



1968

## Personality Characteristics of the Alcoholic Derived from Story Sequence Analysis

Harry George Eschel  
*Loyola University Chicago*

Follow this and additional works at: [https://ecommons.luc.edu/luc\\_diss](https://ecommons.luc.edu/luc_diss)



Part of the [Psychology Commons](#)

---

### Recommended Citation

Eschel, Harry George, "Personality Characteristics of the Alcoholic Derived from Story Sequence Analysis" (1968). *Dissertations*. 928.

[https://ecommons.luc.edu/luc\\_diss/928](https://ecommons.luc.edu/luc_diss/928)

This Dissertation is brought to you for free and open access by the Theses and Dissertations at Loyola eCommons. It has been accepted for inclusion in Dissertations by an authorized administrator of Loyola eCommons. For more information, please contact [ecommons@luc.edu](mailto:ecommons@luc.edu).



This work is licensed under a [Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 License](#).  
Copyright © 1968 Harry George Eschel

PERSONALITY CHARACTERISTICS OF THE ALCOHOLIC  
DERIVED FROM STORY SEQUENCE ANALYSIS

by

Harry George Eschel

A Dissertation Submitted to the Faculty of the Graduate School of  
Loyola University in Partial Fulfillment of  
the Requirements for the Degree of  
Doctor of Philosophy

June

1968

## ACKNOWLEDGMENTS

The author wishes to express his gratitude to Dr. Richard A. Matre, Dean of the Graduate School, Loyola University and to Dr. Ronald E. Walker, Director, Department of Psychology, for their charity in allowing the time extension which made it possible for him to complete this final Ph.D. requirement, and to Dr. Magda B. Arnold, Professor, for her direction, practical recommendations and suggested revisions which were invaluable.

The author also wishes to express his sincere appreciation to Miss Phyllis K. Snyder, Executive Director; Dr. Vincent D. Pissani, Chief of Mental Health Services; and other staff members and cooperating patients of Chicago's Alcoholic Treatment Center. Appreciation is also expressed to the employees of Consolidated School District 62, Des Plaines, Illinois, and to the employees of the Halliburton Oil Company who served as subjects. I am particularly indebted to Dr. Leon Smaage, Superintendent of Schools, and the Board of Education, Des Plaines, Illinois, for granting me a Board Leave, and to Mrs. Bonnie Barkell for corrections and accurate typing.

Finally, the author wishes to acknowledge the generosity of Mr. Carl Ashley, District Superintendent of the Halliburton Oil Company, without whose cooperation and support this study would not have been completed, and to Mr. Ashley's wife, Ethel, for her gentle encouragement.

The author wishes to dedicate this project to his beloved wife Judith, his sons Harry and Mark, and fellow employees who carried on independently and tolerated his absence during this research undertaking.

## LIFE

Harry G. Eschel was born in Pontiac, Michigan, May 23, 1931. He was graduated from Conception Seminary High School, Conception, Missouri in June of 1948. He received a Bachelor of Arts Degree from Conception Seminary College in June of 1952. He studied Theology for three years at Assumption Seminary in San Antonio, Texas. He received a Master of Arts Degree in Education (Guidance and Counseling), in August of 1958 from Marquette University, Milwaukee, Wisconsin.

Mr. Eschel was employed as an Assistant Psychologist by the Loyola University Child Guidance Center from February of 1958 to September, 1959; as a Psychologist by the Chicago Public School Bureau of Child Study from September, 1959 to August, 1962; as a Psychologist by the Des Plaines Elementary School District from September, 1962 to July, 1967. He also was an instructor in Psychology at St. Joseph's College in Rensselaer, Indiana during the spring of 1963. Mr. Eschel is currently employed as the Director of Special Education for Consolidated School District 62. He was certified as a Qualified Psychological Examiner in the State of Illinois on April 4, 1960 and recognized as a Qualified Supervisor of School Psychologist Interns in November, 1967.

## TABLE OF CONTENTS

Chapter		Page
I	INTRODUCTION	
	A. Problem.....	1
	B. Purpose.....	2
	C. Hypotheses.....	2
II	REVIEW OF RELATED LITERATURE	
	A. Studies With Alcoholics.....	5
	(1) Studies Based Upon Non-Projective Evaluations.....	5
	(2) Studies Based Upon Projective Evaluations...	6
	(3) Studies Based Exclusively on the Thematic Apperception Test.....	10
	B. Studies Employing the Method of Story Sequence Analysis.....	14
	(a) Studies With Normals.....	14
	(b) Studies With Abnormal and Delinquent Groups.	15
III	PROCEDURE	
	A. Subjects.....	19
	(1) Alcoholics.....	19
	(2) Normals.....	19
	B. Pilot Study.....	20
	C. Experimental Study.....	21
	(1) Test Administration Procedures.....	21
	(2) Description of Arnold's Scoring System.....	22
	(3) Description of the Active and Passive Scoring System.....	24
	(4) Description of the Alcoholic, the Ambivalent and Inadequacy Reference Classification System.....	24

Chapter	Page
D. Method For Scoring the TAT Records.....	25
E. Statistical Methods.....	27
 IV. RESULTS AND DISCUSSION	
A. Hypothesis 1.....	29
B. Hypothesis 2.....	31
C. Hypothesis 3.....	39
D. Hypothesis 4.....	46
E. Hypothesis 5.....	46
F. Hypothesis 6.....	49
G. Hypothesis 7.....	49
H. Discussion.....	53
(1) Hypothesis 1.....	53
(2) Hypothesis 2.....	54
(3) Hypothesis 3.....	58
(4) Hypotheses 4, 5, 6.....	61
(5) Hypothesis 7.....	62
 V. SUMMARY AND CONCLUSIONS	
A. Procedure.....	65
B. Results.....	66
C. Conclusions.....	67
 BIBLIOGRAPHY.....	71
 APPENDIXES.....	77

## LIST OF TABLES

Table		Page
1	Summated Variables of the Two Groups of Subjects.....	23
2	A Comparison of the Two Groups by the Number of Subjects Whose Total Motivational Scores Were Above and Below the Median.....	30
3	A Comparison of the Two Groups by the Motivational Indices Obtained by Individual Subjects.....	32
4	A Comparison of the Two Groups On the Number of Subjects Whose Total Numerical Scores Were Above and Below the Median in Category I.....	34
5	A Comparison of the Two Groups On the Number of Subjects Whose Total Numerical Scores Were Above and Below the Median in Category II.....	35
6	A Comparison of the Two Groups On the Number of Subjects Whose Total Numerical Scores Were Above and Below the Median in Category III.....	37
7	A Comparison of the Two Groups On the Number of Subjects Whose Total Numerical Scores Were Above and Below the Median in Category IV.....	38
8	A Comparison of the Two Groups On the Number of Subjects Scoring Either More Active or More Passive Imports (ties being disregarded) in Category I.....	41
9	A Comparison of the Two Groups On the Number of Subjects Scoring Either More Active or More Passive Scores Per Record (ties being disregarded) in Category II.....	42

Table		Page
10	A Comparison of the Two Groups On the Number of Subjects Scoring Either More Active or More Passive Scores Per Record (ties being disregarded) in Category III.....	44
11	A Comparison of the Two Groups On the Number of Subjects Scoring Either More Active or More Passive Scores (ties being disregarded) in Category IV.....	45
12	A Comparison of the Two Groups On the Frequency of Alcoholic References Per Record With a Maximum of One Tally Per Story.....	47
13	A Comparison of the Two Groups On the Frequency of Ambivalent Expressions Per Record With a Maximum of One Tally Per Story.....	48
14	A Comparison of the Two Groups On the Frequency of Inadequacy Expressions Per Record With a Maximum of One Tally Per Story.....	50
15	A Comparison of the Judged and Actual Group Affiliation of the Alcoholic and the Normal Subjects by the Two Raters, Independently.....	52



## APPENDICES

Appendix	Page
I-A	The Categorical Distribution of the Total Numerical Scores and the Motivation Indices Obtained by Each Subject in the Normal Group..... 77
I-B	The Categorical Distribution of the Total Numerical Scores and the Motivation Indices Obtained by Each Subject in the Alcoholic Group..... 78
II-A	The Frequency of Active and Passive Imports Observed in the Records of the Normal Subjects in Each of Arnold's Four Major Categories..... 79
II-B	The Frequency of Active and Passive Imports Observed in the Records of the Alcoholic Subjects in Each of Arnold's Four Major Categories..... 80
III	The Frequency of the Alcoholic, Ambivalent and Inadequacy Reference Responses (A Maximum of One Tally Per Story) Provided by the Alcoholic and Normal Subjects Per Record..... 81
IV-A	Pilot Study Data: Distribution of the Variables For Normal Subjects Most Likely to Reveal Significant Differences Between the Two (Alcoholic and Normal) Groups and Serve as a Helpful Quantitative Criteria for Blind Analysis..... 82
IV-B	Pilot Study Data: Distribution of the Variables For Alcoholic Subjects Most Likely to Reveal Significant Differences Between the Two (Alcoholic and Normal) Groups and Serve as a Helpful Quantitative Criteria for Blind Analysis..... 83
V-A	A Sample of an Alcoholic Subject's TAT Stories. The Original Record..... 84
V-B	A Sample of an Alcoholic Subject's TAT Story Sequence Analysis..... 88
VI-A	A Sample of a Normal Subject's TAT Stories. The Original Record..... 90
VI-B	A Sample of a Normal Subject's TAT Story Sequence Analysis..... 93

## CHAPTER I

### INTRODUCTION

#### A. Problem

The intent of this paper is directed toward identifying some of the personality characteristics which distinguish the alcoholic from normal subjects. The simple concept of the alcoholic as a member of a homogenous group characterized by a low degree of social stability has been modified markedly through the years with the accumulation of research in general, and the study of more affluent addicts in particular. Authors like Singer (1950) reported that test characteristics which were regarded as typical of non-alcoholic psychoneurotic and character disorder patients were consistently lacking among the alcoholics. Citing evidence to the contrary, researchers like Rosen (1958) maintained that alcoholic patients displayed the same range and spectrum of symptoms as other psychiatric patients when drawn from comparable populations.

Currently there appears to be a marked tendency to combine both views by stressing that alcoholic subjects do possess some characteristics similar to non-alcoholic psychiatric patients, but they also exhibit other characteristics such as a lack of self-esteem, a marked passive and dependent orientation, frequent self-rejections,

feelings of guilt and concern about addiction. There seems to be an increasing consensus that alcoholics are in some ways alike and in some ways different from normals and other clinical groups.

#### B. Purpose

This study is an attempt to investigate some of the personality characteristics of alcoholics which would serve to distinguish them from normals. More precisely, it is an effort to determine if Arnold's method of TAT Analysis and scoring can differentiate the motivational patterns of alcoholics and normals and if there are additional characteristics which consistently permit one to distinguish between the alcoholic and normal subject.

#### C. Hypotheses

The following hypotheses will be subjected to systematic inquiry in this investigation.

1. Subjects in the alcoholic and normal groups will differ significantly in their total motivational scores derived according to Arnold's Story Sequence Analysis criteria.
2. Subjects in the alcoholic and normal groups will differ significantly in their total numerical scores obtained in each of Arnold's four major categories: I. Achievement, II. Right and Wrong, III. Human Relationships, IV. Reaction to Adversity.
3. Subjects in the alcoholic and normal groups will differ significantly in the overall active and passive orientation observed in their imports classified according to Arnold's four major categories: I. Achievement, II. Right and Wrong, III. Human Relationships, IV. Reaction to Adversity.
4. The alcoholic and normal groups will differ significantly in the frequency of Alcoholic References made in the TAT stories.

5. The alcoholic and normal groups will differ significantly in the frequency of Ambivalent References made in the TAT stories.
6. The alcoholic and normal groups will differ significantly in the frequency of the Inadequacy References made in the TAT stories.
7. Examiners experienced in Arnold's method of Story Sequence Analysis, employing her criteria and suggested alcoholic test characteristics, will be able through blind analysis to distinguish, with significant accuracy, between members of the alcoholic and normal groups.

CHAPTER II  
REVIEW OF THE LITERATURE

INTRODUCTION

The literature available on Alcoholism is overwhelming. The following is an attempt to review some studies which report those characteristics of alcoholics derived primarily through projective techniques and the Thematic Apperception Test in particular which seem amenable to investigation through Arnold's Story Sequence Analysis. Additional studies which support the effectiveness of the Story Sequence Analysis technique to reveal associated characteristics are also reviewed.

## A. Studies With Alcoholics

This writer prefers to classify the studies according to the techniques employed in the various investigations. The major divisions are (1) Studies based upon non-projective evaluations (2) Studies based upon projective evaluations (3) Studies based exclusively on the TAT. A number of sub-classifications were devised based upon the type of experimental controls used. These sub-classifications (a) Alcoholics vs. Normals (b) Alcoholics vs. Mental Patients (c) Select Alcoholic Groups vs. Other Select Alcoholic Groups, and (d) Alcoholics Without Controls can be utilized with any of the three major divisions. Because of the few studies in certain areas only one of the other sub-classifications may be applicable under a particular major division. All of the sub-classifications might be employed in another.

### (1) Studies Based Upon Non-Projective Evaluations

(a) Alcoholics vs. Normal Subjects: Zax and Associates (1962) compared the social desirability responses of forty alcoholics with those of a corresponding group of schizophrenics, and those of a hospital control group equated for age and education. The subjects were asked to rate one hundred thirty-nine trait descriptive adjectives on a seven point scale of social desirability. The alcoholics were found to use significantly fewer extreme ratings for positive and negative adjectives than any of the other three reference groups. The author interpreted the results to reflect the vacillating, non-committal type of behavioral pattern which is frequently described in the reports of alcoholics.

(b) Alcoholics vs. Mental Patients: Rosen (1958) administered the MMPI to eighteen Alcoholics in Clinics, seventeen Alcoholics from Skid Row, sixty-four Non-Psychotic Alcoholics from a State Mental Hospital and thirty-four Non-Alcoholic Psychotic Clinic patients. He reported that the Alcoholic patients displayed the same range and spectrum of psychotic symptoms as other psychiatric patients drawn from comparable populations. He believes that the differences in the personality characteristics of alcoholic and psychiatric patients as revealed by clinical tests can be attributed in part to the divergence in samples rather than to an essential difference between the groups.

