or Divorced Person not living with a person of opposite sex; please answer below:

1. YES, Answer questions 28 & 29. (45)
2. NO, go to question 30.

28. How many times have you been with a date these last 2 weeks?
   1. More than 3 times. (46)
   2. Three times.
   3. Twice.
   4. Once.
   5. Never.
### SOCIAL ADJUSTMENT SELF REPORT QUESTIONNAIRE (Page 4 of 6)

<table>
<thead>
<tr>
<th>Study</th>
<th>Patient Number</th>
<th>Patient Initials</th>
<th>21</th>
<th>SAS-SR-Patient</th>
<th>Page 4 of 6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FAMILY**

Answer Questions 30-37 about your parents, brothers, sisters, in-laws, and children not living at home. Have you been in contact with any of them in the last two weeks?

1. **YES, Answer questions 30-37.**
2. **NO, Go to question 36.**

#### Questions 30-37

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>30. Have you had open arguments with your relatives in the last 2 weeks?</td>
<td>1. We always got along very well.</td>
</tr>
<tr>
<td></td>
<td>2. We usually got along very well but had some minor arguments.</td>
</tr>
<tr>
<td></td>
<td>3. I had more than one argument with at least one relative.</td>
</tr>
<tr>
<td></td>
<td>4. I had many arguments.</td>
</tr>
<tr>
<td></td>
<td>5. I was constantly in arguments.</td>
</tr>
<tr>
<td>31. Have you been able to talk about your feelings and problems with at least one of your relatives in the last 2 weeks?</td>
<td>1. I can always talk about my feelings with at least one relative.</td>
</tr>
<tr>
<td></td>
<td>2. I usually can talk about my feelings.</td>
</tr>
<tr>
<td></td>
<td>3. About half the time I felt able to talk about my feelings.</td>
</tr>
<tr>
<td></td>
<td>4. I usually was not able to talk about my feelings.</td>
</tr>
<tr>
<td></td>
<td>5. I was never able to talk about my feelings.</td>
</tr>
<tr>
<td>32. Have you avoided contacts with your relatives these last two weeks?</td>
<td>1. I have contacted relatives regularly.</td>
</tr>
<tr>
<td></td>
<td>2. I have contacted a relative at least once.</td>
</tr>
<tr>
<td></td>
<td>3. I have waited for my relatives to contact me.</td>
</tr>
<tr>
<td></td>
<td>4. I avoided my relatives, but they contacted me.</td>
</tr>
<tr>
<td></td>
<td>5. I have no contacts with any relatives.</td>
</tr>
<tr>
<td>33. Did you depend on your relatives for help, advice, money or friendship during the last 2 weeks?</td>
<td>1. I never need to depend on them.</td>
</tr>
<tr>
<td></td>
<td>2. I usually did not need to depend on them.</td>
</tr>
<tr>
<td></td>
<td>3. About half the time I needed to depend on them.</td>
</tr>
<tr>
<td></td>
<td>4. Most of the time I depend on them.</td>
</tr>
<tr>
<td></td>
<td>5. I depend completely on them.</td>
</tr>
<tr>
<td>34. Have you wanted to do the opposite of what your relatives wanted in order to make them angry during the last 2 weeks?</td>
<td>1. I never wanted to oppose them.</td>
</tr>
<tr>
<td></td>
<td>2. Once or twice I wanted to oppose them.</td>
</tr>
<tr>
<td></td>
<td>3. About half the time I wanted to oppose them.</td>
</tr>
<tr>
<td></td>
<td>4. Most of the time I wanted to oppose them.</td>
</tr>
<tr>
<td></td>
<td>5. I always opposed them.</td>
</tr>
<tr>
<td>35. Have you been worried about things happening to your relatives without good reason in the last 2 weeks?</td>
<td>1. I have not worried without reason</td>
</tr>
<tr>
<td></td>
<td>2. Once or twice I worried.</td>
</tr>
<tr>
<td></td>
<td>3. About half the time I worried.</td>
</tr>
<tr>
<td></td>
<td>4. Most of the time I worried.</td>
</tr>
<tr>
<td></td>
<td>5. I have worried the entire time.</td>
</tr>
<tr>
<td></td>
<td>8. Not applicable; my relatives are no longer living.</td>
</tr>
<tr>
<td>36. During the last two weeks, have you been thinking that you have let any of your relatives down or have been unfair to them at any time?</td>
<td>1. I did not feel that I let them down at all.</td>
</tr>
<tr>
<td></td>
<td>2. I usually did not feel that I let them down.</td>
</tr>
<tr>
<td></td>
<td>3. About half the time I felt that I let them down.</td>
</tr>
<tr>
<td></td>
<td>4. Most of the time I have felt that I let them down.</td>
</tr>
<tr>
<td></td>
<td>5. I always felt that I let them down.</td>
</tr>
<tr>
<td>37. During the last two weeks, have you been thinking that any of your relatives have let you down or have been unfair to you at any time?</td>
<td>1. I never felt that they let me down.</td>
</tr>
<tr>
<td></td>
<td>2. I felt that they usually did not let me down.</td>
</tr>
<tr>
<td></td>
<td>3. About half the time I felt that they let me down.</td>
</tr>
<tr>
<td></td>
<td>4. I usually have felt that they let me down.</td>
</tr>
<tr>
<td></td>
<td>5. I am very bitter that they let me down.</td>
</tr>
</tbody>
</table>

