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Suicide: An Introduction and an Attempt at Prediction

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SUICIDE: AN INTRODUCTION AND
AN ATTEMPT AT PREDICTION

BY
WILBUR J. SCOTT

HONORS PROGRAM
SAINT JOHN'S UNIVERSITY
COLLEGE OF ARTS AND SCIENCES
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TABLE OF CONTENTS

	PAGE
ACKNOWLEDGEMENTS	ii
CHAPTER	
I. HISTORICAL INTRODUCTION	1
II. SPECIAL METHODOLOGICAL PROBLEMS OF SUICIDE RESEARCH	10
III. STATISTICS OF SUICIDE	22
IV. THEORIES OF SUICIDE	34
DURKHEIM'S THEORY	
PSYCHOLOGICAL THEORY	
V. ITEM ANALYSIS OF MMPI RESPONSES OF THIRTEEN SUICIDES AND THEIR CONTROLS. .	45
METHOD	
RESULTS	
DISCUSSION	
SUMMARY	
APPENDIX A	58
BIBLIOGRAPHY	82

CHAPTER I

HISTORICAL INTRODUCTION

Despite increased interest in and intensified study of the problem of suicide, this phenomenon remains as baffling as ever. The subject is related to the values that the individual and his community attach to life, existing attitudes toward death, socially propagated customs and mores, prevailing standards of life, and the variations from such standards. Suicide is an incredibly complex act, involving both the individual and society. Any systematic study of the problem must consider not only the internal dynamic forces of the individual but also the external circumstances over which the individual has no control, but which nonetheless effect the life of the individual.

The U.S. Statistical Abstract (1960) reports that there are approximately 20,000 suicides per year in the United States. Dublin, a famed investigator in the field of suicide research, estimates that about 310,000 people in the world take

their lives each year.¹ Evidence is accumulating to support the suspicion that these figures represent only a portion of the actual number of suicides. A recent study by the statisticians of the New York City Health Department suggested that the recorded suicide figures for deaths from barbituate poisoning, inhalation of gas, and falls from high places, all under unspecified circumstances, are understated by as much as one-fourth to one-third. Dublin has stated that it is safe to say that there are at least 25,000 suicides per year in this country.²

Although problems related to suicide statistics will be discussed in a later chapter, it is necessary to point out here the reluctance not only on the part of the family but also by officials to report a death as a "suicide." American society has always promoted a spirit of rugged individualism, of productive, high-octane living, of man succeeding in the physical and social jungle against odds and hardships. Suicide is viewed as indicating strains of cowardice in the face of this attitude. More potent is the pervading religious influence and heritage entwined

¹Don D. Jackson, "Suicide," Scientific American, November, 1954, p. 2.

²Louis Dublin, Suicide--A Sociological and Statistical Study (New York: The Ronald Press Company, 1963), p. 3.

with the moral fiber which regards suicide as spiritually unethical, if not damnable.

Historically, however, there has been considerable contradiction regarding the morality of suicide. Suicide was not always considered a sin in the Greek or Roman state. Although it was opposed by Pythagoras and other early philosophers, it was mentioned with a certain degree of admiration in ancient legends and in Homer, and the latter schools of Greek and Roman philosophy took a more lenient attitude. In fact, the Cynics, the Cyrenaics, the Stoics, and the Epicureans rather actively encouraged it.³ Significantly, all of these groups tended to regard life as of little importance, although their individual emphases on its value were quite different.

The early Christians apparently accepted the prevailing attitudes of their time concerning suicide, particularly when persecution made life unbearable for them. The suicides of martyrs were not considered displeasing to God. St. Cyprian declared that the Christians were invincible because they did not fear death and did not defend themselves against attack. Rather, they gave their blood and lives to escape from a cruel and wicked

³Ibid., p. 118.

world.⁴ Religious fervor prompted many early Christians to court openly or even pursue death actively so that they might sooner attain the happiness of heaven.

St. Augustine was the first to denounce suicide definitely as a sin. He argued that suicide, by the very nature of the act, precluded the possibility for the individual to repent for his sin of self-homicide. Augustine's reasoning was translated into ecclesiastical law by the fifth century. Several hundred years later, this position was prolifically supported by Thomas Aquinas. Aquinas stressed the argument that one who deliberately takes his own life flagrantly violates the will of God by rashly assuming power over life and death, a right in Christian doctrine reserved for God alone. Furthermore, this transgression necessarily occurs at the worst possible time, at that moment when one's earthly account is sealed for all eternity. The self-murderer, therefore, was viewed as killing, for all practical purposes, not only his body but his soul as well.⁵

The importance of one's concepts of life, death, and afterlife in relation to suicide is neatly illustrated in the behavior of some early Christians.

⁴Ibid., p. 110.

⁵Ibid., p. 120.

Many of them regarded this world as a "vale of tears" and yearned for the infinite happiness of heaven in which man was to be freed from his human condition and the realities of this world. Such a view enhanced the desirability of the suicide act and diminished the impact of the physical finality of the action. In contrast, the thinking of Christian philosophers such as Augustine and Aquinas emphasized the will of God and the necessity for man's adherence to it.

During the Middle Ages, suicide was deeply enmeshed in superstition. Since the Church explicitly stated that one who committed suicide was eternally damned, it was commonly thought that the devil played a crucial role in inducing people to commit suicide, a carry-over from the then prevalent notions concerning the etiology of insanity. Frequently, the corpse of the suicide was removed from the house through a window or some opening other than the door. Sometimes the body was dragged through the streets and hung on the public gallows. The ultimate preventive measure was to deny Christian burial.