## (2) Studies Based Upon Projective Evaluations

(c) Select Alcoholic Groups vs. Other Select Alcoholic Groups: Zwerling (1959) adopted an interdisciplinary approach utilizing psychiatric interviews, projective tests, metabolic records, physical and social histories to investigate the characteristics of twenty-three remitted and twenty-three unremitted male alcoholics between the ages of twenty and fifty-six. He reported that both groups of Alcoholic patients exhibited schizoid-like characteristics, were dependent, depressed, hostile, and sexually immature. He described the alcoholic's basic withdrawal from close interpersonal relationships, the efforts to achieve security through the efforts of others, the sense of futility and self-loathing, the expressions of chronic rage, and the inability to establish an adequate masculine identity.

(a) Alcoholics vs. Normals: Fisher and associates (1955) applied rigidity

principles to measure the personality disturbances of alcoholics. They administered a battery of tests including the TAT to thirty-two non-psychotic male patients at a state mental hospital and to thirty-eight normals, job applicants at the same institution. Their procedure of administering the TAT varied from the more or less standardized method. They directed the subjects to select certain alternatives from a list of annoying and interesting situations. They found that only a few rigidity scores differed significantly between the groups, and concluded that there was only limited evidence to support the hypothesis that normals were capable of greater flexibility under stress.

(d) Alcoholics Without Controls: LeVann (1953) administered a battery of psychological tests, including the Rorschach, Wechsler, Bender-Gestalt and the TAT to thirty-two alcoholic patients committed or voluntarily admitted to a state hospital. He reported the emergence of two distinct alcoholic groups, Primary and Secondary. The Primary group was characterized by few personality resources and was particularly troubled by an unresolved Oedipal conflict. They tended to give abbreviated, unreflective cliché stories in response to the TAT cards with very little apparent identification or empathy with the story characters. Their productions were frequently only descriptive, and revealed very little of their individuality. The Secondary or reactive group manifested more emotional concern in their productions. Their verbalizations, story contents, etc., suggested some psychoneurotic involvement and frequently provided meaningful information about themselves and their relationships with others.



(c) Select Alcoholic Groups vs. Other Select Alcoholic Groups: Machover (1959) and associates listed twenty-three characterizations which appeared in sixty percent or more of the reports derived from a battery of psychological tests individually administered to twenty-three remitted and twenty-three unremitted male alcoholics. These included (1) Schizoid tendencies (2) Mother involvement (3) Father involvement (4) Oral dependence (5) Castration problems (6) Castration anxieties (7) Feelings of insufficiency (8) General ambivalence (9) Sex role ambivalence (10) Low self-esteem (11) Depression (12) Social withdrawal (13) Female identification (14) Homosexual trends (15) Narcissism (16) Feelings of frustration (17) Hostility (18) Difficulty in expressing hostility (19) General guilt feelings (20) High level of tension or anxiety (21) Denial (22) General defensive attitudes (23) Obsessiveness and compulsiveness. Her description of how some of these characterizations were revealed in the TAT stories is especially interesting.

The schizoid tendency was reflected by an excessive amount of symbolism, descriptions of cards in terms of fertility, etc.; Castration problems by an inadequate, ineffectual submissive hero; Human relationship conflicts by rejection by mother, father, mate, or others; Sex role ambivalence by confusing or alternating the sex of the hero; Feelings of frustration by the blocking of the hero's intentions or drives; Hostility by an excessive number of aggressive themes; Difficulty with hostility by themes describing the hero as ashamed, guilty, remorseful, or subjected to punishment; High level of anxiety by perplexity, confusion, denial; Low self-esteem by derogatory remarks about the hero; Repression by

masochistic aggression, themes of failure, sickness and death; Social withdrawal by the hero submitting to a threatening external figure, depression, incapable of self-assertion; and Obsessive compulsive traits by uncertainty in decisions, alternate interpretations, conditional qualifications of events, and over-detailed elaborations. Machover concluded in a sequel (1959), utilizing the same groups, that there was a marked similarity between the remitted and unremitted alcoholics, though some differences did appear. The remitted group as compared with the unremitted group showed a greater incidence of mother identification, general feminine identification, general ambivalence, overcompensation, rationalization, obsessive compulsive character traits, overcontrol, reaction formation, and fear of psychosis. In the unremitted group a greater incidence was found of hostility toward mother, identification with father and social inhibition.

(d) Alcoholics Without Controls: Gynther and associates (1959) applied the Leary Interpersonal System to analyze MMPI profiles, personal ratings and TAT stories from fifty hospitalized white male alcoholic patients. They reported that most of the alcoholics revealed narcissistic, hostile, rebellious or indecisive feelings. They repressed many of their feelings in an attempt to maintain a pleasant, cooperative front. Most of the subjects felt that they did not achieve their aim of appearing friendly, passive and dependent. The majority rejected themselves. Almost all of the patients described the members of their families, mothers, fathers, and spouses as generous, admired, responsible individuals. However, some

of the patients depreciated those close to them, a tendency which probably reflects a resentment of support and of those stronger individuals who supply it.

(c) Select Alcoholic Groups vs. Other Select Alcoholic Groups: Singer (1950) gathered and analyzed the case histories, the Wechsler-Bellevue Test results, and the Rorschach and Thematic Test records of thirty-four male chronic alcoholics diagnosed as character disorder patients, and thirty-four male chronic alcoholics diagnosed as psychoneurotic patients. He compared the two groups and reported that no quantitative differences between the two groups of chronic alcoholics were obtained. He then compared the alcoholic character disorder cases with available data on general character disorder groups, and the alcoholic psychoneurotic cases with available data on general psychoneurotic groups. He reported that the results obtained from both groups were at marked variance with what had been commonly considered test productions of character disorder and psychoneurotic patients who were not chronic alcoholics. In conclusion, he found a personality configuration which was consistent for both alcoholic groups which supported in many ways the psychoanalytic concepts of the dynamics of alcoholism in terms of a lack of self-esteem, a weakened super-ego, pronounced hostilities, and the inadequate hostility management.

(3) Studies Based Exclusively on the  
Thematic Apperception Test

(b) Alcoholics vs. Mental Patients: Knehr's (1953) conclusions are directly opposed to the findings of previous authors. He examined the

TAT records of thirty-three alcoholic and forty-five psychiatric patients obtained in a New York clinic, and utilized several distinct procedures to study the TAT responses of the two groups. After comparing the dynamics of the eighty-four inpatients as inferred from the TAT protocols with the dynamics reported by physicians after working with the same patients for one month subsequent to hospitalization, he concluded that the TAT did not provide new or additional significant information. He likewise compared the problem action frequencies and found no significant differences in the problems selected, but reported significant differences in the nature of the actions attributed to story characters. The alcoholics told stories with more outgoing, positive action in contrast to the non-alcoholic psychiatric patients who told stories in which the characters were submissive and avoided problems. However, there were so many exceptions that this finding could not be used in the analysis of individual protocols. He also compared the incidence of the emotions of anxiety, tension and resentment ascribed to the characters of the TAT stories and reported no significant differences were observed between the responses of the two groups. Thus, he concluded that as a group alcoholics project like non-alcoholic psychiatric patients in their emotional response to the TAT pictures, which is contrary to the results reported by many other authors.

(c) Select Alcoholic Groups vs. Other Select Alcoholic Groups: Thrice and associates (1959) sought out thirty-seven non-AA affiliated and thirty-seven AA affiliated alcoholics and administered eight TAT pictures

to them. He employed the Atkinson, Heyns and Veroff method of analysis to evaluate the strength of the affiliation motive. He reported that half of the indices manifested a difference in the affiliation motives of the AA members and the non-AA members. He also observed that all of the alcoholics (both groups) demonstrated very little motivation.

(d) Alcoholics Without Controls: Klebanoff (1947) administered the TAT to a group of seventeen patients with symptomatic chronic alcoholism. A careful attempt was made to keep the group homogenous. As their principal characteristics he found a desire for relief from addiction, an overlay of surface anxiety, conscious feelings of guilt concerning the excessive use of alcohol, and a general pattern of psychoneurotic maladjustment. A quantitative and qualitative analysis of their phantasy productions indicated: (1) a relative absence of aggressive tendencies; (2) marked emphasis upon themes depicting internalized emotional stress with little concern for themes of a pleasant or neutral kind; (3) a striking predominance of failure attributed to central characters with consistent domination of central characters by minor characters; (4) power and social inferiorities characterized by the group as a whole; (5) intoxication, domination and rejection themes occurred with the highest frequency.

#### Summary

The majority of the studies reviewed clearly reveal the presence of certain characteristics which have been rather consistently derived from the analysis of the test responses of alcoholics. Almost all of

the authors agree that as a group the alcoholics seem poorly motivated, lacking in self-esteem, anxious about interpersonal relationships, and confused about their sexual identity. Some authors believe that alcoholics are also concerned about controlling hostile emotions, though there is some disagreement on this last point. It seems probable that those alcoholics who reject help, want to be left alone, and resent confinement (often referred to by some as primary alcoholics) would be hostile. Those alcoholics who seek help, desire counseling, request institutional treatment (secondary alcoholics) would seem to be more humble and less hostile. It also seems possible that the usual interpretation of the TAT in which the story characters' emotions are ascribed to the story teller, account for some of the divergent findings particularly when no normal control group is used (e.g., Singer, 1950, and Knehr, 1953, Pages 10 and 11).

Almost all of the studies reviewed employed small samples. The majority of the studies did not use adequate controls, some none at all. Many of the authors, including LeVann, Machover, Gynther, and Klebanoff applied methods of interpretation which evaluated quantitative and qualitative differences in themes in terms of the activities of the hero and thus failed to take into account the outcome which reveals the subject's fundamental motivation. Abbreviated methods of analysis such as Fisher's adaptation, evaluating certain alternatives selected by the subjects from a prepared list in response to the presentation of individual TAT cards, seem to overlook many differences which a more detailed analysis would possibly reveal.

B. Studies Employing the Method of Story Sequence Analysis

(a) Studies With Normals: Burkard (1958) developed the TAT as an instrument to distinguish between high rated and low rated teachers. He analyzed the twelve story records of sixty teachers, thirty high rated and thirty low rated, who had been paired on the criterion of age, intelligence, type of school, and type of assignment. He successfully employed the sequence analysis scoring system to correctly identify the proper group affiliation of fifty-eight out of the sixty subjects. Reliability coefficients for three independent scores on a larger sample of one hundred records were all reported to be significant beyond the 0.1 percent level of confidence.

Petrauskas (1958) used the TAT to compare the motivational characteristics of delinquent and non-delinquent Navy personnel. He administered thirteen TAT cards to two groups of thirty men each who were paired for sex, age, intelligence, rural or urban residence, and length of service. After having scrambled all of the records he scored the imports derived through sequence analysis and correctly identified the group affiliation of every one of the delinquent and non-delinquent servicemen. The records were evaluated by two other raters and reliability coefficients significant beyond the one percent level were reported.

Quinn (1961) investigated the usefulness of the TAT to evaluate promise for the religious life. He calculated correlation coefficients between the TAT sequence analysis scores of forty-five religious students with their rating for religious promise made by superiors and fellow

students. The correlation of  $.61 \pm .10$  between the average ranks provided by superiors and of  $.59 \pm .10$  provided by classmates and the TAT scores were not as favorable as other studies employing the sequence analysis method of analysis.

Garvin (1960) explored the relationship between motivation and school achievement by means of the TAT. He gave and applied the sequence analysis scoring method to the TAT records of forty-six men and forty-five women college students and calculated correlation coefficients between them and a measure of the subject's college achievement based upon marks earned. He obtained a correlation coefficient of .85 for the men and .83 for the women which was notably higher than the often reported coefficients between grade point average and intelligence. He also determined regression equations for predicting college success but did not cross validate his findings. He indicated that the TAT sequence analysis method of scoring proved highly effective for the prediction of college achievement.

(b) Studies With Abnormal and Delinquent Groups: Vassiliou (1962) investigated the motivational patterns of two groups of hospitalized mental patients with the TAT. She utilized story sequence criteria, including a supplement she devised to analyze the scrambled records of sixty subjects; twenty patients with personality disorders, twenty schizophrenic patients, and twenty normals. She reported success in correctly identifying the diagnostic category to which the record belonged in fifty-nine out of sixty cases. No attempt was reported to establish scorer reliability.



Fields (1965) substantiated her hypothesis that Unwed Mothers have motivational patterns that distinguish them from Delinquent Girls. She employed the Arnold method of sequence analysis plus supplementary classifications to score and compare the TAT records of twenty-five Unwed Mothers and twenty-five Delinquent Girls who have been sexually active. She found that Unwed Mothers had a passive type of attitude which made pregnancy out of wedlock likely. She reported that independent scorer agreement was .76 but upon conferring about the scoring differences, an inter-scorer reliability of .90 was established.

Najjar (1967) investigated the effectiveness of Arnold's method of story sequence analysis in differentiating the motivational patterns of inadequate and inept dimensions of psychopathy. He concluded from a comparison of the records of thirty-eight inadequates with thirty-eight inept psychopaths, that significant differences existed in the positive imports scored in the area of Human Relationships and in the negative imports scored in the area of Right and Wrong. The inadequates consider good relations as desirable but not easily maintained, so they have to depend upon others to help them resolve any difficulties or problems that arise in their relationship. The inepts believe that good relations occur by chance and therefore regard them as desirable only in terms of what they can get out of them. In the area of right and wrong actions the inadequates feel themselves at the mercy of social forces that impinge upon them in the face of their wrong-doing and merely associate wrong-doing with getting into trouble. The inepts are more

skillful in dealing with social forces when confronted with their wrongdoing. Their readiness to admit or to apologize for their transgressions are manipulative techniques designed to disarm others and thereby reduce the consequences of their wrong actions or intentions. He discussed other observations and concluded that Arnold's method of Story Sequence Analysis was a powerful technique for making fine discriminations needed to separate highly similar groups.