**Are you living with your spouse or have been living with a person of the opposite sex in a permanent relationship?**

1. **YES, Please answer questions 38-46.**
2. **NO, Go to question 47.**

#### Questions 38-46

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>38. Have you had open arguments with your partner in the last 2 weeks?</td>
<td>1. We had no arguments and we got along well.</td>
</tr>
<tr>
<td></td>
<td>2. We usually got along well but had minor arguments.</td>
</tr>
<tr>
<td></td>
<td>3. We had more than one argument.</td>
</tr>
<tr>
<td></td>
<td>4. We had many arguments.</td>
</tr>
<tr>
<td></td>
<td>5. We were constantly in arguments.</td>
</tr>
</tbody>
</table>
### SOCIAL ADJUSTMENT SELF REPORT QUESTIONNAIRE (Page 5 of 6)

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>39. Have you been able to talk about your feelings and problems with your partner during the last 2 weeks?</td>
<td>1 □ I could always talk freely about my feelings. (68)</td>
</tr>
<tr>
<td></td>
<td>2 □ I usually could talk about my feelings.</td>
</tr>
<tr>
<td></td>
<td>3 □ About half the time I felt able to talk about my feelings.</td>
</tr>
<tr>
<td></td>
<td>4 □ I usually was not able to talk about my feelings.</td>
</tr>
<tr>
<td></td>
<td>5 □ I was never able to talk about my feelings.</td>
</tr>
<tr>
<td>40. Have you been demanding to have your own way at home during the last 2 weeks?</td>
<td>1 □ I have not insisted on always having my own way. (69)</td>
</tr>
<tr>
<td></td>
<td>2 □ I usually have not insisted on having my own way.</td>
</tr>
<tr>
<td></td>
<td>3 □ About half the time I insisted on having my own way.</td>
</tr>
<tr>
<td></td>
<td>4 □ I usually insisted on having my own way.</td>
</tr>
<tr>
<td></td>
<td>5 □ I always insisted on having my own way.</td>
</tr>
<tr>
<td>41. Have you been bossed around by your partner these last 2 weeks?</td>
<td>1 □ Almost never. (60)</td>
</tr>
<tr>
<td></td>
<td>2 □ Once in a while.</td>
</tr>
<tr>
<td></td>
<td>3 □ About half the time.</td>
</tr>
<tr>
<td></td>
<td>4 □ Most of the time.</td>
</tr>
<tr>
<td></td>
<td>5 □ Always.</td>
</tr>
<tr>
<td>42. How much have you felt dependent on your partner these last 2 weeks?</td>
<td>1 □ I was independent.</td>
</tr>
<tr>
<td></td>
<td>2 □ I was usually independent.</td>
</tr>
<tr>
<td></td>
<td>3 □ I was somewhat dependent.</td>
</tr>
<tr>
<td></td>
<td>4 □ I was usually dependent.</td>
</tr>
<tr>
<td></td>
<td>5 □ I depended on my partner for everything.</td>
</tr>
<tr>
<td>43. How have you felt about your partner during the last 2 weeks?</td>