During the eighteenth century, philosophers began asking serious and pointed questions of traditional institutions which had been regarded unquestioningly in the preceding centuries. The remarks of David Hume are of particular interest

and not without support today. Hume believed that human life depended upon the general laws of matter and motion and that it was no violation of the divine to disturb or stir these general laws. Thus he argued that if someone wanted to take his own life, he had the right given him by nature to do so.⁶

Discussion of suicide in the eighteenth century centered primarily around the moral implications of the act. While the philosophical aspects continued to be discussed, the nineteenth century spirit of scientific inquiry prompted empirical investigation of the problem. One of the earliest comprehensive investigations of suicide was that of Falret in 1822. Falret recognized the role of internal causes, which he thought to be certain forms of inherited mental disease, and of external causes in accounting for the varying suicide rate among different groups.⁷ This work was followed by many studies on suicide. These studies confirmed the contention that suicide rates tend to rise during periods of rapid social change; vary by age, sex, religion, marital status, and time of year; are higher in urban than in rural areas; and vary positively with socio-economic status, being highest

⁶Ibid., p. 125.

⁷Anthony Giddens, "The Suicide Problem in French Sociology," British Journal of Sociology, Vol. 16, No. 1. 1965, p. 3.

among the professional occupations and lowest among the chronically poor.⁸

Two traditions emerge from the controversy over suicide in the nineteenth century. The crucial distinction between the two lies in the emphasis placed on definitively describing the intervening factors which cause individuals to deviate from the established norm against suicide. The first tradition is deeply embedded in the sociological aspect of the problem. Exponents of this tradition maintain that the causes of suicide are primarily social. Durkheim, whose monumental work, Suicide, was published in 1898, stated that the individual inclination for a given behavior is explicable only in relation to the collective inclination, and that this collective inclination is itself a determined reflection of the structure of the society in which the individual lives. The aggregate of individual views on life is more than the sum of the individual views. To Durkheim, it is an existence in itself; it is what he calls the "collective conscience," the totality of beliefs and practices, of folkways and mores, a repository of common sentiments, a well-spring from which each individual conscience draws its moral sustenance. Inherent in this tradition is the assumption that violations of socially

⁸Ibid., p. 4.

established values are not an indication of morality per se. In fact, a given number of "criminal" acts are to be expected in a given society. But where the rates are high or increasing rapidly, it is symptomatic of a breakdown in the collective conscience, and therefore of a basic flaw in the social fabric.⁹

Durkheim's contribution does not lie in the empirical correlations contained in Suicide, for these had been previously documented by Legoyt (1881), Morselli (1887), and Wagner (1864). Nor was Durkheim the first investigator to realize that suicide rates could be explained sociologically. Durkheim's work marked a decisive advance because it presented a consistent framework of sociological theory which could bring together the major correlations which had already been established.¹⁰ Durkheim used the analysis of suicide as a basis for the vindication of his sociological method. His analysis was particularly directed against the view that suicide rates can be explained in terms of the distribution of mental disorders.

The second tradition has as its foundation the empirical approach. Its basic proposition is that any social, psychological, physiological, or

⁹Emile Durkheim, Suicide (New York: The Glencoe Free Press, 1951), p. 10.

¹⁰Giddens, op. cit., p. 6.

other factor can be utilized in explaining the dynamics of suicide as long as it is demonstrably related to the problem. Typically, exponents of this tradition are content to focus upon the individual, and particularly, but not necessarily, upon the internal dynamic forces of his personality. For example, explanations of behavior are derived from empirical psychological investigations of representative samplings of those who behave in the manner being studied. The basic difference between the two traditions carries over into prediction and control. The sociological approach recommends control by changing those facets of the social structure which investigation indicates as a precipitator of suicide. The empirical approach, particularly the psychological, is more concerned with facilitating the adjustment patterns and process of the individual.

CHAPTER II

SPECIAL METHODOLOGICAL PROBLEMS IN SUICIDE RESEARCH

Perhaps the most fundamental problem of suicide research in the area of methodological procedure is that of definition.¹ The term "suicide" encompasses every type of self-destructive act from the coolly calculated obliteration of the self, to an impulsive leap to one's death, to a half-hearted attempt which has unintentioned lethal results. Investigation beyond the surface facts has often revealed motives and circumstances which indicate that the mass categorizing of suicidal behavior into "attempted" and "committed" suicide merely on the basis of the success of the act, may, in fact, serve to mask the dynamics of the forces at work.

Shneidman, one of the founders of the Los Angeles Suicide Prevention Clinic, has illustrated the above point very dramatically.² He cites the

¹Charles Neuringer, "Methodological Problems in Suicide Research," Journal of Consulting Psychology, Vol. 26, No. 3, 1962, p. 273.

²Edwin S. Shneidman, The Study of Lives (New York: Prentice-Hall, Inc., 1963), pp. 202-204.

example of two women sharing a hospital room, each recovering from an "attempted suicide." One woman had placed a pistol to her temple and pulled the trigger. Through immediate discovery of the situation, skillful surgery, and the work of miracle drugs, she survived. The other woman does not have her head swathed in bandages, but rather her lone badge is the equivalent of two or three "Band-Aids" taped to her wrist. She had lightly cut her wrist and then said to her inebriated spouse, "Look, I'm bleeding!"

Even the most cursory examination of these cases should reveal immense differences in degree of intent which relegates the unsuccessfulness of each act to coincidental importance. This illustration suggests that research which is to be fruitful must define suicide, not in terms of success or failure of the act, but rather in terms of the ideational intent of the individual. The present system of classification may systematically eliminate the possibility for the expression of the dynamics of suicide. On the basis of ideation and intent, only the second woman should have been classified as an "attempted suicide" since the first woman clearly intended to kill herself.