Winter, et al (1965) investigated the differences between families with abnormal children utilizing the TAT. He compared the scores of three TAT stories, produced jointly in response to the presentation of a three card series by individual families categorized into four diagnostic groups, according to Arnold's method of Story Sequence Analysis. He concluded that the scoring system successfully differentiated families with normal children (N 50), from families with Emotionally Maladjusted (N 44), with Schizophrenic (N 16) and with Delinquent (N 16) children, but reported that the three abnormal groups did not consistently differ from each other. He reported a correlation of  $+0.80$  between the scores obtained by two independent judges for a sample of thirty-nine stories. He felt that the fact that such accurate differentiation took place on the basis of only three stories and even though deviating greatly from the procedures recommended by Arnold speaks well for both the validity of the method and scoring system.

Arnold's method of Sequence Analysis seems particularly suited to isolate the motivational characteristics of subjects and has been repeat-

edly demonstrated to be effective in discriminating between high and low rated teachers, delinquent and non-delinquent military personnel, as well as the motivational patterns of high and low achievers, of mental patients with personality disorders and with schizophrenia, of unwed and delinquent girls, and most recently inadequate and inept psychopaths. For this reason, it seems likely that it might be profitably used to isolate the motivational patterns and personality characteristics of alcoholics and compare them with those found in normals.

In addition, this study hopes to compensate for many of the earlier mentioned weaknesses. The number of subjects and stories are sufficient to permit the application of large sample statistical techniques. The alcoholic group is homogenous and closely matched with the control group.

## CHAPTER III

### PROCEDURE

#### A. Subjects

A grand total of eighty subjects were employed in this study. Twenty subjects were used in a pilot study and sixty subjects in the research proper.

(1) Alcoholics. The alcoholic group was composed of male patients at the Chicago Alcoholic Treatment Center, who were relatively free from the effects of the drugs usually administered upon commitment, had not had the opportunity to profit from regular individual therapy, were considered by their ward psychologist to be cooperative during the period of forced alcohol abstinence, and agreed to participate in this research project.

(2) Normals. The normal group, or non-alcoholic controls, consisted of male subjects who were gainfully employed, had no known history of atypical behavior, were not regarded as being intemperate, who were allegedly functioning adequately in their environment, and who agreed to participate in this research project. The normals consisted of a few employees or relatives of employees of a suburban school district, while the majority of subjects were employees of the Halliburton Oil Company.

## B. Pilot Study

In order to ascertain whether Arnold's method of Story Sequence Analysis might distinguish between alcoholic and normal groups and suggest test characteristics which might differ significantly between groups, the records of the first ten alcoholics tested, and their normal counterparts, were evaluated and revealed the following trends: a) Arnold's method of Sequence Analysis did seem to provide a means of distinguishing between the two experimental groups, b) alcoholics seem to provide more passive imports than normals, c) alcoholics seem to provide more alcoholic references, d) alcoholics expressed more ambivalence, e) and alcoholics expressed more helplessness than normals. The Pilot Study data is contained in Appendices IV-A and IV-B.

These observations were formulated into hypotheses which were originally stated on Page 2, but are repeated here for the sake of clarity since they serve as the rationale for this investigation:

1. The alcoholic and normal groups will differ significantly in their total motivational scores derived according to Arnold's Story Sequence Analysis criteria.
2. The alcoholic and normal groups will differ significantly in the sum total of plus and minus numerical scores obtained in each of Arnold's four major categories: I. Achievement, II. Right and Wrong, III. Human Relationships, IV. Reaction to Adversity.
3. The alcoholic and normal groups will differ significantly in the number of subjects who provide more active than passive or more passive than active imports in each of Arnold's four major categories: I. Achievement, II. Right and Wrong, III. Human Relationships, IV. Reaction to Adversity.

4. The alcoholic and normal groups will differ significantly in the frequency of Alcoholic References made in the TAT stories.
5. The alcoholic and normal groups will differ significantly in the frequency of Ambivalent References made in the TAT stories.
6. The alcoholic and normal groups will differ significantly in the frequency of the Inadequacy References made in the TAT stories.
7. Examiners experienced in Arnold's Story Sequence Analysis, employing her criteria and suggested alcoholic test characteristics, will be able through blind analysis to distinguish, with significant accuracy, between members of the alcoholic and normal groups.

C. The Experimental Study

Contrasting Groups: The two groups, consisting of thirty alcoholic and thirty non-alcoholic controls, were matched for race, sex, age, and educational level. The age range for both groups was 31 to 59. The mean age of the alcoholic groups was 42.87 as compared with that of the normal controls of 42.90. The educational level of both groups ranged from 8 years to 16 years of schooling. The mean educational level for both groups was 11.27 and 11.23, respectively (refer to Table 1). The differences between the ages ( $t = .02, P > .05$ ) and educational levels ( $t = .06, P > .05$ ) of the two groups was not significant.

(1) Test Administration Procedures. The TAT was administered to each subject individually. The instructions, as modified by Arnold (1962), were employed. The subjects were directed to tell rather than write a story about each picture. Fifteen cards of the standard series of

twenty (Numbers 1, 2, 3BM, 4, 6BM, 7BM, 8BM, 9BM, 10, 11, 13BM, 14, 16, 18BM, and 20) were presented.

(2) Description of Arnold's Scoring System. Arnold's scoring system consists of summarized imports that are classified into general categories, major headings, subheadings, and divisions. Within this system there are four general categories: I. Achievement, II. Right and Wrong, III. Human Relationships, and IV. Reaction to Adversity, which indicate the predominant theme of the import. Each category is divided into major headings represented by capital letters (A., B., C., etc.) which specify the theme. Each major heading is organized into subheadings identified by numbers (1., 2., 3., etc.) which indicate the way in which the problem cited in the theme can be resolved. The subheadings are further ordered into divisions distinguished by small letters (a., b., c., etc.) which indicate the kind and quality of solution to the problem that can be obtained.

Najjar quotes Arnold as describing the application of her scoring system in the following manner:

...scoring categories are intended as a help for the scorer in deciding on the correct score...The import to be scored must not be interpreted with the help of extraneous considerations to fit the score, any more than the stories can be so interpreted in the formulation of imports. Rather, the meaning of the story is abstracted into an import, and the import is compared with the summarized imports in the scoring categories until the subheading and division are found that correspond to it. (1967, p.33)

Table 1  
Summated Variables of the Two  
Groups of Subjects

Population Variables	Alcoholic Subjects	Normal Controls	t
Age			
Mean	42.87	42.90	
S D	7.36	7.41	0.02 *
Education			
Mean	11.27	11.23	
S D	2.35	2.39	0.06 *
Sex			
Male	30	30	
Race			
White	30	30	

\*Not significant with a two-tailed test at the .05 level of confidence.



Every category with its progressively more specific classifications is grouped into four rating sections characterized by numerical values of +2, +1, 0, -1, and -2. Each import is scored. An import which reflects attitudes, motivation, actions, etc., and which is very positive is scored +2, mildly positive +1, neither positive nor negative 0, mildly negative -1, and very negative -2. The scores for each import can then be summed algebraically to yield a total score for each record. A comprehensive presentation of Arnold's scoring system is contained in her published text and manual (1962).

(3) Description of the Active and Passive Scoring System. An attempt to apply Fields' (1965) objective but incomplete system, which assigned to some of Arnold's headings an active or passive rating, was frustrating. This author, as well as Dore (1968), discovered that in some instances two different imports with identical scores could be rated as either active or passive because of variations within the import itself. At that point it was decided to rate each individual import as either active or passive based upon the judged activity or passivity expressed in the import, rather than classify every import as active or passive, because it happened to receive a particular (Arnold) score. Two independent raters agreed in 84 percent of the cases as to which category, active or passive, the 900 imports belonged.

(4) Description of the Alcoholic, the Ambivalent and Inadequacy Reference Classification System. The above classifications are purely

objective and derived from the individual TAT stories rather than from the abstracted imports. Any literal reference to drink, such as alcoholic, wino, intoxicated, drunk, etc., was classified as an Alcoholic Reference Response. Any literal phrase which consisted of a complete either/or alternative statement, such as, "He could be either sick or dead", "He could either go or stay", "It could be his wife or mother", etc., was counted as an Ambivalent Response. Any literal comment or statement of helplessness, such as, "I can't figure it out", "It is hard to say what", "I can't recognize anything", "I don't know", made while going on to complete a story which could be scored within Arnold's categories, was designated as an Inadequacy Response.

Each story was allowed only one literal reference score per category. Thus, even though five alcoholic references were made in a particular story, the story as a unit was limited to a tally of one Alcoholic Reference. It was possible for the same story to have one Alcoholic, one Ambivalent and one Inadequacy reference score, since they were regarded as being independent. This method of tallying frequencies is extremely conservative, because each story could only be scored once in a particular category. No attempt was made to combine categories since significant differences in all instances were obtained.

#### D. Method for Scoring the TAT Records

In order to prevent any scoring bias because of the known group affiliation of a subject and to prepare for the blind analysis, the

original sixty handwritten records were given to a stenographer, who typed only the story proper without any identifying information, and then sealed the handwritten records in a business envelope. The typewritten (now anonymous) sixty records were then thoroughly shuffled, grouped into one pile and individually assigned a number from one through sixty. At that point the anonymous typewritten records were scored, analyzed and classified without the identity or group affiliation of any subject being known.

The method of securing consistency and reliability was similar to that employed by Vassiliou (1962) and Dore (1968). In this instance two independent raters were secured to score the sixty records according to Arnold's Story Sequence Analysis criteria. After both raters had scored the records independently they were directed to compare their results and discuss any differences obtained, and resolve any discrepancies insofar as possible. A coefficient of agreement, a Person Product Moment Correlation of .93 was obtained between the total scores reported by the two raters for each of the sixty records. The two raters also agreed in the classification of the imports into Arnold's four major categories in 91% of the cases. The amended scoring of Rater B was used as the basis of our numerous comparisons.

Method for Blind Analysis: Two raters were directed to separate the sixty typewritten anonymous records into two groups of thirty each according to their judged alcoholic or normal group affiliation. They were prepared for this task by being provided with the twenty original,

ten alcoholic and ten normal, pilot study records and were acquainted with the distinguishing criteria: differences in Arnold's Total Motivation Scores; differences in the frequency of Active and Passive imports; and differences in the Alcoholic, Ambivalent and Inadequacy Reference Responses which would aid them in their classification.

Ultimately, the precise group affiliation of each anonymous typewritten record was determined by opening the sealed envelope and matching each anonymous typewritten record with its corresponding, clearly identified handwritten record, subject for subject.

#### E. Statistical Methods

1. Chi-square was employed to compare the alcoholics and normals on the basis of:
  - a) The number of subjects obtaining motivational indices above or below the median of the group.
  - b) The number of subjects obtaining total numerical scores above or below the median of the group in each of Arnold's four major categories: I. Achievement, II. Right and Wrong, III. Human Relationships, IV. Reaction to Adversity.
  - c) The number of subjects providing more active than passive imports or more passive than active imports (ties being disregarded) in each of Arnold's four major categories: I. Achievement, II. Right and Wrong, III. Human Relationships, IV. Reaction to Adversity.<sup>1</sup>
2. The t test was employed to compare the alcoholics and normals on the basis of:
  - (1) The motivational indices obtained by the individual subjects in each group.
  - (2) The frequency per record of the Alcoholic, Ambivalent and Inadequacy Reference Responses.

---

<sup>1</sup>Fisher's exact probability test was necessarily substituted when an  $X^2$  expected frequency in Category III was below five.

3. The  $\phi$  coefficient was employed to compare the individual raters on the basis of:

- (1) The judged and actual group affiliation of the alcoholic and normal subjects.

A two-tailed test was employed in each appropriate statistical analysis. The .05 level of confidence was established as criterion acceptable to reject the null hypothesis.

## CHAPTER IV

### RESULTS AND DISCUSSION

The findings from the statistical analysis of the 900 TAT imports in stories obtained from the alcoholic and normal subjects are presented and discussed in terms of the Hypotheses which served as the rationale for this study.

#### Hypothesis 1

Subjects in the alcoholic and normal groups will differ significantly in their total motivational scores derived according to Arnold's Story Sequence Analysis criteria.

The testing of this hypothesis was based upon the Motivational Index, the ratio of actual scale units obtained over the maximum obtainable units multiplied by 200, as determined for each subject. The Motivational Indices are recorded in Appendixes I-A and I-B. The number of subjects in each group obtaining Motivational Indices above or below 74, the calculated median of both groups combined, were compared (refer to Table 2). Twenty-five alcoholics, as compared with five normals, obtained motivational indices below the median; while twenty-five normals, as compared with five alcoholics, obtained indices which were above the median. The difference was significant

Table 2  
 A Comparison of the Two Groups  
 by the Number of Subjects Whose Motivational Indices  
 Were Above and Below the Median of 74

Group	Motivational Indices		$\chi^2$
	Per Subject All Categories		
	Above Median	Below Median	
Normals	25	5	24.06 *
Alcoholics	5	25	

\*Significant with a two-tailed test beyond the .001 level of confidence.

( $\chi^2 = 24.06$ ,  $df=1$ ,  $P < .001$ ) employing a two-tailed test. The hypothesis that subjects in the alcoholic and normal groups will differ significantly in their total motivational scores was verified. The alcoholic group obtained significantly lower total motivational scores.

The same data was also evaluated in a different manner which could stimulate additional discussion (refer to Table 3). The Mean and Standard Deviation of the motivational indices of the alcoholic group were 49.37 and 20.23 as compared with that of 106.8 and 25.92 respectively for the normal group. The difference was significant ( $t = 9.41$ ,  $df=58$ ,  $P < .01$ ) employing a two-tailed test. The alcoholic group obtained significantly lower motivational indices than the normal group, as was previously indicated.

### Hypothesis 2

Subjects in the alcoholic and normal groups will differ significantly in their total numerical scores obtained for each of Arnold's four major categories.

The testing of this hypothesis was based on the total numerical score, the sum of the positive and negative import scores per record obtained by the individual subjects in each of Arnold's four major categories. These numerical scores are recorded by categories in Appendixes I-A and I-B. The total numerical scores above and below the median in each major category obtained by the individual subjects in each group were compared.