<td>1 □ I always felt affection.</td>
</tr>
<tr>
<td></td>
<td>2 □ I usually felt affection.</td>
</tr>
<tr>
<td></td>
<td>3 □ About half the time I felt dislike and half the time affection.</td>
</tr>
<tr>
<td></td>
<td>4 □ I usually felt dislike.</td>
</tr>
<tr>
<td></td>
<td>5 □ I always felt dislike.</td>
</tr>
<tr>
<td>44. How many times have you and your partner had intercourse?</td>
<td>1 □ More than twice a week.</td>
</tr>
<tr>
<td></td>
<td>2 □ Once or twice a week.</td>
</tr>
<tr>
<td></td>
<td>3 □ Once every two weeks.</td>
</tr>
<tr>
<td></td>
<td>4 □ Less than once every two weeks but at least once in the last month.</td>
</tr>
<tr>
<td></td>
<td>5 □ Not at all in a month or longer.</td>
</tr>
<tr>
<td>45. Have you had any problems during intercourse, such as pain these last two weeks?</td>
<td>1 □ None.</td>
</tr>
<tr>
<td></td>
<td>2 □ Once or twice.</td>
</tr>
<tr>
<td></td>
<td>3 □ About half the time.</td>
</tr>
<tr>
<td></td>
<td>4 □ Most of the time.</td>
</tr>
<tr>
<td></td>
<td>5 □ Always.</td>
</tr>
<tr>
<td></td>
<td>8 □ Not applicable; no intercourse in the last two weeks.</td>
</tr>
<tr>
<td>46. How have you felt about intercourse during the last 2 weeks?</td>
<td>1 □ I always enjoyed it.</td>
</tr>
<tr>
<td></td>
<td>2 □ I usually enjoyed it.</td>
</tr>
<tr>
<td></td>
<td>3 □ About half the time I did and half the time I did not enjoy it.</td>
</tr>
<tr>
<td></td>
<td>4 □ I usually did not enjoy it.</td>
</tr>
<tr>
<td></td>
<td>5 □ I never enjoyed it.</td>
</tr>
</tbody>
</table>

**QUESTIONS 47-54 On Next Page.**
### SOCIAL ADJUSTMENT SELF REPORT QUESTIONNAIRE (Page 6 of 6)

**CHILDREN**

Have you had unmarried children, stepchildren, or foster children living at home during the last two weeks?

1 □ YES, Answer questions 47-50.  
2 □ NO, Go to question 51.

47. Have you been interested in what your children are doing — school, play or hobbies during the last 2 weeks?

1 □ I was always interested and actively involved.  
2 □ I usually was interested and involved.  
3 □ About half the time I could communicate.  
4 □ I usually was disinterested.  
5 □ I was/always disinterested.

48. Have you been able to talk and listen to your children during the last 2 weeks? Include only children over the age of 2.

1 □ I was always able to communicate with them.  
2 □ I usually was able to communicate with them.  
3 □ About half the time I could communicate.  
4 □ I usually was not able to communicate.  
5 □ I was completely unable to communicate.  
6 □ Not applicable; no children over the age of 2.