In an effort to correct this situation, Shneidman has devised a system of classification which might be described as a kind of psychological

autopsy. The purpose of this system of psychological inquiry is to uncover some of the variables which previously were systematically eliminated. The system makes use of four key concepts:³

1) Cessation

Cessation is defined as the stopping of the potentiality for any further conscious experience.

2) Termination

Termination is the stopping of the physiological functions of the body. The concept is necessitated by the fact that cessation and termination are not always temporally coincidental.

3) Interruption

Interruption is the stopping of consciousness with the actuality, and usually the expectation, of further conscious experiences.

4) Continuation

Continuation can be defined as experiencing, in the absence of interruption, the stream of temporally contiguous conscious events.

The four categories outline general states of mind. Thus, in considering the individual, it becomes important to know at least his attitudes and beliefs about death, cessation, the hereafter, and rebirth. More specific delineations of the psychological state are needed, however, for suitable classification of suicidal intent. Shneidman further specifies these precise categories using two variables, intention and attitude towards cessation (psyde).⁴

³Ibid., pp. 209-212.

⁴Ibid., pp. 212-220.

1) Intentioned

Intentioned refers to those cases in which the individual actively precipitates cessation.

a) Psyde-seeker

One who has consciously verbalized to himself his wish for cessation and behaves accordingly.

b) Psyde-initiator

One who believes cessation will occur in the near future and himself induces cessation rather than wait for it.

c) Psyde-ignoror

One who seems to ignore the fact that, as far as is known, termination always involves cessation.

d) Psyde-darer

One who consciously seeks cessation by risking his life in situations where chances for survival are slim.

2) Subintentioned

Subintentioned refers to behaviors which play an indirect, partial, or unconscious role in inducing termination.

a) Psyde-chancer

Individuals who "gamble with death" or "half intended to do it anyway."

b) Psyde-hastener

One, who through his style of life, unconsciously irritates a physiological disequilibrium so that cessation is expedited.

c) Psyde-capitulator

Individuals, who by virtue of some strong emotion, play a psychological role in effecting termination.

d) Psyde-experimenter

One who consciously seeks neither cessation nor interruption, but an altered, befogged state (through the use of drugs, alcohol, etc.).

3) Unintentioned

Unintentioned refers to those occurrences in which, for all intents and purposes, the person psychologically plays no significant role in his own demise.

a) Psyde-welcomer

One, who although playing no conscious or unconscious role in either hastening or precipitation his own cessation, actually welcomes death.

b) Psyde-acceptor

One who has accepted the imminence of his cessation and resigns himself to that fate.

c) Psyde-postponer

One who wishes that cessation would not occur for as long as possible.

d) Psyde-disdainer

One who feels he is above being involved in the cessation of the vital processes.

e) Psyde-fearer

One who is fearful of death and the topics of death.

4) Contrainentioned

Contrainentioned refers to those attempts which are enacted with the hope of drawing attention to the persons themselves.

a) Psyde-feigner

One who feigns or simulates what appears to be a self-directed advertent movement toward cessation.

b) Psyde-threatener

One who, with conscious intention of avoiding cessation, uses the threat of cessation with the aim of achieving some secondary gains.

It is evident that these categories carefully delineate and classify those who have committed, threatened, or attempted suicide only after careful consideration of the biological, psychological,

and social factors involved. Using this system of classification, for example, the woman recovering from the self-inflicted pistol wound mentioned earlier (and who was classified as an "attempted suicide") would be categorized as an "intentioned cessation psyde-seeker." The other "attempted suicide," who cut her wrist in an apparent attempt to deal with a seemingly intolerable situation would be classified as a "contraintentional psyde-feigner."

The real merit of this psychological autopsy is its capability for unquestionably more precise classifications. The precision of the classification places together cases which by their intent and ideation demonstrate a logical and meaningful continuity. These characteristics make the system desirable as a paradigm or as a statistical base in the field of research as well as useful in the clinical setting for diagnosis and treatment of disturbed cases.

The main objection to the use of this system is that of practicality. The effectiveness of the system depends heavily upon two conditions: 1) that the information required to make a judgment of the person's biological condition, psychological make-up, and social factors is available; and 2) the competency of the individual reviewing the data and making the classification. In other

words, the ascription of motives in the case of successful suicides, at least is likely to be arbitrary. Furthermore, as Shneidman himself points out, lay coroners cannot legitimately be expected to make these kinds of psychological judgments.⁵ One might argue nonetheless that despite its shortcomings, this system is more accurate than the present system of classification.

In the present study, it was impossible to use Shneidman's system because there was insufficient information available to classify the suicides. This problem would seem to be quite pervasive because the social stigma attached to suicide acts as a determining force in putting clamps on the availability of the needed information. The researcher can, however, state qualifying criteria for the subjects in a given suicide study, and by combing the records and files, attempt to overcome the inadequacies of the practice of categorizing all suicides under one term.

The second problem peculiar to suicide research is: how can the successful suicide be studied? Neuringer suggests two alternatives: the residual approach and the method of substitute subjects.⁶ The residual approach assumes that

⁵Ibid., p. 220.

⁶Neuringer, op. cit., p. 274.

previously taken psychological tests, records, and other sources of personal information of the suicide necessarily contain residual evidence of the forces which eventually culminated in the person's death. The task, therefore, is to ferret out empirically the factors which discriminate the successful suicides from their non-suicidal controls.

The major difficulty with the residual approach is that information contained in records, the scores of psychological tests, or other personal data of the eventual suicides is not accumulated routinely or uniformly. For the most part, control of the when, what, how, and where factors of the data of eventual suicides appears virtually impossible.

This deficiency can be somewhat circumvented by tenaciously scouring the data of suicides and screening out variables and cases which appear to have little continuity or comparability. However, residual information is not necessarily a representation of what the person might be if he were alive, nor is it a clear reflection of what he was like immediately before his death.