Table 3  
A Comparison of the Two Groups  
by the Motivational Indices Obtained by Individual Subjects

---

---

Motivational Indices			
Group	Mean	S.D.	t
Normals	106.8	25.92	9.41*
Alcoholics	49.37	20.23	

---

\* Significant with a two-tailed test beyond the .01 level of confidence.

(1) Table 4 contains the comparison of the alcoholics and normals by the number of subjects whose total numerical scores were above or below the median of the group (-0.75) in Category I. Twenty-seven alcoholics, as compared with nine normals, obtained total numerical scores below the median; while twenty-one normals, as compared with three alcoholics, obtained scores which were above the median in Category I. The difference was significant ( $X^2 = 20.06$ ,  $df=1$ ,  $P < .001$ ) employing a two-tailed test. The hypothesis that subjects in alcoholic and normal groups will differ significantly in their total numerical scores in Category I was verified. The alcoholic group obtained significantly lower total numerical scores in Category I, Achievement.

(2) Table 5 contains the comparison of the alcoholics and normals by the number of subjects whose total numerical scores were above or below the median of the group (-0.1) in Category II. Twelve alcoholics, as compared with seventeen normals, obtained total numerical scores above the median; while thirteen normals, as compared with eighteen alcoholics, obtained scores which were below the median in Category II. The difference was not significant ( $X^2 = 1.06$ ,  $df=1$ ,  $P > .05$ ) at the required .05 level of confidence employing a two-tailed test. The hypothesis that subjects in alcoholic and normal groups will differ significantly in their total numerical scores in Category II was not verified. The alcoholic group obtained only moderately lower total numerical scores in Category II, Right and Wrong.

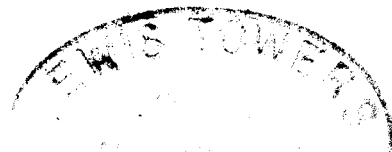


Table 4  
 A Comparison of the Two Groups  
 On the Number of Subjects Whose Total Numerical Scores  
 Were Above and Below the Median of  $-0.75$   
 in Category I

Group	Summed Plus and Minus Numerical Score		$\chi^2$
	Above Median	Below Median	
Normals	21	9	20.06 *
Alcoholics	3	27	

\*Significant with a two-tailed test beyond the .001 level of confidence.

Table 5  
 A Comparison of the Two Groups  
 On the Number of Subjects Whose Total Numerical Scores  
 Were Above and Below the Median of -0.1  
 In Category II

Group	Summed Plus and Minus Numerical Score		$\chi^2$
	Above Median	Below Median	
Normals	17	13	1.06 *
Alcoholics	12	18	

\*Not significant with a two-tailed test at the required .05 level of confidence.

(3) Table 6 contains the comparison of the alcoholics and normals by the number of subjects whose total numerical scores were above or below the median of the group (-2.71) in Category III. Twenty-eight alcoholics, as compared with two normals, obtained total numerical scores below the median; while twenty-three normals, as compared with seven alcoholics obtained scores which were above the median in Category III. The difference was significant ( $X^2 = 27.42$ ,  $df=1$ ,  $P < .001$ ) employing a two-tailed test. The hypothesis that subjects in alcoholic and normal groups will differ significantly in their total numerical scores in Category III was verified. The alcoholic group obtained significantly lower total numerical scores in Category III, Human Relationships.

(4) Table 7 contains the comparison of the alcoholic and normal groups by the number of subjects whose total numerical scores were above or below the median of the group (-1.44) in Category IV. Twenty-six alcoholics, as compared with eight normals, obtained total numerical scores below the median; while twenty-two normals, as compared with four alcoholics obtained scores which were above the median in Category IV. The difference was significant ( $X^2 = 19.61$ ,  $df=1$ ,  $P < .001$ ) level of confidence. The alcoholic group obtained significantly lower total numerical scores in Category IV, Reaction to Adversity.

The Hypothesis that subjects in the alcoholic and normal groups will differ significantly in their total numerical scores obtained for each of Arnold's four major categories was verified in Categories I, III

Table 6  
 A Comparison of the Two Groups  
 On the Number of Subjects Whose Total Numerical Scores  
 Were Above and Below the Median of -2.71  
 in Category III

Group	Summed Plus and Minus Numerical Score		$\chi^2$
	Per Subject Category III		
	Above Median	Below Median	
Normals	23	2	27.42 *
Alcoholics	7	28	

\*Significant with a two-tailed test beyond the .001 level of confidence.

Table 7  
 A Comparison of the Two Groups  
 On the Number of Subjects Whose Total Numerical Scores  
 Were Above and Below the Median of  $-1.44$   
 in Category IV

Group	Summed Plus and Minus Numerical Score		$\chi^2$
	Above Median	Below Median	
Normals	22	8	19.61 *
Alcoholics	4	26	

\*Significant with a two-tailed test beyond the .001 level of confidence.

and IV, but not in Category II. The alcoholic subjects obtained significantly lower total numerical scores in Category I, Achievement; Category III, Human Relationships; and Category IV, Reaction to Adversity. No significant differences between the alcoholic and normal subjects was found in total numerical scores in Category II, Right and Wrong.

### Hypothesis 3

Subjects in the alcoholic and normal groups will differ significantly in the overall active and passive orientation observed in their imports classified according to Arnold's four major categories: I. Achievement, II. Right and Wrong, III. Human Relationships, and IV. Reaction to Adversity.

The testing of this Hypothesis was based on the frequency with which individual subjects in either group provided more active than passive or more passive than active imports in each of Arnold's four major categories. The frequencies are recorded in the Appendixes II-A and II-B.

(1) Table 8 illustrates the comparison of the alcoholics and normals by the number of subjects (ties being disregarded), who provided either more active than passive or more passive than active imports in Arnold's Category I. Twenty-eight alcoholics provided more passive than active imports as compared with six normals who did so. No alcoholics provided more active than passive imports as compared with nineteen normals who



did so. The difference was significant ( $X^2 = 29.95$ ,  $df=1$ ,  $P < .001$ ) employing a two-tailed test. The Hypothesis that subjects in the alcoholic and normal groups will differ significantly in their overall active and passive orientation observed in their imports in Category I was verified. Subjects in the alcoholic group were significantly more passive than subjects in the normal group in overall orientation in Category I, Achievement.

(2) Table 9 illustrates the comparison of the alcoholics and normals by the number of subjects (ties being disregarded), who provided either more active than passive, or more passive than active imports in Arnold's Category II. Twenty-one alcoholics provided more passive than active imports as compared with twenty normals who did so. Four alcoholics provided more active than passive imports as compared with six normals who did so. The difference was not significant ( $X^2 = .08$ ,  $df=1$ ,  $P > .05$ ) employing a two-tailed test. The Hypothesis that subjects in the alcoholic and normal groups will differ significantly in the overall active and passive orientation observed in their imports in Category II was not verified. Subjects in the alcoholic group were about as active and passive as subjects in the normal group in overall orientation in Category II, Right and Wrong.

(3) Table 10 illustrates the comparison of the alcoholics and normals by the number of subjects (ties being disregarded), who provided either more active than passive, or more passive than active imports in

Table 8  
 A Comparison of the Two Groups  
 On the Number of Subjects Scoring Either  
 More Active or More Passive Imports  
 (ties being disregarded)  
 in Category I

More Active or More Passive Imports			
Category I Scores			
Group	Scores		$\chi^2$
	<u>Active</u>	<u>Passive</u>	
Normals	19	6	
Alcoholics	0	28	29.95 *

\* Significant with a two-tailed test beyond the .001 level of confidence.

Table 9  
 A Comparison of the Two Groups  
 On the Number of Subjects Scoring Either  
 More Active or More Passive Scores Per Record  
 (ties being disregarded)  
 in Category II

---



---

More Active or More Passive Imports  
 Category II Scores

---

Group	Scores		$\chi^2$
	<u>Active</u>	<u>Passive</u>	
Normals	6	20	.08 *
Alcoholics	4	21	

---

\*Not significant with a two-tailed test at the required .05 level of confidence.

Category III. Twenty-nine alcoholics provided more passive than active imports as compared with twenty-two normals who did so. No alcoholics provided more active than passive imports as compared with seven normals who did so. The difference was significant (Fisher's Exact Probability,  $df=1$ ,  $P < .001$ ) employing a two-tailed test. The Hypothesis that subjects in the alcoholic and normal groups would differ significantly in their overall active and passive orientation observed in their imports in Category III was verified. Subjects in the alcoholic group were significantly more passive than subjects in the normal group in overall orientation in Category III, Human Relationships.

(4) Table 11 illustrates the comparison of the alcoholic and normals by the number of subjects (ties being disregarded) who provided either more active than passive or more passive than active imports in Category IV. Twenty-five alcoholics provided more passive than active imports as compared with fourteen normals who did so. Five alcoholics provided more active than passive imports as compared with six normals who did so. The difference was not significant ( $X^2 = .59$ ,  $df=1$ ,  $P > .05$ ) employing a two-tailed test. The Hypothesis that subjects in the alcoholic group would differ significantly in their overall active and passive orientation observed in their imports in Category IV was not verified. Subjects in the alcoholic group were only moderately more passive than subjects in the normal group in overall orientation in Category IV, Reaction to Adversity.

Table 10  
 A Comparison of the Two Groups  
 On the Number of Subjects Scoring Either  
 More Active or More Passive Scores  
 (ties being disregarded)  
 in Category III

More Active or More Passive Imports			
Category III Scores			
Group	Scores		Fisher's Exact Probability
	<u>Active</u>	<u>Passive</u>	
Normals	7	22	
Alcoholics	0	29	.001 *

\*Significant with a two-tailed test beyond the .01 level of confidence.

Table 11  
 A Comparison of the Two Groups  
 On the Number of Subjects Scoring Either  
 More Active or More Passive Scores  
 (ties being disregarded)  
 in Category IV

---

More Active or More Passive Imports  
 Category IV Scores

---

Group	Scores		$\chi^2$
	<u>Active</u>	<u>Passive</u>	
Normals	6	14	
Alcoholics	5	25	.59 *

---

\*Not significant with a two-tailed test at the required .05 level of confidence.

#### Hypothesis 4

The alcoholic and normal groups will differ significantly in the frequency of alcoholic references made in the TAT stories.

The testing of this hypothesis was based on the frequency (a maximum of one tally per story) of the alcoholic references made by the subjects per record. These frequencies are recorded in Appendix III. The frequency per record with which the alcoholics made alcoholic reference responses was compared with those made by the normals (refer to Table 12). The alcoholics made 2.30 alcoholic reference responses compared with .60 for the normals. The difference was significant ( $t = 4.75$ ,  $df=58$ ,  $P < .01$ ), employing a two-tailed test. The Hypothesis that the alcoholic and normal groups will differ significantly in the frequency of alcoholic references made in the TAT stories was verified. The alcoholics provided significantly more alcoholic references than the normals.

#### Hypothesis 5

The alcoholic and normal groups will differ significantly in the frequency of ambivalent references made in the TAT stories.

The testing of this hypothesis was based on the frequency (a maximum of one tally per story) of the ambivalent references made by the subjects per record. These frequencies are recorded in Appendix III. The frequency per record with which the alcoholics made ambivalent reference responses was compared with those made by the normals (refer to Table 13). The alcoholics made 5.63 ambivalent reference responses compared with 2.30 for the normals. The difference was

Table 12  
 A Comparison of the Two Groups  
 On the Frequency of Alcoholic Reference  
 Per Record With a Maximum of One Tally Per Story

Frequency of Alcoholic References			
Per Record			
Group	Mean	S.D.	t
Normals	0.60	.61	
Alcoholics	2.30	1.83	4.75 *

\*Significant with a two-tailed test beyond the .01 level of confidence.



Table 13  
 A Comparison of the Two Groups  
 On the Frequency of Ambivalent Expressions Per Record  
 With a Maximum of One Tally Per Story

Frequency of Ambivalent Expressions Per Record			
Group	Mean	S.D.	t
Normals	2.30	2.42	4.66 *
Alcoholics	5.63	2.99	

\* Significant with a two-tailed test beyond the .01 level of confidence.

significant ( $t = 4.66$ ,  $df=58$ ,  $P < .01$ ) employing a two-tailed test. The Hypothesis that the alcoholic and normal groups will differ significantly in the frequency of ambivalent references made in the TAT stories was verified. The alcoholics provided significantly more ambivalent references than did the normals.

#### Hypothesis 6

The alcoholic and normal groups will differ significantly in the frequency of inadequacy references made in the TAT stories.

The testing of this hypothesis was based on the frequency (a maximum of one tally per story) of the inadequacy references made by the subjects per record. These frequencies are recorded in Appendix III. The frequency per record with which the alcoholics made inadequacy reference responses was compared with those of the normals (refer to Table 14). The alcoholics made 5.23 inadequacy reference responses compared with 0.70 for the normals. The differences were significant ( $t = 8.32$ ,  $df=58$ ,  $P < .01$ ) employing a two-tailed test. The hypothesis that the alcoholic and normal groups will differ significantly in the TAT stories was verified. The alcoholics provided significantly more inadequacy references than did the normals.

#### Hypothesis 7

Examiners experienced in Arnold's Story Sequence Analysis, employing her criteria and several promising alcoholic test characteristics, will be able through blind analysis to distinguish with significant

Table 14  
 A Comparison of the Two Groups  
 On the Frequency of Inadequacy Expressions Per Record  
 With a Maximum of One Tally Per Story

Frequency of Inadequacy Expressions Per Record			
Group	Mean	S.D.	t
Normals	0.70	.69	8.32 *
Alcoholics	5.23	2.85	

\*Significant with a two-tailed test beyond the .01 level of confidence.

accuracy between members of the alcoholic and normal groups.