49. How have you been getting along with the children during the last 2 weeks?

1 □ I had no arguments and got along very well.  
2 □ I usually got along well but had minor arguments.  
3 □ I had more than one argument.  
4 □ I had many arguments.  
5 □ I was constantly in arguments.

50. How have you felt toward your children these last 2 weeks?

1 □ I always felt affection.  
2 □ I mostly felt affection.  
3 □ About half the time I felt affection.  
4 □ Most of the time I felt affection.  
5 □ I never felt affection toward them.

**FAMILY UNIT**

Have you ever been married, ever lived with a person of the opposite sex, or ever had children? Please check

1 □ YES, Please answer questions 51-53.  
2 □ NO, Go to question 54.

51. Have you worried about your partner or any of your children without any reason during the last 2 weeks, even if you are not living together now?

1 □ I never worried.  
2 □ Once or twice I worried.  
3 □ About half the time I worried.  
4 □ Most of the time I worried.  
5 □ I always worried.  
6 □ Not applicable; partner and children not living.

52. During the last 2 weeks have you been thinking that you have let down your partner or any of your children at any time?

1 □ I did not feel they let me down at all.  
2 □ I usually did not feel that they let me down.  
3 □ About half the time I felt they let me down.  
4 □ Most of the time I have felt that they let me down.  
5 □ I let them down completely.

53. During the last 2 weeks, have you been thinking that your partner or any of your children have let you down at any time?

1 □ I never felt that they let me down.  
2 □ I felt they usually did not let me down.  
3 □ About half the time I felt they let me down.  
4 □ I usually felt they let me down.  
5 □ I feel bitter that they have let me down.

**FINANCIAL – EVERYONE PLEASE ANSWER QUESTION 54.**

54. Have you had enough money to take care of your own and your family’s financial needs during the last 2 weeks?

1 □ I had enough money for needs.  
2 □ I usually had enough money with minor problems.  
3 □ About half the time I did not have enough money but did not have to borrow money.  
4 □ I usually did not have enough money and had to borrow from others.  
5 □ I had great financial difficulty.
APPENDIX G
Relative's Rating Scales (R Forms)

The forms which I shall ask you to fill out are designed to give us some idea of how ____________ is from day to day, his behavior, and how he gets along with other people. It will give us some idea of what he has been doing and how well he has been getting along within the past two months.
<table>
<thead>
<tr>
<th>Study</th>
<th>Form</th>
<th>Hospital</th>
<th>Subject</th>
<th>Period</th>
<th>Rater</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Name of subject ________________________________
Name of respondent ________________________________
Respondent's relationship to the subject ________________________________
Date ________________________________
Interviewer ________________________________

Copyright M.M. Katz, 1979
Reprinted by Permission
Form R1 (Parts I & II)

Instructions to the relative or friend:

There are a number of statements on this list which describe different kinds of behavior and mood. These include symptoms that people who have been in the hospital sometimes show. Would you go through them and indicate how ______________ has looked to you on these things during the few weeks before entering the hospital. Alongside each statement are four possible answers.

If, in your opinion, ______________ is never like this, or only rarely, then place a check in the first box (1).

If ______________ is this way sometimes, but not too frequently, place a check in box (2).

If ______________ is like this often, check box (3).

Place a check in box (4) if the statement would describe ______________ or his behavior always or practically always.

For example, where the statement reads "has trouble sleeping," if ______________ is sometimes bothered by this, then you would place a check in box (2). If, as far as you know, he never or very rarely has any difficulties with sleeping, then you would check box (1).