The method of substitute subjects, which involves the careful study of attempted suicides and subsequent assignment of like motives and forces to actual suicides, appears at first glance to be a

logical procedure. Shneidman and Farberow indicate that approximately 75% of successful suicides have previously threatened or attempted suicide.⁷ The first implication of such a finding is that suicidal threats and attempts, no matter how half-hearted, should definitely be taken seriously. Another inference is that possibly progressive yet identical forces operate as suicidal behavior becomes more serious.

Neuringer is wary of projecting findings obtained from attempted suicides into successful suicides.⁸ Studies indicate that it may well be a fallacy to assume that the difference between attempted suicides and successful suicides is one of intensity. Further problems lie in the feedback effect of the attempt and the effects of hospitalization. Rope burn, damaged nerve or brain tissue, chemical poisoning side-effects, or even shock may induce lasting and inherent changes so that study of the attempted suicide after his unsuccessful attempt does not necessarily allow the investigator to make valid statements about the thinking and feeling of the individual immediately prior to his attempt. The continuous guarding and observing of

⁷Edwin S. Shneidman and Norman L. Farberow, Clues to Suicide (New York: McGraw-Hill Book Company, Inc., 1957), p. 279.

⁸Neuringer, op. cit., p. 275

a suicidal patient during hospitalization may have a similar effect. Because of these drawbacks, careful use of the residual approach seems to have the advantages of the two avenues of investigation.

Of course, other methods of investigation have been used in studying suicide. Durkheim and other investigators of the sociological tradition have studied the problem by carefully delineating characteristics of successful suicides in specific socio-cultural categories. By tabulating the frequency of the appearance of particular socio-cultural characteristics, general yet empirically predictive statements about the occurrence of suicide can be made.

The two criticisms of this approach are that the method ignores the psychological factors of the individual and that the method does not lend itself to precise prediction. In answer to the first objection, it must be stated that the individual's psychological make-up as such is really not the concern of the sociologist in view of his previously discussed frame of reference. His basic assumption is that the factors underlying the incidence of suicide are primarily social. Nor is precise prediction considered to be of paramount importance. The intent of this approach is to state empirically the social factors which

directly influence the incidence of suicide. Control of the occurrence of suicide consists of changing those facets of the social system which evidence indicates influence the rate of suicide.

Other investigators, particularly of the psychoanalytic tradition, have been content to use the method of the individual case study. Essentially, this approach makes use of detailed psychoanalytic descriptions of emotionally distraught individuals who eventually take their own lives. The main objection to this approach is that the detailed and, therefore, few cases examined are not necessarily representative. However, this is not to suggest that this approach is without merit. Exponents and theories of this method will receive further consideration in a later chapter.

Another particular problem to be considered in suicide research regarding prediction and control stems from the fact that suicide is a low-incidence event, as evidenced by the fact that the suicide rate in the U.S. is only 10.4 per hundred thousand of the population (1960).⁹ Even among individuals who threaten or attempt suicide, the number who actually commit suicide is comparatively small. Rosen has rather convincingly pointed out the

⁹Edwin Goldfield, Statistical Abstract of the United States (Washington, Buckram Co., 1960), p. 65.

predictive problems that this datum engenders. An effective instrument of suicide prediction must be able to identify a major proportion of eventual suicides (true positives) without at the same time including a large number of non-suicides (false positives). The low incidence of suicide is, in itself, a major obstacle in developing an efficient suicide predictor, for, as Rosen has stated, "in any attempt at prediction of infrequent behavior, a large number of false positives are obtained."¹⁰ Rosen has suggested that, in a practical setting, the number of false positives which could be expected on the basis of the incidence of suicide and the relative imprecision of the predictive instrument may be as high as 90 per cent.

¹⁰Albert Rosen, "Detection of Suicidal Patients: An Example of Some Limitations on the Prediction of Infrequent Event," Journal of Consulting Psychology, Vol. 18, No. 5, 1954, p. 397.

CHAPTER III

STATISTICS OF SUICIDE

The statistics of suicide traditionally have been notoriously unreliable. Social and religious attitudes regarding the ethic of the act have been demonstrated to have an effect on the reporting and recording of suicides. Thus, the actual suicide rate is likely to be higher than the recorded rate in countries such as the U.S. which have a negative attitude toward the commission of the self-destructive act. Nonetheless, according to projections made on the basis of the recorded rate, 15 out of every 1,000 white male infants born in the U.S. will eventually take their own lives, as will 4 out of every 1,000 white female infants.¹

Although suicide in the U.S. is among the top ten causes of death, the proportionate toll of suicide is comparatively small compared to the major causes of death of heart disease and cancer. Suicide, however, is still regarded as a serious problem since a self-inflicted death not only extinguishes one life but also often carries with it

¹Dublin, op. cit., p. 15.

a tragic loss to the family and an attached social stigma. Suicide is compared with a "natural" and an "accidental" cause of death in Table I. As can be noted, the suicide rate has remained near an incidence of 10 per 100,000 of the population over the past forty years with the exception of the decades of 1930 and 1940, which were periods of unusual economic and social stress.