The testing of this hypothesis was based upon the frequency in which a rater would correctly or incorrectly judge the actual alcoholic or normal group affiliation of the sixty subjects. Rater A correctly judged the group affiliation of twenty-nine alcoholics and twenty-nine normals while incorrectly judging the actual group affiliation of two subjects. Rater B correctly judged the group affiliation of twenty-eight alcoholic and twenty-eight normals while incorrectly judging the actual group affiliation of four subjects. The accuracy of each rater was significant; a Phi coefficient of .93 was obtained for Rater A and .87 for Rater B (refer to Table 15). The hypothesis that examiners experienced in Arnold's Story Sequence Analysis, employing her criteria and promising alcoholic test characteristics, will be able through blind analysis to distinguish with significant accuracy between members of the alcoholic and normal groups, was verified. Two raters, through the analysis of anonymous TAT records, were successful with a significant degree of accuracy in judging the actual group affiliation of alcoholic and normal subjects.

Table 15  
 A Comparison of the Judged and Actual Group Affiliation  
 Of the Alcoholic and the Normal Subjects  
 By the Two Raters, Independently

Rater	Group	Judged Affiliation	Actual Affiliation	$\phi$ Coefficient
A	Alcoholics	29	30	.93
	Normals	29	30	
B	Alcoholics	28	30	.87
	Normals	28	30	

## DISCUSSION

### (1) Hypothesis 1

The quantitative difference in the mean motivational indices of the alcoholic group (M.I. 49.37) and the normal group (M.I. 106.8) indicates that the average alcoholic has extremely negative motivational attitudes as compared with the average normal who possesses positive attitudes. This observation is in general agreement with the majority of authors who have reported similar negative findings for groups of alcoholic subjects. Klebanoff (1947) reported that his group of alcoholic subjects provided expressions of inferiority, failure, submission, rejection, a desire for relief from addiction, and very little aggression. Singer (1950) reported a personality configuration which included a lack of self-esteem and a weakened super-ego. Zwerling (1955) described the characteristics of his two alcoholic groups which included dependency, depression, and sexual immaturity. Machover (1959) reported felt inadequacies, negative emotions, difficulties in personal relationships, and associated clinical symptoms.

## (2) Hypothesis 2

The alcoholic and normal groups did differ significantly in the sum total of plus and minus numerical scores obtained in three of Arnold's four major categories: I. Achievement, III. Human Relationships, IV. Reaction to Adversity, but not in Category II. Right and Wrong. In Category I. Achievement, the alcoholics expressed pessimistic and vague attitudes toward achievements and goals which they regarded as beyond them. In their stories they hoped, dreamed and occasionally made a feeble attempt toward a goal which usually ended in failure, disgust and confusion. They generally adopted a course of least resistance and accepted passivity, sleep and a lack of active effort as a way of life. They usually looked to the future with uncertainty and doubt and often expected to lose the little they possessed. Some expressed dissatisfaction with their fate and a few of them expressed a preference for anything at all different from their present unsatisfactory way of life.

The normals, in marked contrast, expressed considerable enthusiasm toward tasks and goals. They planned, tried, worked, and succeeded in their efforts. They adopted appropriate means to gain their ends. If their efforts did not initially work out they adopted other means, corrected errors through experience, or actively sought advice which made it possible for them to succeed. Rest and recreation were generally regarded as deserved, as a reward for achievement, or necessary so one could go on to complete an undertaking. They

planned for the future and expected success. They rarely expressed any chronic dissatisfaction with their way of life and expected to continue planning, striving and realizing the results of their efforts.

Hypothesis 2 was not verified in Category II. Right and Wrong. Twelve alcoholics, as compared with seventeen normals, obtained total numerical scores above the median; while thirteen normals, as compared with eighteen alcoholics, obtained scores which were below the median in Category II. The differences were not significant and the alcoholic group obtained only moderately lower total numerical scores in Category II. Right and Wrong.

An analysis of the imports suggests that many of the alcoholics and normals agree in general that wrongdoing is usually followed by punishment. More specifically, some of the alcoholics and normals regard employing devious means in order to make a profit, e.g., in business, as an acceptable manner of behavior. Alcoholics and normals also tend to view a sexual affair as something positive, natural, or at least as a minor incident which is soon forgotten without any enduring guilt or remorse. A few of the normals and several alcoholics felt that their wrong intentions were sometimes prevented because something or someone managed to interfere.

Within the major category of Human Relationships (Category III), the alcoholics expressed extreme negative attitudes toward human relationships. Many of them seemed indifferent to others. Most regarded themselves as loners, losers, and lonesome men apart from the main



stream of society, and preoccupied with thoughts of despair and self-destruction. However, they seemed to feel a certain kinship and tolerance for other alcoholics who have the same problem.

The alcoholics generally expected good relationships to fail and imagined themselves taking final farewells, never to return. A few expressed some remorse and guilt feelings about having neglected their responsibilities or leaving friends or family in dire straits.

The majority viewed others as a source of serious conflict. As a group they harbored considerable resentment toward people and frequently tried, but more often lacked the courage, to rebel against anyone who attempted to give them advice, warnings or directions. A minority were extremely dependent upon domineering figures who directed them toward activities which they felt compelled to try to follow and, even though occasionally successful, this often resulted in unhappiness. A few alcoholics seemed to be indifferent, almost blind and deaf, to the criticisms, cautions, reprimands of the various aspects of their unfortunate habit. The words of others seemed to be about as pertinent as inter-cosmic frequency modulation.

The normals as a group expressed relatively more positive attitudes toward human relationships. They considered themselves a part of society, not always in harmony, but committed to work toward some agreement. Some of the interaction was not particularly productive and included exchanges of affection, sharing of pleasures, providing for mutual reassurances, or reminiscing about happy experiences.

Many of the normals sought, accepted and applied the advice provided by others to solve individual problems in their stories. A notable minority of normal subjects expressed very positive altruistic principles which reflected a philosophy of helping others, of engaging in activities which benefit society and of assisting individuals in distress. These traits were conspicuously lacking in the productions of alcoholics.

Within the major category of Reaction to Adversity (Category IV) the alcoholics as a group responded pessimistically to unfavorable situations. For the most part they did not expect to overcome unfavorable happenings. Even when others who might be regarded as potential helpers were involved, the situation appeared insurmountable and both succumbed. A couple of subjects imagined that their crises would be resolved through some magical solution without any personal effort. A few sought to flee to escape adversity or threatening dangers.

Adversity, for a sizeable majority, brought about further adversity and worse calamities which often occurred because of personal self-defeating behavior born of despair. Many expressed dependency. A few seemed to have become relatively calloused to failure and therefore they only vaguely recalled that something bad really happened in the remote past. A few of the alcoholics reflected confusion insofar as they were caught up in a struggle which was beyond them and they could in no way comprehend, or even imagine an end

or outcome to their problems.

The normals generally adopted somewhat more positive attitudes toward adversity. Most of the normal subjects expected to overcome their difficulties. The majority faced unfortunate happenings with hope and courage. They generally considered some way to rectify or at least come to grips with adverse situations so that some more or less positive solutions resulted. If the adversity was objectively insurmountable, as the death of a spouse or relative, most of the normals imagined themselves marrying again or adopting some positive measure so that their self sufficiency and resiliency was clearly apparent.

Many of the normals, although they mourned the absence of a loved one, often went on to express thankfulness for the brief happiness which had been shared, and also expressed some satisfaction as they recalled having managed to fulfill the additional responsibilities successfully.

### (3) Hypothesis 3

Hypothesis 3 was verified in part. Subjects in the alcoholic and normal groups did differ significantly in the overall active and passive orientation observed in their imports in two of Arnold's four major categories, I. Achievement and III. Human Relationships. In the category of Achievement (Category I) the passive orientation of the alcoholics was in sharp contrast to the active orientation of the normals. The alcoholics as a group were extremely passive and generally regarded

goals, aims and success as elusive and beyond their capabilities; while the normals as a group were very active and anticipated achieving their goals, aims and being successful. The alcoholics accepted their marginal day to day existence with resignation and rarely put forth any consistent effort to achieve; while the normals consistently and actively pursued and worked toward goals and plans which were generally taken for granted. The few hopes, dreams, and any minimal efforts of the alcoholics characteristically terminated in failure, lowered self-esteem and greater passivity; while the normals generally adopted active and appropriate means which resulted in achievement, success and satisfaction.

In Category III. Human Relationships, the subjects in the alcoholic group manifested significantly greater passive orientation toward others than did subjects in the normal group. The alcoholics as a group regarded themselves as losers and loners who generally were passive, indifferent or beyond close inter-personal relationships with others; while the normals felt a part of, actively sought and regularly engaged in communication with others. Many alcoholics generally regarded friends, relatives and acquaintances as meddlesome advisors, counselors or domineering figures who interfered with their freedom; while the majority of normals appreciated the support, advice and associations of others. Some alcoholics anticipated that most good relationships would fail and pictured themselves taking final farewells from loved ones; while the normals expected good relationships to endure and

continue to lead to greater mutually satisfying activities, benefits and happiness.

Hypothesis 3 was not verified in two of Arnold's four major categories, II. Right and Wrong and IV. Reaction to Adversity. Approximately an equivalent majority of subjects in both the alcoholic and normal groups adopted a rather passive orientation toward Right and Wrong and toward Adversity. The lack of significant results may in part be associated with the fact that only thirty-one percent of the total imports were classified in Categories II and IV combined. The majority of the alcoholic and normal subjects generally adopted passive attitudes toward Category II. Right and Wrong. They viewed punishment as something that inevitably happens and which follows wrongdoing. Members of the two groups anticipated that serious deviant behavior would bring about apprehension, punishment and often, for the alcoholic in particular, personal disgust and despair. Some subjects in both groups felt that circumstances or someone interfered and prevented them from carrying out their wrong intentions. A few subjects in both groups expressed some (passive) hope or feeble intentions of mending their ways without much active effort.

The majority of the alcoholic and normal subjects viewed adversity (Category IV) passively and rather fatalistically. Adversity was described as something that just happened unavoidably, but the alcoholics generally projected complete pessimism while most of the normals expressed some positive attitudes or at least anticipated some favorable

outcome. The misfortunes of the alcoholics were sometimes self-induced and frequently befell them as individuals who were more or less completely alone, while the tragedies of the normals often befell a family and were shared and eased by mutual consolation. If some unfortunate occurrence such as an illness, tragedy or accident befell themselves or their relatives, members of both groups tended to respond passively. However, the alcoholics generally became confused, tried to flee, or gave way to despair; while the normals resigned themselves to the unfortunate event and in some instances it was overcome through fortuitous circumstances or the help of professionals and the like.

#### (4) Hypotheses 4, 5, 6

The Hypotheses that the alcoholic and the normal groups will differ significantly in the frequency of the Alcoholic, Ambivalent and Inadequacy References were verified. The alcoholics were keenly involved in their personal problems of drinking and manifested their concern in their projective responses, while the normals occasionally made some reference to addiction. The alcoholics expressed preoccupation with their problems by describing drinking activities, their personal conflicts stemming from intemperance, the anxieties and concerns about overcoming the habit, and the repeated failures and despair associated with chronic intoxication. The alcoholics also expressed extreme uncertainty and hesitancy through their ambivalent and inadequacy reference responses. These phrases manifest the alcoholics' confusion,

insecurity and reluctance to make definite statements about anything. They qualified their statements as, "It could be this or that" or "This might happen" or "Maybe that could occur" or "I don't know", or the situation or the outcome seemed uncertain. Their expressions of uncertainty seemed to illustrate the alcoholics' refusal or inability to face their problems, so that they seek escape into their drugged paradises.

#### (5) Hypothesis 7

The success of two raters in assigning records to the correct group (alcoholic or normal) suggests that this method could be used for the diagnosis of alcoholism. Although a separate study is needed for cross validation, it is possible to indicate on the basis of the present study what criteria could be used for such a diagnosis.

a. A motivational index of 78 could be used as the cut-off point below which a record would probably belong to an alcoholic subject. In the present sample this would provide two misplaced alcoholics (Nos. 32 and 34) who would be suspected of being normals, and five normals (Nos. 3, 5, 9, 10, and 17) who would be suspected of being alcoholics (see Appendixes I-A and I-B). Note that the subjects in the experimental group have been assigned successive identifying numbers, 1 through 30 for the normals and 31 through 60 for the alcoholics, to facilitate quick references in the Appendixes.

b. In addition, the diagnosis of alcoholism would also have to be based

on "passive" imports that are at least three times more frequent than active imports per record. In this sample two normal subjects (Nos. 1 and 17) would be suspected of alcoholism and six alcoholics (Nos. 34, 39, 49, 51, 53, and 54) would fall within the normal limits (see Appendixes II-A and II-B).

c. Finally, when the references to alcohol are combined with the Ambivalent and Inadequacy Responses, a criterion of nine such references per fifteen story records (or 3/5 per story) could be established. If a fifteen-story record yielded more than nine reference responses it could be regarded as likely to be the record of an alcoholic. The record of one normal (No. 11) contained nine such statements and the records of eight alcoholics (Nos. 34, 39, 41, 48, 49, 51, 54, and 56) had fewer than nine (see Appendix III).

However, when all three indicators (a, b, c) are considered together only one of the experimental and none of the control group would be misplaced. None of the normal subjects is positive for alcoholism on more than one factor. As for the alcoholic subjects one could be mistaken for a normal subject on all three factors. No. 34 has six active against nine passive imports, three alcoholic and inadequacy reference responses and a M.I. of 90. Four alcoholic subjects could be mistaken for normals on two of the three factors: No. 39 has six active against nine passive imports and only eight alcoholic and inadequacy reference responses, but a M.I. of 77; No. 49 has four active



against eleven passive imports and only seven alcoholic and inadequacy reference responses, but a M.I. of 77; No. 51 has five active against ten passive imports and only six alcoholic and inadequacy reference responses, but a M.I. of 57; and No. 54 has four active against eleven passive imports and only five alcoholic and inadequacy reference responses, but a M.I. of 57. It would seem that the three alcoholics with M.I.'s of 90, 77, and 77 respectively might be considered more promising for rehabilitation than the two subjects with the M.I.'s of 57.

## CHAPTER V

### SUMMARY AND CONCLUSIONS

The purpose of this project was to investigate the personality characteristics which distinguish the alcoholic from the normal subject.