Do not spend too much time on any one question, but make sure that you check every question.
<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Has trouble sleeping</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>2. Gets very self critical, starts to blame himself for things</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>3. Cries easily</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>4. Feels lonely</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>5. Acts as if he has no interest in things</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>6. Is restless</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>7. Has periods where he can't stop moving or doing something</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>8. Just sits</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>9. Acts as if he doesn't have much energy</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>10. Looks worn out</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>11. Feelings get hurt easily</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>12. Feels that people don't care about him</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>13. Does the same thing over and over again without reason</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>14. Passes out</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>15. Gets very sad, blue</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>16. Tries too hard</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>17. Needs to do things very slowly to do them right</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>18. Has strange fears</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>19. Afraid something terrible is going to happen</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>20. Gets nervous easily</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>21. Jittery</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
### KAS-R, Revised Form A

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>22. Worries or frets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 40</td>
</tr>
<tr>
<td>23. Gets sudden fright for no reason</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 41</td>
</tr>
<tr>
<td>24. Has bad dreams</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 42</td>
</tr>
<tr>
<td>25. Acts as if he sees people or things that aren't there</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 43</td>
</tr>
<tr>
<td>26. Does strange things without reason</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 44</td>
</tr>
<tr>
<td>27. Attempts suicide</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 45</td>
</tr>
<tr>
<td>28. Gets angry and breaks things</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 46</td>
</tr>
<tr>
<td>29. Talks to himself</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 47</td>
</tr>
<tr>
<td>30. Acts as if he has no control over his emotions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 48</td>
</tr>
<tr>
<td>31. Laughs or cries at strange times</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 49</td>
</tr>
<tr>
<td>32. Has mood changes without reason</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 50</td>
</tr>
<tr>
<td>33. Has temper tantrums</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 51</td>
</tr>
<tr>
<td>34. Gets very excited for no reason</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 52</td>
</tr>
<tr>
<td>35. Gets very happy for no reason</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 53</td>
</tr>
<tr>
<td>36. Acts as if he doesn't care about other people's feelings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 54</td>
</tr>
<tr>
<td>37. Thinks only of himself</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 55</td>
</tr>
<tr>
<td>38. Shows his feelings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 56</td>
</tr>
<tr>
<td>39. Generous</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 57</td>
</tr>
<tr>
<td>40. Thinks people are talking about him</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 58</td>
</tr>
<tr>
<td>41. Complains of headaches, stomach trouble, other physical ailments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 59</td>
</tr>
<tr>
<td></td>
<td>KAS-R, Revised Form A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>----------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>col.</td>
</tr>
<tr>
<td>42.</td>
<td>Bossy</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>43.</td>
<td>Acts as if he's suspicious of people</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>44.</td>
<td>Argues</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>45.</td>
<td>Gets into fights with people</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>46.</td>
<td>Is cooperative</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>47.</td>
<td>Does the opposite of what he is asked</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>48.</td>
<td>Stubborn</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>49.</td>
<td>Answers when talked to</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>50.</td>
<td>Curses at people</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>51.</td>
<td>Deliberately upsets routine</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>52.</td>
<td>Resentful</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>53.</td>
<td>Envious of other people</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>54.</td>
<td>Friendly</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>55.</td>
<td>Gets annoyed easily</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>56.</td>
<td>Critical of other people</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>57.</td>
<td>Pleasant</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>58.</td>
<td>Gets along well with people</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>59.</td>
<td>Lies</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>60.</td>
<td>Gets into trouble with law</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>61.</td>
<td>Gets drunk</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>62.</td>
<td>Is dependable</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>63.</td>
<td>Is responsible</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>64.</td>
<td>Argues (talks) back</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>65.</td>
<td>Obedient</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
### KAS-R, Revised Form A

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Column</th>
</tr>
</thead>
<tbody>
<tr>
<td>66. Shows good judgment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 22</td>
</tr>
<tr>
<td>67. Stays away from people</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 23</td>
</tr>
<tr>
<td>68. Takes drugs other than recommended by hospital or clinic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 24</td>
</tr>
<tr>
<td>69. Shy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 25</td>
</tr>
<tr>
<td>70. Quiet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 26</td>
</tr>
<tr>
<td>71. Prefers to be alone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 27</td>
</tr>
<tr>
<td>72. Needs a lot of attention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 28</td>
</tr>
<tr>
<td>73. Behavior is childish</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 29</td>
</tr>
<tr>
<td>74. Acts helpless</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 30</td>
</tr>
<tr>
<td>75. Is independent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 31</td>
</tr>
</tbody>
</table>