TABLE I

Death Rate per
100,000 in the U.S. from
1920-1959²

<u>Cause of Death</u>	<u>1920</u>	<u>1930</u>	<u>1940</u>	<u>1950</u>	<u>1955</u>	<u>1959</u>
Major cardiovascular-renal diseases	364.9	414.4	485.7	510.8	506.0	519.7
Motor vehicle accidents	10.3	26.7	23.1	23.4	23.4	20.0
Suicide	10.2	15.6	14.4	11.4	10.2	10.4

For various reasons, suicide rates vary tremendously from country to country. In comparison with other countries, the U.S. has an average suicide rate, as indicated in Table II. General observation of these figures seems to indicate that the prevalence of self-destruction does not always correlate with the traditions, religious convictions, and social viewpoints of the country. Denmark,

²Goldfield, op. cit., p. 65.

for example, has a suicide rate three times her Scandinavian neighbor, Norway. West Germany, long regarded as a stronghold of Catholicism, reports a suicide rate significantly larger than her Catholic counterparts, Ireland and Spain. On the other hand, Japan, which has the highest suicide rate of any country in the world, could expect to have a relatively high mortality rate from suicide on account of her traditional approval of the act and because of the tremendous amount of rapid social change which she is now experiencing.³

TABLE II

Suicide Rates for 10
Countries, circa 1955⁴

<u>Country</u>	<u>Suicide Rate per 100,000 Population</u>	<u>Year</u>
Japan	25.3	1955
Denmark	22.5	1956
West Germany	19.3	1955
Union of South Africa	11.1	1954
United States	10.2	1955
Canada	7.6	1956
Norway	7.4	1955
Spain	5.9	1953
Ireland	2.3	1955
Egypt	0.1	1954

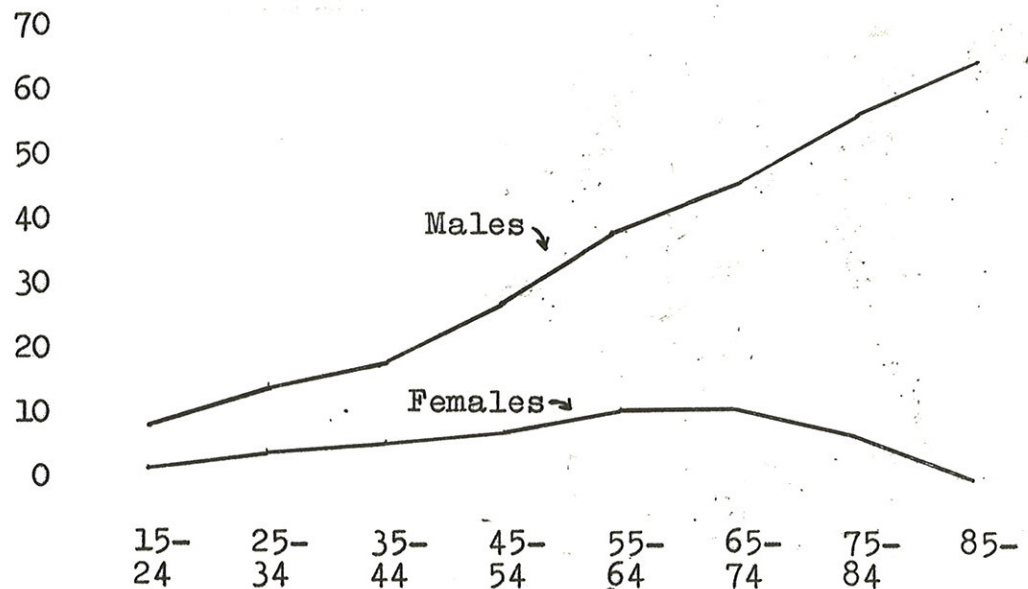
³Robert K. Merton and Robert A. Nisbet, ed., Contemporary Social Problems (New York; Harcourt, Brace, and World Inc., 1961), p. 230.

⁴Ibid.

Age, sex, and marital status are important characteristics in any quantitative analysis of suicide. Suicide increases in frequency with advancing years. Children rarely kill themselves; up to the age of 15, the cases are so few as to be numerically negligible. The incidence increases steadily through the other age groups until the maximum rate of 27.9 per 100,000 is reached in the age group 75-84. This trend is illustrated in Table III.

TABLE III

Sex and Age Variations in Suicide
Death rates per 100,000 among White Persons
United States, 1959⁵



The increase in the incidence of suicide with advancement in years is understandable in terms of the

⁵Dublin, op. cit., p. 25.

economic insecurity, physical infirmities, feelings of unproductiveness, and other attributes often characteristic of increasing age which limit the resources of older persons to cope with whatever difficulties which may arise. Table III further indicates that at every age period, more men than women kill themselves. Statistics indicate that in the U.S., four times as many men kill themselves as do women.

Students of suicide have long noted that suicide is less common among married persons than among those who have never married or whose marriages have terminated in divorce or death of a spouse. Statistical data support this opinion, as shown in Table IV. The suicide rate among the married is markedly lower than among single in all male age groups but the youngest, while rates for the widowed and divorced are recorded to be as much as seven times those of the married for the same ages. In the group as a whole, almost three times as many widowers as married men and nearly five times as many divorced men are recorded as having taken their own lives.

Suicide is much less frequent among women than among men and the differences among the several groups are much less marked. Rates are lower for married women than for single in all age groups

except the youngest (15-24 years) and oldest (75 and over), and rates for the widowed and divorced, especially the latter, run as much as three or four times those for the married.

TABLE IV

Mortality from Suicide by Marital Status and Age Groups Among Men and Women 15 Years and Over United States, 1959⁶

<u>Age Group</u>	<u>Total</u>	<u>Single</u>	<u>Married</u>	<u>Widowed</u>	<u>Divorced</u>
Males					
15-24	7.4	6.8	8.4	-	19.7
25-34	14.5	23.2	11.1	95.8	66.7
35-44	20.5	23.2	16.7	81.7	112.6
45-54	30.3	39.0	25.6	58.3	111.7
55-64	39.1	58.3	32.4	65.0	89.4
65-74	45.5	82.0	33.6	79.6	152.5
75 and over	54.6	85.3	34.5	79.2	140.0
Females					
15-24	2.1	1.7	2.4	-	12.4
25-34	5.5	9.2	4.7	7.2	17.8
35-44	6.9	9.4	5.9	10.2	24.4
45-54	8.5	8.8	7.5	12.0	17.4
55-64	9.8	12.3	8.0	12.4	19.6
65-74	9.7	9.6	7.5	11.3	25.8
75 and over	6.4	4.0	4.6	6.9	18.4

Negroes are commonly thought to enjoy a relative immunity to suicide. While the Negro in the United States does have a low rate of suicide compared to whites, Gibbs, in his study of suicide, has drawn up the following table to demonstrate the fact that generalizations concerning race and

⁶Ibid., p. 27.

suicide may be misleading.