#### A. Procedure

The TAT was individually administered to forty male alcoholic patients at the Chicago Alcoholic Treatment Center and to forty normal, non-alcoholic control subjects who were, for the most part, employees of the Halliburton Oil Company and who allegedly functioned adequately in their environments.

Twenty records, those of the first ten alcoholic and normal subjects, were analyzed as a Pilot Project to determine what test characteristics might distinguish differences between the two groups.

Subsequently, the records of the remaining thirty alcoholics and of the thirty normals comprising the Experimental Subjects were evaluated according to the distinguishing criteria found promising in the pilot study. Differences in Motivational Indices were derived according to Arnold's Story Sequence Analysis method. The imports were

rated as Active or Passive and the Alcoholic, Ambivalent and Inadequacy References expressed in the stories were tabulated and counted. The agreement of two raters in determining the total numerical scores for the records of the individual sixty subjects was high and a reliability coefficient of .93 was reported. The two raters were also directed to judge the actual group affiliation of the anonymous sixty records according to the distinguishing criteria and story sequences observed in the Pilot Project.

## B. Results

The stated Hypotheses were verified as follows:

1. Subjects in the alcoholic group expressed significantly lower motivational scores according to Arnold's Story Sequence Analysis criteria than normal subjects.
2. Subjects in the alcoholic group expressed significantly lower motivational scores in the major areas of Achievement (I), Human Relationships (III), and Reaction to Adversity (IV) than normal subjects.
3. Subjects in the alcoholic group expressed significantly more passivity in the major areas of Achievement (I) and Human Relationships (III) than normal subjects.
4. Subjects in the alcoholic group referred significantly more often to alcohol or related situations in their TAT stories than normal subjects.
5. Subjects in the alcoholic group expressed significantly more ambivalence in their TAT stories than normal subjects.
6. Subjects in the alcoholic group expressed significantly more helplessness (inadequacy references) in their TAT stories than normal subjects.
7. Examiners experienced in Arnold's Story Sequence Analysis were able through blind analysis to distinguish with significant accuracy between subjects in the alcoholic and normal groups.

The following Hypotheses were not verified:

2. Subjects in the alcoholic group had moderately lower, but not significantly lower, motivational scores in the major area of Right and Wrong (II) than normal subjects.
3. Subjects in the alcoholic group showed about the same passivity in the major area of Right and Wrong (II), and only moderately more passivity in the major area of Reaction to Adversity (IV) than normal subjects.

### C. Conclusions

- 1) The alcoholic subjects do manifest personality characteristics that distinguish them from normal subjects.
- 2) Arnold's Story Sequence Analysis method, together with auxiliary factors, shows considerable promise for distinguishing between alcoholic and normal subjects for clinical screening purposes.
- 3) Further investigation is desirable to determine which of the recently identified characteristics will also distinguish between alcoholics and other clinical groups.
- 4) The following is a summary of the motivational attitudes expressed by the alcoholics. As a group they generally adopted a pessimistic orientation toward achievement. The majority of the alcoholics regarded success and goals beyond their capabilities. Although they might hope and dream of success they ultimately expected to fail and generally became disgusted and resigned when they did so. They adopted a marginal existence as a way of life and often expected to be victimized or to

lose what little they had acquired. A few of them expressed dissatisfaction with their condition and regarded anything as a potential improvement over their current unsatisfactory state.

The alcoholics as a group expressed considerable conflict in the area of human relationships. Many of them seemed indifferent to others and most of them regarded themselves as loners and losers who were frequently occupied with thoughts of despair. They seemed to expect good relationships to fail and imagined themselves taking final farewells from relatives. Occasionally some expressed guilt feelings about having abandoned others. The majority seemed to resent, and some expressed rebellion against, interference, advice, or directions. Others unhappily yielded to the domination of powerful figures. A few seemed impervious or indifferent to any type of communication, criticism and the like.

The alcoholics as a group expressed little or no hope of overcoming adversity. Most difficult situations seemed insurmountable. For the majority, adversity seemed to beget more adversity, and failure to generate more failure, and aroused an associated tendency toward despondency. A few of the alcoholic subjects felt so completely enmeshed in their problems that they expressed helplessness and confusion without any hope of ever seeing a solution. A minority seemed calloused to failure and only vaguely recalled the difficulties they had experienced or the suffering their problem had caused.

The characteristically passive attitude of the alcoholics as a

group in the major areas of Achievement and Human Relationships is readily apparent in the preceding description.

The alcoholics frequently referred to drinking in their stories. They seemed unable to come to direct grips with the thematic material and expressed considerable ambivalence by qualifying their statements with, "It could be this or that", etc. They also seemed to feel very inadequate and regularly expressed helplessness or doubt by rather regularly commenting that they didn't know what was going to happen, how to proceed, or what the outcome would be while continuing to tell their story.

## ABSTRACT

Fifteen cards of the Thematic Apperception Test were administered to two groups consisting of thirty chronic alcoholic and thirty normal subjects who were equated on the basis of race, sex, age, and educational level. The records were evaluated according to Arnold's Story Sequence Analysis method. Alcoholic subjects had a significantly lower motivational index (M.I.) than normal controls and lower final scores in three of Arnold's four categories: I. Achievement, III. Human Relationships, and IV. Reaction to Adversity. Also, they had significantly more active than passive imports in two of Arnold's four major categories: I. Achievement, and III. Human Relationships. When the stories were evaluated in terms of content, characteristics which would distinguish between the alcoholic and normal groups, it was found that alcoholic subjects made significantly more references to alcohol and expressed significantly more ambivalence and helplessness than did normals. The findings substantiate current research findings that the alcoholics have more unfavorable attitudes toward achievement, human relationships and adversity; are more passive, ambivalent and helpless; and are more aware of drinking than normals. The study indicates that Arnold's method of Sequence Analysis is a valuable technique for evaluating attitudes and motivational patterns of alcoholics and normals.

## BIBLIOGRAPHY

- Arnold, M.B., Story Sequence Analysis: A New Method of Measuring Motivation and Predicting Achievement, New York, Columbia University Press, 1962.
- Apperson, L.B. and McAdoo, W.G.Jr., Paternal reactions in childhood as described by schizophrenics and alcoholics, J. clin. Psychol., 1965, 21, 369-373.
- Apperson, L.B., Childhood experiences of schizophrenics and alcoholics, J. genet. Psychol., 1965, 106, 301-313.
- Aronson, H. and Gilbert, A., Preadolescent sons of male alcoholics: An experimental study of personality patterning, Arch. gen. Psychiat., 1963, 8, 235-241.
- Armstrong, R.C., Hambacher, W.O. and Overly, J.F., Self-concept of psychiatric and normal subjects revealed by the WAY test, J. clin. Psychol., 1962, 18, 271-276.
- Atkinson, J.W., Heyns, R.W. and Veroff, J., The effect of experimental arousal of the affiliation motive in apperception, J. abnorm. soc. Psychol., 49, 405-410.
- Brown, J.E., Personality dynamics of high and low academic achievers in high school; a modified Thematic Apperception Test reliability study, M.A. Thesis, St. Louis University, St. Louis, 1953.
- Burkard, M.I., Characteristic differences, determined by TAT Sequential Analysis, between teachers rated by their pupils at the extremes in teaching efficiency, Ph.D. Dissertation, Loyola University, Chicago, 1958.
- Chodorkoff, B., Alcoholism and ego function, Quart. J. stud. Alcohol., 1964, 25, 292-299.



- Coehko, G.V., Siber, E., and Hamburg, D.A., Use of student TAT to assess coping behavior in hospitalized, normal and exceptional competent college freshmen, Percpt. Motor Skills, 1962, 355-365.
- Cumin, C., TAT correlates of executive performance, J. appl. Psychol., 1967, 51, 78-81.
- Dore, P., An investigation into the motivational characteristics of petty offenders using the method of Story Sequence Analysis, Ph.D. Dissertation, Loyola University, Chicago, 1968.
- Easter, V. and Murstein, B.I., Achievement fantasy as function of probability of success, J. consult. Psychol., 1964, 28, 154-159.
- Fields, R.M., A personality description of the unwed pregnant adolescent, using Story Sequence Analysis, M.A. Thesis, Loyola University, Chicago, 1965.
- Finlay, D.G., Effect of role network pressure on an alcoholic's approach to treatment, Soc. Wk., 1966, 11, 71-77.
- Fisher, S. and Fisher, R., Application of rigidity principles to the measurement of personality disturbance, J. Personality, 1955, 24, 86-93.
- Fitzhugh, C., Fitzhugh, K.B. and Rectan, R.M., Adaptive abilities and intellectual functioning of hospitalized alcoholics: Further consideration, Quart. J. stud. Alcohol, 1965, 26, 402-411.
- Fuller, G.B., Lunny, G.H. and Naylor, W.M., Role of perception in differentiating subtypes of alcoholism, Percpt. Motor Skills, 1966, 23, 735-743.
- Gavin, J.A., A Thematic Apperception Test study of non-intellective factors related to academic success on the college level, Ph.D. Dissertation, Loyola University, Chicago, 1960.
- Gibbons, R.J., Smert, R.G. and Seeley, J.R., A critique of the Mansin Test, Quart. J. stud. Alcohol, 1959, 20, 357-361.
- Gynther, M.D., Precher, H. and McDonald, R.R., Personal and interpersonal factors associated with alcoholism, Quart. J. stud. Alcohol, 1959, 20, 321-334.

- Hall, S., A comparison of the dreams of four groups of hospitalized mental patients with each other and with a normal population, J. nerv. ment. Disease, 1966, 143, 135-139.
- Halpern, F., Studies of compulsive drinkers, psychological test results, Quart. J. stud. Alcohol, 1946, 4, 468-479.
- Harrison, M., The affiliation motive and readiness to join Alcoholics Anonymous, Quart. J. stud. Alcohol, 1959, 20, 313-320.
- Jenkins, W.O. and Pascal, G.R., A study of the early environment of workhouse inmates and alcoholics and its relationship to adult behavior, Quart. J. stud. Alcohol, 1960, 21, 40-50.
- Kayan, J. and Moss, H.A., Stability and validity of achievement of fantasy, J. abnorm. Psychol., 1959, 58, 357-364.
- Klebanoff, S.G., Personality factors in symptomatic chronic alcoholism as indicated by the TAT, J. consult. Psychol., 1947, 11, 111-119.
- Knehr, C.A., Vickery, A. and Guy, M., Problem action responses and emotions in Thematic Apperception Test stories recounted by alcoholic patients, J. Psychol., 1953, 35, 201-226.
- Kogan, K.L. and Jackson, J.K., Some concomitants of personal difficulties in wives of alcoholics and non-alcoholics, Quart. J. stud. Alcohol, 1965, 26, 595-604.
- LeVann, L., An intensive psychological study of thirty alcoholic patients, Canad. med. ass. J., 1953, 69, 584-588.
- Levy, R.I., The psychodynamic functions of alcohol, Quart. J. stud. Alcohol, 1958, 19, 649-659.
- Lisanski, E.S., Etiology of alcoholism: The role of the psychological pre-disposition, Quart. J. stud. Alcohol, 1960, 21, 314-327.
- MacAndrew, D., Self reports of male alcoholics: A dimensional analysis of certain differences from non-alcoholic male psychiatric outpatients, Quart. J. stud. Alcohol, 1967, 28, 43-51.
- McCandlish, L.A., An investigation of a new method of TAT analysis, by a prediction study of high and low academic achievers, Ph.D. Dissertation, Loyola University, Chicago, 1958.

- McGaughran, L.S. and Rudie, R.R., Differences in developmental experiences, defensiveness, and personality organization between two classes of problem drinkers, J. abnorm. Psychol., 1961, 62, 659-665.
- Machover, S. and Puzzo, F., Clinical and Objective Studies of Personality Variables in Alcoholics, I. Clinical Investigation of the Alcoholic Personality, Quart. J. stud. Alcohol, 1959, 20, 505-520.
- Machover, S. and Puzzo, F., Clinical and Objective Studies of Personality Variables in Alcoholics, II. Clinical Studies of Personality Correlation of Remitted from Active Alcoholics, Quart. J. stud. Alcohol, 1959, 20, 520-527.
- McNiel, E.B., Aggression in fantasy and behavior, J. consult. Psychol., 1962, 26, 232-240.
- Mindlin, P.F., The characteristics of alcoholics as related to prediction of therapeutic outcome, Quart. J. stud. Alcohol, 1959, 20, 604-619.
- Moore, R.A. and Ramseur, F., A study of the background of 100 hospitalized veterans with alcoholism, Quart. J. stud. Alcohol, 1960, 21, 51-67.
- Mulford, H.A., Miller, D.E., Public definitions of the alcoholic, Quart. J. stud. Alcohol, 1961, 22, 312-320.
- Murphy, D.G., The revalidation of diagnostic tests of alcohol addiction, J. consult. Psychol., 1956, 20, 301-304.
- Murstein, B.I., The measurement of ambiguity by thematic cards, J. project. Techn., 1960, 24, 419-423.
- Murstein, B.I., Sex differences in TAT ambiguity, hostility and projection, J. genet. Psychol., 1966, 108, 71-80.
- Murstein, B.I., A normative study of TAT ambiguity, J. project. Techn., 1964, 28, 210-218.
- Najjar, B., Differences in Motivational Patterns of Inadequate and Inept Psychopathic Deviant Prison Inmates as Revealed by TAT Story Sequence Analysis, Ph.D. Dissertation, Loyola University, Chicago, 1967.