### R1, Part 11

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Column</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Moves about very slowly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 32</td>
</tr>
<tr>
<td>2. Moves about in a hurried way</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 33</td>
</tr>
<tr>
<td>3. Clumsy; keeps bumping into things or dropping things</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 34</td>
</tr>
<tr>
<td>4. Very quick to react to something you say or do</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 35</td>
</tr>
<tr>
<td>5. Very slow to react</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 36</td>
</tr>
<tr>
<td>6. Gets into peculiar positions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 37</td>
</tr>
<tr>
<td>7. Makes peculiar movements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 38</td>
</tr>
<tr>
<td>8. Hands tremble</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 39</td>
</tr>
<tr>
<td>9. Will stay in one position for a long period</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 40</td>
</tr>
<tr>
<td>10. Loses track of day, month, or year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 41</td>
</tr>
<tr>
<td>11. Forgets his address or other places he knows well</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 42</td>
</tr>
</tbody>
</table>
### KAS-R, Revised Form A

<table>
<thead>
<tr>
<th></th>
<th>1 almost never</th>
<th>2 sometimes</th>
<th>3 often</th>
<th>4 almost always</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Remembers the names of people he knows well</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 43</td>
</tr>
<tr>
<td>13. Acts as if he doesn't know where he is</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 44</td>
</tr>
<tr>
<td>14. Remembers important things</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 45</td>
</tr>
<tr>
<td>15. Acts as if he's confused about things; in a daze</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 46</td>
</tr>
<tr>
<td>16. Acts as if he can't get certain thoughts out of his mind</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 47</td>
</tr>
<tr>
<td>17. Acts as if he can't concentrate on one thing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 48</td>
</tr>
<tr>
<td>18. Acts as if he can't make decisions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 49</td>
</tr>
<tr>
<td>19. Talks without making sense</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 50</td>
</tr>
<tr>
<td>20. Hard to understand his words</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 51</td>
</tr>
<tr>
<td>21. Speaks clearly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 52</td>
</tr>
<tr>
<td>22. Refuses to speak at all for periods of time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 53</td>
</tr>
<tr>
<td>23. Speaks so low you cannot hear him</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 54</td>
</tr>
<tr>
<td>24. Speaks very loudly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 55</td>
</tr>
<tr>
<td>25. Shouts or yells for no reason</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 56</td>
</tr>
<tr>
<td>26. Speaks very fast</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 57</td>
</tr>
<tr>
<td>27. Speaks very slowly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 58</td>
</tr>
<tr>
<td>28. Acts as if he wants to speak but can't</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 59</td>
</tr>
<tr>
<td>29. Keeps repeating the same idea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 60</td>
</tr>
<tr>
<td>30. Keeps changing from one subject to another for no reason</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 61</td>
</tr>
<tr>
<td>31. Talks too much</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>col. 62</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>col.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>------</td>
</tr>
<tr>
<td>32. Says that people are talking about him</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>63</td>
</tr>
<tr>
<td>33. Says that people are trying to make him do or think things he doesn't want to</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>64</td>
</tr>
<tr>
<td>34. Talks as if he committed the worst sins</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>65</td>
</tr>
<tr>
<td>35. Talks about how angry he is at certain people</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>66</td>
</tr>
<tr>
<td>36. Talks about people or things he's very afraid of</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>67</td>
</tr>
<tr>
<td>37. Threatens to injure certain people</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>68</td>
</tr>
<tr>
<td>38. Threatens to tell people off</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>69</td>
</tr>
<tr>
<td>39. Says he is afraid that he will injure somebody</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>70</td>
</tr>
<tr>
<td>40. Says he is afraid that he will not be able to control himself</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>71</td>
</tr>
<tr>
<td>41. Talks about strange things that are going on inside his body</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>72</td>
</tr>
<tr>
<td>42. Says how bad or useless he is</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>43. Brags about how good he is</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>74</td>
</tr>
<tr>
<td>44. Says the same thing over and over again</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>75</td>
</tr>
<tr>
<td>45. Complains about people and things in general</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>76</td>
</tr>
<tr>
<td>46. Talks about big plans he has for the future</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>77</td>
</tr>
<tr>
<td>47. Says or acts as if people are after him</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>78</td>
</tr>
<tr>
<td>48. Says that something terrible is going to happen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>79</td>
</tr>
<tr>
<td>49. Believes in strange things</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>1 almost never</td>
<td>2 sometimes</td>
<td>3 often</td>
<td>4 almost always</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>----------------</td>
<td>-------------</td>
<td>--------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td>50. Talks about suicide</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>51. Talks about strange sexual ideas</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>52. Gives advice without being asked</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
</tbody>
</table>