TABLE V
Suicide Rates by Race: a Variety of Cases⁷

<u>Race</u>	<u>Location</u>	<u>Mean Annual Suicide Rate per 100,000 Population</u>	<u>Years</u>
Oriental	United States	14.6	1949-51
Caucasian	United States	11.9	1949-51
Caucasian	Union of South Africa	10.8	1952-54
Negro	Seattle, Washington	10.2	1948-52
Caucasian	Mississippi	9.7	1949-51
Negro	United States	3.7	1949-51
Negro	Union of South Africa	2.3	1952-54

These figures indicate that Negroes have a suicide rate much lower than Caucasians in the United States, and that in the Union of South Africa, the rate for Caucasians far exceeds that of the Negro rate. However, instances of a higher Negro rate can be found, for example, the Negro rate in Seattle, Washington as compared with the Caucasian rate in Mississippi. Gibbs concludes that the data permits only one general conclusion: the immunity of any race to suicide is extremely variable.⁸ The implication of such a generalization is that other factors are presumably more potent in effecting the incidence of suicide.

⁷Merton and Nisbet, op. cit., p. 237.

⁸Dublin, op. cit., p. 237.

Another interesting statistic of suicide concerns that of seasonal variances. One might expect to find a rise in suicide rated during the cold winter months when the days are short, the nights long, and the weather dreary. However, statistics indicate that this is not the case, as shown in Table VI.

TABLE VI

Number of Suicides and Daily Average, by Month
United States, 1960⁹

<u>Month</u>	<u>Total</u>	<u>Per Diem</u>	<u>Relative Index</u>
Total	19,041	52.2	100
January	1,601	51.7	99
February	1,481	51.1	98
March	1,669	53.8	103
April	1,705	56.8	109
May	1,751	56.5	108
June	1,568	52.2	100
July	1,601	51.7	99
August	1,579	50.9	98
September	1,489	49.6	95
October	1,626	52.5	101
November	1,532	51.1	98
December	1,439	46.4	89

Although the seasonal variances differ among geographic areas of the country, the highest incidence of suicide is almost invariably found in the months of April and May. However, few investigators attribute this phenomenon to cosmic factors but rather adhere to an explanation such as the one of

⁹Merton and Nisbet, op. cit., p. 237.

Durkheim's implicating the change in the social life and conditions which occurs at this time of the year.

The most commonly employed methods of committing suicide are the use of firearms, poisons and gases, hanging and strangulation, use of cutting or piercing instruments, drowning, and jumping from high places.¹⁰ The selection of one method or methods used appears to be dependent upon one of two factors or both. First is the availability and accessibility of the agent. The second is that of the particular symbolic significance or psychological relevance which the method holds for the prospective suicide.

Analysis of the methods of suicide by sex casts some light upon the dynamics of suicide. A statistical comparison of method by sex and age is given in Table VII. The most outstanding difference in the methods employed by men and women is the use of firearms by males and of poisons and gases by females. Men are more likely to use violent means which leave little or no chance for error or intervention, whereas women traditionally choose less violent methods which allow for the possibility of rescue or resuscitation due to the time lapse which occurs between ingestion or inhalation and resultant death.

¹⁰Goldstein, op. cit., p. 146.

TABLE VII

Percentage Distribution of Deaths from Suicide
by Specified Method or Means among
White Men and Women in Given Age Groups
United States, 1955-1959¹¹

<u>Method</u>	<u>All Ages</u>	<u>10-24</u>	<u>25-44</u>	<u>45-64</u>	<u>65-over</u>
White Males					
Firearms	53.3	53.8	54.6	53.1	52.0
Poisoning	17.3	18.4	23.1	17.8	9.9
Hanging	20.0	22.5	14.8	19.7	25.8
All others	9.4	5.3	7.4	9.4	12.3
White Females					
Firearms	24.9	43.8	32.9	20.9	12.6
Poisoning	34.6	32.4	37.7	35.5	27.0
Hanging	22.6	12.0	15.9	25.4	32.7
All others	17.6	11.7	13.5	18.2	27.8

On the basis of information yielded by suicide statistics, Cohen has drawn up a suicidal tendency scale for predicting the possibility of suicidal behavior. The scale has been used at the Golden Gate Medical Clinic for Psychotherapy to evaluate suicidal potential:¹²

- 1) Is this person Male?
- 2) Is this person Caucasian?
- 3) Is this person 45 years or older?
- 4) Is this person separated, widowed, or divorced?

¹¹Dublin, op. cit., p. 41.

¹²_____, "Personality Checklist Assists in Evaluation of Suicide Risk," Psychiatric Progress, Vol. 1, No. 1, 1965, pp. 4-6.

5) Does this person live in the transitional area surrounding the central downtown section?

6) Did this person currently attempt suicide by oral injection, shooting, or jumping from a high place?

7) Was this person unconscious or unable to answer questions coherently as a result of the self-destructive act?

8) Did this person have a previous psychiatric hospitalization?

9) Did this person make a previous suicide attempt?

10) Was this person in poor physical health during the past six months?