- Petrauskas, F.B., A TAT and Picture Frustration study of naval offenders and non-offenders, Ph.D. Dissertation, Loyola University, Chicago, 1959.
- Podolsky, E., The obsessive, compulsive chronic alcoholic, Personality features of the chronic alcoholic, Am. J. Psychiat., 1960, 117, 236-238.
- Quinn, T.L., Differences in motivational patterns of college student brothers as revealed in the TAT, the ratings of their peers and the ratings of their superiors: A validation study, Ph.D. Dissertation, Loyola University, Chicago, 1961.
- Roe, A., Alcohol and creative work, Part I. Fantasy, Quart. J. stud. Alcohol, 1946, 6, 415-467.
- Rosen, A., A comparative study of alcoholic and psychiatric patients with the MMPI, J. consult. Psychol., 1958, 22, 433-457
- Rubin, S.S., A comparison of the Thematic Apperception Test stories of two I.Q. groups, J. project. Techn., 1964, 28, 81-85.
- Singer, E., Personality Structure of Chronic Alcoholics, Amer. Psycholog., 1950, 5, 323.
- Skolnich, A., Motivational imagery and behavior over twenty years, J. consult. Psychol., 1966, 30, 463-478.
- Steggert, F.X., An analysis of some personal and executive characteristics of participants in a university program of executive development for federal personnel, Ph.D. Dissertation, Loyola University, Chicago, 1961.
- Syme, L., Personality Characteristics of Alcoholics, A Critique of Current Studies, Quart. J. stud. Alcohol, 1957, 18, 288-335.
- Thrice, H., The Affiliation Motive and Readiness to Join AA, Quart. J. stud. Alcohol, 1959, 20, 313-320.
- Vassiliou, V., Motivational patterns of two clinical groups as revealed by TAT Sequence Analysis, Ph.D. Dissertation, Loyola University, Chicago, 1962.
- Wellman, W.M., Maunell, M.A. and O'Hallaren, P., Private hospital alcoholic patients and the changing concept of the typical alcoholic, Quart. J. stud. Alcohol, 1957, 18, 380-404.

- Whisler, R., Hugh, J. and Cantor, J.M., The MacAndrew Alcoholism Scale: A cross validation in a domiciliary setting, J. clinic. Psychol., 1966, 22, 331-342.
- Whiteley, J.M., A method for assessing adaptive ego functioning using the Thematic Apperception Test, J. exper. Educ., 1966, 34, 1-21.
- William, A.F., Validation of a college problem-drinking scale, J. project. Techn., 1967, 31, 33-40.
- Winter, W.P., Ferreira, A.J. and Olson, J.L., Story Sequence Analysis of family TAT's, J. project. Techn., 1965, 29, 392-397.
- Zax, M., Cowen, E., Budin, W. and Riggs, C., The social desirability trait descriptive terms: Application to an alcoholic sample, J. soc. Psychol., 1962, 56, 21-27.
- Zelen, S.L., Fox, J., Gould, E. and Olson, R.W., Sex-contingent differences between male and female alcoholics, J. clinic. Psychol., 1966, 22, 160-165.
- Zwerling, I., Psychiatric Findings in an Interdisciplinary Study of Forty-six Alcoholic Patients, Quart. J. stud. Alcohol, 1959, 20, 543-554.

APPENDIX I-A

THE CATEGORICAL DISTRIBUTION OF THE TOTAL NUMERICAL SCORES  
AND THE MOTIVATION INDEX OBTAINED BY EACH  
SUBJECT IN THE NORMAL GROUP

Subjects	Category I	Category II	Category III	Category IV	Motivation Index
1	+8	+2	-1	0	130
2	-5	+1	-3	+1	80
3	-7	-3	+1	0	70
4	+1	-1	+3	-2	103
5	-1	-2	-2	-5	67
6	+5	0	+2	+3	133
7	+4	+1	-1	-1	110
8	+7	-2	+2	+2	130
9	-1	0	-3	-6	67
10	-2	-2	-5	-1	67
11	+1	-1	-3	-3	80
12	-3	0	+3	-4	87
13	+4	+1	+4	-2	123
14	+5	-1	-2	0	107
15	+3	0	-3	-1	97
16	+1	+1	+3	+2	123
17	-6	-3	-1	-2	60
18	-2	-3	-2	-3	100
19	+3	+2	-4	0	103
20	+3	-1	+4	+2	127
21	-1	-1	+1	+4	110
22	+8	+3	+1	+3	150
23	+7	+4	+2	-2	137
24	+3	+4	+3	+2	140
25	+7	+2	+8	-1	153
26	+1	0	+3	-1	110
27	+1	-1	-1	+1	100
28	+6	-5	-1	+5	117
29	+1	+8	+1	0	133
30	0	+2	-4	-2	90

## APPENDIX I-B

THE CATEGORICAL DISTRIBUTION OF THE TOTAL NUMERICAL SCORES  
 AND THE MOTIVATION INDEX OBTAINED BY EACH  
 SUBJECT IN THE ALCOHOLIC GROUP

---

Subjects	Category I	Category II	Category III	Category IV	Motivation Index
31	- 4	- 5	- 8	-4	30
32	- 2	+ 7	- 3	0	107
33	0	+ 3	- 8	-2	77
34	0	+ 1	- 2	-2	90
35	- 8	0	- 6	-5	37
36	- 3	- 8	- 5	-4	33
37	- 4	- 1	- 6	-6	43
38	-10	- 1	- 5	-6	27
39	- 1	0	- 4	-2	77
40	- 5	+ 2	- 4	-7	53
41	0	- 3	- 6	-7	47
42	- 5	- 4	- 5	-2	47
43	- 5	- 3	- 7	-3	40
44	- 2	+ 2	- 6	-3	70
45	-10	- 2	- 5	0	43
46	- 9	- 2	- 3	-3	43
47	- 1	- 3	- 6	-4	53
48	- 9	- 4	- 5	-5	23
49	- 1	+ 1	- 6	-1	77
50	- 1	-10	- 3	-3	43
51	- 4	- 1	- 4	-4	57
52	-14	0	-12	0	13
53	- 4	0	- 9	-6	37
54	- 5	0	- 4	-4	57
55	- 1	- 2	- 5	-6	53
56	- 4	- 3	- 4	-6	43
57	- 7	+ 2	- 8	-3	47
58	- 8	- 3	- 9	-2	27
59	- 5	- 2	- 6	-2	50
60	- 9	- 1	0	-9	37

## APPENDIX II-A

THE FREQUENCY OF ACTIVE AND PASSIVE IMPORTS OBSERVED IN THE  
 RECORDS OF THE NORMAL SUBJECTS IN EACH OF  
 ARNOLD'S FOUR MAJOR CATEGORIES

Sub- ject	CATEGORY I		CATEGORY II		CATEGORY III		CATEGORY IV		TOTAL	
	Active	Passive	Active	Passive	Active	Passive	Active	Passive	A	P
1	3	6	0	1	0	5	0	0	3	12
2	1	4	2	1	1	4	0	2	4	11
3	4	4	0	2	2	3	0	0	6	9
4	5	2	2	0	3	1	0	2	10	5
5	4	2	1	1	2	0	1	4	8	7
6	3	2	0	0	2	5	1	2	6	9
7	5	3	0	1	2	3	0	1	7	8
8	6	1	0	1	4	1	1	1	11	4
9	3	1	1	2	2	1	5	0	11	4
10	3	3	1	0	2	5	0	1	6	9
11	2	1	0	1	4	5	1	1	7	8
12	3	4	1	1	0	3	2	1	6	9
13	4	1	0	2	1	3	2	2	7	8
14	5	2	0	2	1	3	1	1	7	8
15	5	1	0	3	0	3	1	2	6	9
16	5	0	0	1	0	3	2	4	7	8
17	1	4	0	4	0	4	0	2	1	14
18	3	3	1	2	0	4	1	1	5	10
19	7	2	0	1	2	3	0	0	9	6
20	2	2	0	1	2	4	2	2	6	9
21	3	2	1	0	1	2	2	4	7	8
22	5	3	1	1	0	2	1	2	7	8
23	5	3	1	2	1	0	1	2	8	7
24	5	1	3	2	2	1	1	0	11	4
25	2	3	2	1	3	3	1	0	8	7
26	2	4	1	2	1	4	0	1	4	11
27	3	3	0	3	0	4	2	0	5	10
28	7	0	1	3	0	1	2	1	10	5
29	6	3	0	5	0	1	0	0	6	9
30	3	2	0	2	5	2	0	1	8	7



## APPENDIX II-B

THE FREQUENCY OF ACTIVE AND PASSIVE IMPORTS OBSERVED IN THE  
RECORDS OF THE ALCOHOLIC SUBJECTS IN EACH OF  
ARNOLD'S FOUR MAJOR CATEGORIES

Sub- ject	CATEGORY I		CATEGORY II		CATEGORY III		CATEGORY IV		TOTAL	
	Active	Passive	Active	Passive	Active	Passive	Active	Passive	A	P
31	1	3	0	3	0	6	0	2	1	14
32	1	2	0	5	1	6	0	0	2	13
33	1	7	0	1	0	5	0	1	1	14
34	4	5	1	1	1	2	0	1	6	9
35	1	6	0	0	0	4	1	3	2	13
36	0	2	0	6	0	3	0	4	0	15
37	0	3	0	1	0	7	0	4	0	15
38	0	7	0	1	0	4	0	3	0	15
39	2	3	2	1	2	4	0	1	6	9
40	1	5	0	1	0	2	0	6	1	14
41	1	3	0	2	0	4	1	4	2	13
42	0	5	0	3	0	6	0	1	0	15
43	1	5	0	3	0	4	0	2	1	14
44	1	5	1	0	0	4	0	4	2	13
45	0	8	0	4	0	3	0	0	0	15
46	0	8	0	2	0	2	0	3	0	15
47	1	3	0	3	0	6	0	2	1	14
48	0	6	0	2	0	4	0	3	0	15
49	2	2	1	0	1	6	0	3	4	11
50	0	6	0	5	0	2	0	2	0	15
51	2	6	0	1	2	2	1	1	5	10
52	1	7	0	0	0	7	0	0	1	14
53	2	2	1	1	1	5	1	2	5	10
54	0	4	1	1	2	3	1	3	4	11
55	1	3	0	1	0	5	0	5	1	14
56	1	2	0	2	0	6	0	4	1	14
57	0	5	0	3	1	4	1	1	2	13
58	0	5	0	3	0	6	0	1	0	15
59	3	5	0	1	0	4	0	2	3	12
60	1	5	1	0	0	3	1	4	3	12

## APPENDIX III

THE FREQUENCY OF THE ALCOHOLIC, AMBIVALENT AND INADEQUACY REFERENCE  
 RESPONSES (A MAXIMUM OF ONE TALLY PER STORY) PROVIDED BY THE  
 ALCOHOLIC AND NORMAL SUBJECTS PER RECORD

Sub- jects		Alcoholic Reference Responses		Ambivalent Reference Responses		Inadequacy Reference Responses		Total Reference Responses	
N	A	Normals	Alcoholics	Normals	Alcoholics	Normals	Alcoholics	N	A
1	31	1	1	0	7	0	4	1	12
2	32	2	3	1	7	3	9	6	19
3	33	1	1	3	8	1	8	5	17
4	34	0	1	0	2	0	0	0	3
5	35	1	1	3	11	1	1	5	13
6	36	1	3	2	9	0	1	3	13
7	37	1	1	2	2	1	10	4	13
8	38	0	3	1	8	0	5	1	16
9	39	1	2	0	5	0	1	1	8
10	40	0	2	5	8	1	2	6	12
11	41	1	1	10	2	1	5	12	8
12	42	0	2	5	5	1	6	6	13
13	43	0	2	0	9	0	5	0	16
14	44	1	2	1	4	0	4	2	10
15	45	0	4	0	6	1	7	1	17
16	46	0	7	2	8	2	6	4	21
17	47	0	4	7	6	1	5	8	15
18	48	1	0	5	4	1	4	7	8
19	49	1	0	6	2	1	5	8	7
20	50	0	7	0	6	1	8	1	21
21	51	0	2	2	1	0	3	2	6
22	52	0	3	2	7	0	9	2	19
23	53	1	6	1	11	1	9	3	26
24	54	1	0	4	1	1	4	6	5
25	55	0	2	2	8	0	8	2	18
26	56	1	2	0	4	1	1	2	7
27	57	2	0	0	0	0	9	2	9
28	58	0	3	0	6	0	7	0	16
29	59	0	3	2	3	1	3	3	9
30	60	1	1	3	9	1	8	5	18

## APPENDIX IV-A

## PILOT STUDY DATA

DISTRIBUTION OF THE VARIABLES FOR NORMAL SUBJECTS MOST LIKELY TO REVEAL  
SIGNIFICANT DIFFERENCES BETWEEN THE TWO (ALCOHOLIC AND NORMAL)  
GROUPS AND SERVE AS A HELPFUL QUANTITATIVE CRITERIA  
FOR BLIND ANALYSIS

Sub- jects	MOTIVATION INDICES	IMPORTS		FREQUENCY PER RECORD OF THE LITERAL REFERENCE RESPONSES		
		Active	Passive	Alcoholic References	Ambivalent References	Inadequacy References
1	103	6	9	0	1	0
2	87	6	9	1	3	1
3	83	7	8	1	4	0
4	127	7	8	0	1	0
5	80	5	10	1	0	0
6	80	9	6	1	5	0
7	97	11	4	0	0	2
8	93	6	9	0	0	0
9	90	5	10	0	2	0
10	117	5	10	0	1	1

## APPENDIX IV-B

## PILOT STUDY DATA

DISTRIBUTION OF THE VARIABLES FOR ALCOHOLIC SUBJECTS MOST LIKELY TO REVEAL SIGNIFICANT DIFFERENCES BETWEEN THE TWO (ALCOHOLIC AND NORMAL) GROUPS AND SERVE AS A HELPFUL QUANTITATIVE CRITERIA FOR BLIND ANALYSIS

Sub- jects	MOTIVATION INDICES	IMPORTS		FREQUENCY PER RECORD OF THE LITERAL REFERENCE RESPONSES		
		Active	Passive	Alcoholic References	Ambivalent References	Inadequacy References
11	37	1	14	5	8	8
12	60	3	12	8	7	7
13	40	5	10	1	0	4
14	67	1	14	1	3	3
15	63	2	13	3	9	7
16	53	0	15	2	9	11
17	63	3	12	1	8	6
18	27	0	15	2	10	8
19	50	1	14	4	10	9
20	50	1	14	1	13	6

## APPENDIX V-A

## A SAMPLE OF AN ALCOHOLIC SUBJECT'S

## TAT STORIES. THE ORIGINAL RECORD

Alcoholic No.12  
(Pilot Study)

1. Now he is studying about a violin, don't know too much about it and thinking about sleep. Way he is looking at the violin he doesn't know if he wants to be a violinist or a doctor. He's got music down there. Well, I'd rather call it quits and go to bed.
2. Well, the old boy is out here with a plow looks like. He is out here doing farm work and looks like his little daughter is on her way to school and the wife is waiting for him to get the day's work done. She must be in love with him 'cause she is waiting for him. Well, he is going to raise a crop of some kind, some day they are going to own the land. The way he is dressed he is poor and a share cropper and some day the land will belong to us. Instead of using a horse and plow I'd be able to use a tractor and new equipment.
- 3EM. Well, looks like just about had it. One time was probably a millionaire, went out drinking like I started drinking. Is this a man or woman. Think I better say she. Lost all my friends, turned out to be a drunkard. Maybe some day will be able to get off my back and straighten things out and get back to where I used to be. That's all I can say about that picture.
4. That looks like a drinking picture to me. Looks like she is trying to talk him into not going out again tonight, stay with me at least one evening a week. He don't love her any more, probably fell with another girl. She is trying to get things back like our love was at one time. Well, he will get sobered up and find out he was wrong all the way and he will go back to her, look her up. He finds out she is the one he loved all along. And she married somebody else and he is left in the cold. She will say I gave you your chance, you turned it down and I found something that has a future to it.
- 6EM. This looks like a mother and son. Father has just passed away, look brokenhearted. She is saying son don't worry, had to go someday, don't worry, I'll have to go some day too. Looks like people got money and a nice home. You don't have nothing to worry about, you can keep the

estate, you know that you are the only child. And after I am gone you will be able to go into the world and do things you will want to do. You was my only child and I tried to keep you, and should have let you marry that girl years ago, the one you loved. Now you...she passes away not long after that, she looks like she is old enough. And find the girl you love, have a happy home and all the money you need, so son hold your head up and don't look so sad.