Card 03

col. 19

col. 20

col. 21
Form R1 (Part III)

Instructions to the relative or friend:

Here are a list of problems and complaints that people sometimes have. From what you have been able to observe, how much have the following bothered or distressed ____________________________ during the past few weeks before he came into the hospital?
<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Col.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Soreness of muscles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>2. Numbness or tingling in parts of the body</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>23</td>
</tr>
<tr>
<td>3. Heavy feelings in the arms or legs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>4. Weakness in parts of the body</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>5. Pains in heart or chest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>6. Hot or cold spells</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>7. Pains in lower back</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28</td>
</tr>
<tr>
<td>8. Trouble getting his breath</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>9. Faintness or dizziness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>10. A lump in his throat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>31</td>
</tr>
<tr>
<td>11. Headaches</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>12. Nausea or upset stomach</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>13. Heart pounding or racing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>34</td>
</tr>
<tr>
<td>14. Trouble falling asleep</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>15. Trouble awakening in the early morning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>16. Sleep that is restless or disturbed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>37</td>
</tr>
<tr>
<td>17. Over-eating</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>38</td>
</tr>
<tr>
<td>18. Poor appetite</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>39</td>
</tr>
<tr>
<td>19. Constipation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>20. Loss of sexual interest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>41</td>
</tr>
</tbody>
</table>
DATE: __________

I, (name)_________________________, hereby volunteer to participate as a subject in a clinical investigation conducted under Program # CI 81 08 1612. Work Title: "Personality and Alcohol Abuse." I understand that the procedures involved in this study are of a purely pencil and paper nature and subject me to no actual risk, to the best knowledge of the investigator.

I will, as a volunteer, be asked to fill out a behavior inventory in which I will rate the behavior of ______________, who is currently a patient in an alcohol treatment program.

I understand that the purpose of this study is to better understand the relationship between personality and adjustment in those who are diagnosed as being alcoholics.

I understand that my participation has been agreed to by the above named individual, who will not under any circumstances become aware of my answers on this questionnaire.

I understand that my only participation will be the filling out of this questionnaire, which should take less than one hour. It is my understanding that there are no

Initials: __________
known risks attendant to filling out this questionnaire, but that risks not yet identified may exist.

I understand that this test will be of no direct benefit for myself or for the patient about whom I am answering questions.

I understand that my participation or lack of participation will in no way affect the treatment of the patient named above.

I understand that I may withdraw from this study at any time.

I understand that throughout the study, my privacy will be maintained and in any publication resulting from the study, I will not be identified in any way, not even by initials. I further understand that the results of my performance on this questionnaire will be known to the investigators.

In making my decision to volunteer, I am not relying upon any information or representation not set forth in this document. My consent is given as an exercise of free will, without any force or duress of any kind. I understand that I am encouraged to ask any further questions or to discuss this protocol with the proposer if I desire, and may contact Mr. Berns, 446-5178 or Dr. Mather, 398-5652, if I wish.