11) Does this person now have or has he ever had a problem with alcohol?

12) Does this person now have or has he ever had a problem with drug addiction?

13) Does this person now have or has he ever had a problem with anti-social behavior?

14) Has this person suffered a loss--real, threatened, or imagined--within the past six months?

The answers are then tabulated on the following scale:

<u>"Yes" Replies</u>	<u>Classification</u>	<u>Probability of Suicidal Behavior Within 8 Years</u>
0-3	low risk	1 in 22
4-6	moderate risk	1 in 3
7-over	suicide prone	1 in 2

One may object to this scale for unless one is a young Negress who lives in the country, he will undoubtedly qualify several "yes" answers to these questions. The scale lacks precision. Even

if over half of the questions are answered affirmatively, the probability is that predictions will accumulate 50 per cent false positives. Nonetheless, this scale may serve as a useful rule of thumb for some clinicians.

CHAPTER IV

THEORIES OF SUICIDE

Generally, theories of suicide are oriented around a sociological or psychological point of departure. Most investigators agree that the efforts of each discipline have resulted in valuable insights.

Examination of the sociological approach must be begun with Durkheim's classic study. Durkheim felt that suicide was precipitated by various social factors which influence the individual. Accordingly, he recognized three basic types of suicide: egoistic, altruistic, and anomic.

Egoistic suicide includes all those cases in which the individual is not adequately integrated into a meaningful group. Durkheim illustrated this in his study of the relationship between religion and suicide. Generally, suicide rates are lower among Catholics and Jews, and are significantly higher among Protestants. This phenomenon is rather unexpected since all three cults cogently prohibit suicide on moral grounds in keeping with their concept of life and the

hereafter. Therefore, if Protestantism is less likely to deter suicide, it is not because of a different attitude toward the act than Catholicism or Judaism. Durkheim concluded that "the proclivity of Protestantism for suicide must relate to the spirit of free inquiry that animates this religion."¹ Durkheim thus reasons that Catholics and Jews, who have comparatively low suicide rates, closely integrate the individual into collective life, whereas Protestants foster a state of individualism. It is not that Catholics and Jews impose higher moral standards, but that they are obliged to live in greater union. Durkheim's first proposition is therefore: Suicide varies inversely with the degree of integration of religious society.²

Durkheim continued his investigation of egoistic suicide in relation to the family and the political group. Previous findings apparently indicated that unmarried persons committed suicide less often. However, he pointed out that any comparison of the suicide rates of married and unmarried persons must take into account that a very large number of unmarried persons are less than 16 years of age, while all married persons

¹Durkheim, op. cit., p. 159.

²Ibid., p. 208.

are older. Up to the age of 16, the tendency toward suicide is slight, thus introducing a biasing factor in the statistics. Thus, in his research, Durkheim compared only unmarried persons over 16 years of age with married persons.

The data from this research indicated that early marriages have an aggravating influence on suicide. According to Durkheim's statistics of a thousand unmarried men between the ages of 15 and 20, 8.9 committed suicide each year, while a thousand married men of the same age committed 51.0 suicides (a 473 per cent increase). The statistics indicate a smaller difference between unmarried and married females. However, after the age of 20, married persons of both sexes enjoy relative immunity to suicide as compared to unmarried persons. Durkheim pointed out that the family consists of two different associations, the conjugal group and the family group proper, and suggested that investigations in this area should attempt to discover what relationship these associations have in apparently reducing the suicide rate.

Accordingly, Durkheim's data revealed that during the years 1887-1891, a million husbands without children annually accounted for 644 suicides. Of one million husbands with children, only 336 committed suicide each year for the same period

of time. This latter figure is even more striking when compared with the 975 suicides of a million unmarried men approximately the same age as the married men studied. These figures indicate that what Durkheim calls the conjugal society of marriage plays a rather slight role in the immunity of married men as compared to that of the family group proper. Thus emerges Durkheim's second proposition of egoistic suicide: suicide varies inversely with the degree of integration of domestic society.³

It might be commonly thought that great political upheavals and the stress thereby encountered increase the number of suicides. Evidence accumulated by Durkheim indicates that this is not necessarily the case. One explanation is that many individuals with suicidal tendencies have an opportunity to express these inclinations by "living dangerously," which in this particular situation is socially approved.

The question has further been raised whether during periods of crisis, less accurate records might be kept because of administrative difficulties incumbent to the situation. However, Durkheim feels that the widespread occurrence of the reduction of suicide rates in these times "among the conquerors as well as vanquished, invaders and invaded alike"

³Ibid., p. 187.

indicates that administrative difficulties cannot be indicted with the entire blame. Durkheim sees as a more feasible explanation the interpretation that great social disturbances and great popular wars arouse collective sentiments, stimulate partisan spirit and patriotism, political and national faith, and concentrate activity toward a single end, and thereby induce a stronger integration of society. The third proposition of egoistic suicide is therefore: suicide varies inversely with the degree of integration of political society.⁴

If egoistic suicide may be described as resulting from a lack of integration into society, altruistic suicide may be labeled as being caused by excessive integration into society. Whereas egoistic suicide is due to excessive individuation, altruistic suicide is caused by a minimum of individuation. The former occurs because society allows the individual to escape partially and significantly its grasp and influence, while the latter happens because society holds the individual too severely in bondage.

Altruistic suicide refers to those cases of self-destruction in which the act was condoned, or even demanded, by social opinion. The attitudes of some primitive peoples toward suicide is an

⁴Ibid., p. 208.

excellent example. Durkheim states that generally, suicide in primitive societies which actively induce suicide is demanded in the following categorical instances:⁵

- 1) suicides of men on the threshold of old age or stricken with sickness;
- 2) suicides of women at their husbands' death;
- 3) suicides of followers or servants at the death of their chiefs.