- 7BM. He looks kinda like a thug and the old man looks pretty honest. Might be a father and son. Looks like he has had a fast drinking life, and he is talking to him about what is going on and he is trying to explain what should be. Breaking away from that gang he has been running around with at night. He is telling him how wrong it is living the way he has. The old boy is setting and listening. And he is explaining that some day in the future he should grow up like his father is. Looks like the boy breaks loose from the gang he has been drinking with, meets a girl, falls in love with her, brings her into their home, looks like his mother has passed away, the old man passes away, buys a place of business, raises a family, raises three children and he turned out all right after all, didn't he?
- 8EM. Isn't this a gun? This is a little rough, the way the picture is laid out. Oh, he has been shot, yaa, and they are trying to cut this bullet out. This is this guy's son. Maybe he came by to watch him, he turned his back, he is just a kid, get this bullet out so his father will live. Instead his father dies, cause his father was probably a gangster or always in a lot of trouble and the kid thought some day it would happen. Kid grows up, finishes college and turned out to be a banker because he never forgot his childhood days. The misery and torture he went through when this happened.
- 9EM. Well, well, got a bunch of tramps all drunked up. Some got good homes, some raised off it, some have a family, this one guy looks like if he could just get over this drunk he would never do it again. This kid, he wants to tag along with these three drunkards or hoboes, and they told him to beat it, but they are asleep and he is slipping back at camp with them. Boy looks like the rest of them, don't have much future for any of them. Write that down if you want, but just from the looks of it.
10. Well, well, that looks like a drinking bartender to me. Looks like they both might be drunk, he is trying to make love to her. Looks like she has gone for it all right, got her hand on his chest. Well, we get over this one, I'll quit my drinking, straighten up and get another bartender job if he don't drink himself to death before it happens.

Looks like she says all you do is give me promises and promises. She says I am going to keep drinking as long as you do. Can't seem to see a lot of future in that picture either.

11. Looks like this is a walkway and people sleeping here. This looks like a monster coming out to have a big feast, had a mountain slide. Instead of asleep, had a rock slide from the mountain and this monster is going to come out and have a big feast on their bodies.
- 13EM. Well, is this a Bible or a school book? He is saying come on Sis get out of bed, we got to go to school today. Looks like she has been laying around three days without going to school and he had to get up and do all the chores. He is telling her he is about tired of all of it. He is a pretty nice kid, looks like he is a human being. You go ahead and sleep all your life, I am going to get myself an education. His sister went to the bad and she never got married. He got himself a good education, (have I told you that), he ends up in one part of the country, she in another, and he never heard from her no more.
14. Looks like a guy is coming out of where he has been hiding. He had done something, he has been in there so long that he is dying of thirst or hunger. Win, lose or draw (he's thinking) I got to get out of here. He does go out and get himself a bottle, after night sneaks back in, so the second time he comes out the cops are waiting for him, take him and investigate him and find out all. He was a drunkard.
16. That's a picture of a railroad yard, there is a freight train pulling on one side and a passenger train on the other. Two sides here. Just picturing myself going through here on a passenger train thinking that this is where I use to work. Put twenty years here, I was a brakeman on the railroad. So I get off here. This is the old Tuscon Yard. Look up a couple of friends of mine and they wanted to know where I'd been these past few years. I told them I'd been in Chicago and they said what are you doing leaving a big city like Chicago, coming back to this dried out desert. All that is left any more is the old heads. That is what these two friends are telling me. Since the diesel came out the old steam engines are gone. You have to have twenty year's experience just to hold the extra board. Things have really changed since you have been around here. I say, well, things have changed all over. Chicago is not what it use to be, my advice is to stay here and keep your seniority.
- 18EM. This guy looks like he is drunk, and two guys are taking him from the rear. One is going through his pockets over here, looks like they have already hit him over the head with something. They haven't got

him knocked out and looks like he is trying to talk them out of taking the last penny he has got. Looks like he has had it. I say that, but they just robbed. Can't see much of a future for him. Looks like strictly an alcoholic right down on Madison Street.

20. He is headed for the park, another hobo. He is going to the park to look for another place to sleep, he has got himself a jug and so he is going to crawl under the weeds, or hedges or trees, don't know what you call it. He is so drunk from his jug he passed out for the night. He woke up in the morning and says if I get over this one I will never get that way again, but he is like the rest of them and goes out and does it all over again.



## APPENDIX V-B

A SAMPLE OF AN ALCOHOLIC SUBJECT'S  
TAT STORY SEQUENCE ANALYSISAlcoholic No. 12  
(Pilot Study)

1. When you are faced with something you might do, you are uncertain whether you want to do it, call it quits and go to bed.  
-1 I B 5a
2. But with someone waiting for you at the day's end, you work and will achieve some success.  
+1 I D 1a
- 3EM. After failing (because of drinking) you hope you will someday be able to straighten out and regain your previous status.  
-1 I E 2b
4. Although you didn't listen to friends who tried to keep you from drinking, you find you were wrong, reform although it is too late for them to accept you back.  
-1 I C 2b
- 6EM. Following a mutual sorrow a parent regrets her over-protectiveness, comforts you and reminds you that your future is bright.  
-1 III C 3a
- 7EM. You listen to their advice to break away from the wrong life you are leading, settle down and become respectable, don't you?  
-1 III C 4
- 8EM. Since you never forget childhood adversities associated with parental delinquencies, you finish school and become successful.  
+2 I B 1a

9BM. But having failed (got all drunked up) there is not much future for you, even though you may have come from a good environment and look as if you would never do it again.

-2 I E 2e

10. Even though you promise and promise a spouse to quit drinking and get a job, nothing much comes of it and she keeps drinking too.

-2 I A 2a

11. And during sleep you both perish in a catastrophe and become prey to scavengers.

-2 III F 2

13BM. Being tired of (adversity) doing jobs for lazy friends, you resolve to leave, get an education and never hear from them again.

+1 I B 3a

14. As you come out of (adversity) hiding to satisfy your cravings you are apprehended by the law and found out to be a drunkard.

-1 II A 1f

16. Since things are not what they used to be, there is no point in trying your luck elsewhere. It is best to remain where you are and keep what you have.

-1 I B 4b

18BM. Being an alcoholic (a failure) people take advantage of you and although you try to talk your way out of it there is not much future for you.

-2 I E 3d

20. So, after drinking to unconsciousness you promise never to get that way again, but you do it all over again.

-1 II 2a

## APPENDIX VI-A

A SAMPLE OF A NORMAL SUBJECT'S  
TAT STORIES - THE ORIGINAL RECORDNormal No. 29  
(Experimental Study)

1. This boy is taking violin lessons. He has a violin in front of him right now but he looks pretty disgusted with it. He lays it down, looking at it but he decides to go ahead and study real hard and he turns out to be a good musician.
2. It is a farmer working in the field. It shows the wife is watching him and the daughter is on her way to school. She studies real hard. She turns out to be a teacher and she does real well and then she helps the family out. Later on their family is a lot easier for them. They worked real hard to get her through school and now she is working to help them.
- 3EM. This is a girl. She looks very despondent over something that has happened. She was probably reprimanded for something and is very depressed. Probably she will decide to shape up and try to do better in the future.
4. This is a man and wife. The man looks kind of disturbed like something has happened--possibly someone has killed his brother and he is going to get revenge and the wife is talking him out of it. He will probably figure out if he does something like that he will be in more trouble so he decides not to do anything about it.
- 6EM. It is a mother and her son. The son wants to go out on a career for himself and the mother looks a little sad about it. He is a little undecided--does not know just what to do about it but he looks as though he is determined to go out and make good and to make a nice life for his mother.
- 7EM. These two men--one is a younger man, the older gentleman has been talking to him, I think about business--giving him some advice and he seems to be real concerned about it. The older gentleman seems to be real pleased about the way he is taking it and I think he will shape up and make a real executive from the advice from the older gentleman.
- 8EM. This gentleman on the table has been wounded with a shotgun blast and the doctors are trying to fix him up and the young man in the corner,

if he did it, he does not look too sad about it but he looks pretty concerned as though he figures he would never do anything like that in the future. Probably will make a better man out of him—it could have been an accident.

- 9BM. These men are travelers walking across the country and they are tired, getting a little sleep and the only place they have is to just lay in the grass or in the fields, use one another for a pillow. The one in the lower left hand corner looks at him and he is probably thinking that this life is not for him and that he is going to try to do a little better in life so that he won't have to sleep out in the prairie like this. He probably turns out to be a more useful human being.
10. This couple is very devoted to one another and he is leaving for a trip for some mission somewhere in—they are saying goodbye—he will be traveling but it will be a comfort to him to know that she is real true to him and he will be back and they will be a happy couple when he gets back.
11. This is a mountain road with rocks along the side. They have had a landslide, partially blocking the road. They are trying to push some of the debris from the road so that they can get to the other side of the bridge. Part of the road has gone—I see trees in the distance there. When they get this object off the road it will be passable again.
- 13BM. This is a young married couple who have been very happy and they have spent a lot of good times. There is always a time when people have differences and he probably has turned to violence and has choked her to death. Now he realizes what he has done and he will probably be a better man after what he has done. He is in a state of confusion right now. He has books on the table that will help guide him. He will just have to pay the penalty.
14. This young man is going away to college. In his room by himself he gets pretty lonesome so he is right now looking out of the window but he is not going to jump. He is meditating—thinking—and he will study real hard and make a real man out of himself.
16. Here I see a man that is going to retire in about six months and he is rather looking forward to it—not just to sit around and lay around and get lazy or grow old fast—but will find things to do, keep busy and work when he feels like working, rest when he feels like resting and he will keep his wife working for a while, which she wants to do and will have things all ready for her when she comes home and try to make it as pleasant for her as he can and he hopes to live to be a pretty ripe old age.

- 18BM. This man went to a party, he was having a good time, he just went a little too far and got out of line. He is being escorted out of the place by a couple of other gentlemen and he will probably next time go to the party and kind of watch his actions a little better and will turn out to be a better mixer, more congenial and a nicer individual.
20. This is a wooded estate with a fence around it. The man walking by is a poor man. He is thinking about how nice it would be to live in one of these estates with luxury and he will walk by with thoughts of how he could have made his life a lot better and he will try in the future to lead a better life.

## APPENDIX VI-B

## A SAMPLE OF A NORMAL SUBJECT'S

## TAT STORY SEQUENCE ANALYSIS

Normal No. 29)  
(Experimental Study)

1. After having become disgusted with a project (failure) you study real hard and succeed very well.  
+1 I B 1d
2. Having become successful through your own hard efforts and through family sacrifices you work to make life better for them.  
+2 I D 1a
- 3BM. But after you have been reprimanded you decide to shape up and do better in the future.  
+2 II C 1
4. As another tries to restrain you as you seek revenge you realize such action will bring greater adversity and do not carry it out.  
+1 II B 1a
- 6BM. Although you are somewhat hesitant about your independent plans because of another's sadness you determine to make good and to provide for them.  
-1 I B 5b
- 7BM. Being very concerned you provide business advice which is well received and results in another's success.  
-1 I D 1d
- 8BM. If accidental harmful actions were caused by you, you are concerned and figure you will never do anything like that again.  
+1 II A 4b

9EM. And suffering hardships associated with your irresponsible life you decide to lead a better life and become a more useful person.

-1 I B 5b

10. Although you have separated because of some mission you will return and be most happy to be reunited.

+1 III A 1b

11. You work hard and do repair damages that have been caused by a natural calamity.

+1 I B 4b

13EM. After you have committed a crime you become confused, realize your error and must pay the penalty.

+2 II A 1a

14. Although you are lonesome right now you ponder, work hard and make something of yourself.

+1 I B 1d

16. You plan to keep busy during your retirement, help around the house and hope to live to a very old age.

+2 I B 4a

18EM. As you have gotten out of line a rejected experience motivates you to improve your attitudes and develop better habits.

+2 II C 1d

20. And you think about how you could have made your life better while observing wealth and try to lead a better life.

-1 I B 5b

APPROVAL SHEET

The dissertation submitted by Harry George Eschel has been read and approved by three members of the Department of Psychology.

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the dissertation is now given final approval with reference to content, form, and mechanical accuracy.

The dissertation is therefore accepted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy.

June 3, 1968

Date

Magda B. Arnold

Signature of Adviser