Signed: _______ Date: _______
Witness/Date

Printed Name: ____________________

Date of Birth: ______________

Witness/Date

I have explained the above to the subject on the above date.

Principal Investigator:

______________________________

Date: _________________________


Comparison of perceived and experienced control among alcoholics and nonalcoholics. *Journal of Abnormal Psychology*, 1975, 84(6), 726-728.


Karp, S. A., Kissin, B., & Hustmyer, F. E. Field dependence
as a predictor of alcohol therapy dropouts. *Journal of Nervous and Mental Disease*, 1970, **150**, 77-83.


Lefcourt, H. M., Hogg, E., & Sordoni, C. Locus of Control, field dependence and the conditions arousing objective vs. subjective self-awareness. Journal of Research


Miller, P. Behavior modification and Alcoholics Anonymous: An unlikely combination. *Behavior Therapy*, 1978, 9,
300-301.


O'Leary, M. R., Speltz, M. L., & Walker, R. D. Influence of reported helplessness on client-clinician relation-


Pottinger, P. S. The relationship of perceptual field dependence-independence to a measure of the active-passive dimension in personality. Dissertation Abstracts
International, 1972, 32(12-B), 7297-7298. (University Microfilms International No. 72-18,442)


Rohsenow, D. J., & O'Leary, M. R. Locus of control research on alcoholic populations: A review. I. Developments, scales, and treatment. The International Journal of the Addictions, 1978, 13, 55-78. (a)


Shaffer, J. W., Perlin, S., Schmidt, C. W., Jr., & Himelfarb, M. Assessment in absentia: New directions in


Voth, A. C. Autokinesis and alcoholism. *Quarterly Journal*


Witkin, H. A., & Asch, S. E. Studies in space orientation: IV. Further experiments on perception of the upright with displaced visual fields. *Journal of Experimental Psychology, 1948, 38,* 762-782. (b)


Vita

Jonathan H. Berns

Birthdate: May 28, 1948
Birthplace: New York, New York

Education:

1976-1982 The College of William and Mary in Virginia
Williamsburg, Virginia
Certificate of Advanced Graduate Study in
Education
Doctor of Education

1970-1972 The Graduate Faculty of the New School
for Social Research
New York, New York
Master of Arts

1966-1970 The American University
Washington, D. C.
Bachelor of Arts
Abstract

PERCEPTUAL-EXPECTANCY STYLE (PES) AND PRETREATMENT ADJUSTMENT: A STUDY OF SUBTYPES AMONG MALE ALCOHOL ABUSERS

Jonathan H. Berns, Ed.D.
The College of William and Mary in Virginia, November, 1982
Chairman: Charles O. Matthews, Ph.D.

The purpose of this study was to explore the possibilities of subtyping inpatient alcohol abusers using three personality constructs: locus of control (LOC), state dependence-state independence (SD-SI), and perceptual expectancy style (PES). PES is formed by an interaction of LOC (measured by I-E) and SD-SI (measured by GEFT); congruent (I-SI and E-SD) and incongruent (E-SI and I-SD) styles result.

A population of male, active-duty military personnel was sampled. Ss evaluated their own level of adjustment using SAS-SR and, when possible, were evaluated by a significant other using KAS-R1-3.

It was hypothesized that the independent measures would define subtypes which would be reflected in adjustment ratings. Such a finding could then have been used as a basis for studies of patient-to-treatment match.

Results indicate that LOC was related to self-rated adjustment, but are inconclusive in terms of adjustment as rated by another. SD-SI subtypes were found to be related to adjustment as rated by another, but results were inconclusive with regard to self-ratings of adjustment. Results for the PES subtypes were inconclusive with regard to adjustment evaluated either by self or others.

Clinical implications of the results were discussed and further research into subtyping of alcohol abusers on the basis of LOC, SD-SI, and PES was recommended.