It must be remembered that in these cases, the individual does not commit suicide because he "wishes to do so," but because it is his duty. If he fails in this obligation, he is dishonored and punished, usually by religious sanctions.

The preceding example of altruistic suicide is an obvious one. However, few societies today blatantly propagate these beliefs. Altruistic suicides also include those cases in which the suicidal person has been stripped to some degree of his individuality. The military is often cited as an example. An interesting case concerns the suicide rate among the Royal Canadian Mounted Police (Mounties). According to a report in the Minneapolis Tribune (Nov. 22, 1964, p. 17B), the Mounties have a suicide rate of over 24 per 100,000, obviously a theoretical figure since the Mounties only number 8,000. Nonetheless, the indictment is

⁵Ibid., p. 206.

clear since this rate is 4 times that of Canada and $2\frac{1}{2}$ times that of the U.S.

Investigators who have studied the situation at the request of Parliament, have stated that a partial explanation lies in the fact that Mounties are pressed into a strict mold. For example, Mounties are not allowed to marry during their first two years of service and permission may still be refused after this duration by a commanding officer who does not approve of a prospective bride.

The last of Durkheim's divisions of suicide is that of anomic suicide. This form of suicide results from a lack of regulation of the individual by society. This idea is linked with Durkheim's concept of the "collective conscience," the internalized embodiment of the common beliefs and practices of the individual's society. Ordinarily, the individual's needs and his satisfaction of them are regulated by society. When this regulation of the individual is upset so that the individual no longer perceives the expectations and objectives of the society as tangible or achievable, the resultant feeling of anomie tends to heighten the possibility of suicide.

PSYCHOLOGICAL THEORY

Understanding the psychodynamics or internal motives of suicide began with the work of Sigmund Freud. According to psychoanalytic theory, a depressed person, prevented by his conscience from expressing hateful or murderous wishes toward a loved object (originally the mother), turns them against himself. He has tremendous feelings of guilt and feels responsible for all sorts of sins, crimes, and wrongs which realistically do not exist. If he goes so far as to commit suicide, his self-destruction is in reality a strike against the hated and loved object as well as against himself. Menninger has further stated that the dynamics of suicide characteristically contain one of the three following components: the wish to kill, the wish to be killed, or the wish to die.⁶

Suicide usually is the result of the combination of a personality conditioned to handle stress in self-defeating ways and a triggering external stress. At one extreme, suicide may be committed by a psychotic who is under no actual stress but is prompted by delusional ideation; at the other extreme, a cancer victim suffering unbearable pain may end his life; in between, a

⁶Karl Menninger, Man Against Himself (Harcourt, Brace, and Co., New York, 1938), p. 24.

neurotic person under some daily emotional strain may also commit suicide. Suicide is often described as an attempt to escape from an unbearable situation. In nearly all known cases this unbearable situation is the experiencing of the loss of love.⁷ As a natural consequence of a feeling of sudden loss of love, whether real or imagined, the individual hates those who seem to be denying him. Because of the strength of the mechanism of guilt in our culture, the hateful or aggressive feelings are internalized and directed against the self.

Freud's theory postulates dynamic forces within the personality. The three main forces in the personality are the id, ego, and superego. The drives of the id are purely instinctual demands for pleasure or the reduction of tension. When the homeostasis of the organism has been interrupted, instinctual demands are made by the id for a return to the balanced state.

Since the demands of the id are made only from the standpoint of the pleasure principle, it is the task of the ego to regulate the demands of the id and decide upon a course of action in accordance with the long term well-being of the organism and in keeping with the limits laid down

⁷Jackson, op. cit., p. 3.

by the superego, which contains values learned through familial conditioning. The superego, which is intimately involved in the act of suicide, is an outgrowth of the child's awareness of parental approval and disapproval, and punishes the ego for its transgressions with guilt.

Loss of a love object constitutes a real security threat to the individual because of the amount of psychic energy which has been invested or cathected in the love object. Consequently, the organism is in a state of imbalance. When the three forces of the personality cannot satisfactorily harmonize in reacting to the loss, the instinctual drives continue to demand homeostasis, meaning that the person will relive the disrupting experience in various ways until the conflict has been resolved. From the psychoanalytic standpoint, treatment of a person regarded as suicide-prone would involve releasing the energy cathected in the love object through psychoanalytic interaction with a therapist.

Suicidal feelings may entail the following elements: a wish for recognition and attention through being missed, an atonement for guilt, a wish to be born again blamelessly, an urge to join a dead or lost loved object, a longing for sleep, an act of self-punishment which at the same time

lays the blame at another's door. Whatever the immediate motive or occasion, the roots of suicide lie in a childhood conflict. This weakness may be triggered by a trivial event. Typically, the individual, in a sociological setting that complements his interpersonal difficulties, attempts suicide when he experiences specific reflection (real or illusory) in a situation which mimics an earlier traumatic one.⁸ The essence of the interpersonal difficulties is a strong feeling of loss of love, with consequent hateful and murderous feelings. The specific rejection is experienced at a time when the integrative forces of the personality are already strained to the utmost by the strong feelings of rejection and guilt.

⁸Ibid., p. 6.

CHAPTER V

ITEM ANALYSIS OF MMPI RESPONSES OF THIRTEEN SUICIDES AND THEIR CONTROLS

The residual approach, or use of previously accumulated information, has been heavily relied upon in studying actual suicides. This approach can be effective only if data are uniformly and routinely collected from all or most members of the population under study. Further, the materials used in gathering the information must be broad enough to tap the universe of dynamics involved in suicide. The Minnesota Multiphasic Personality Inventory (MMPI) includes 566 statements related to certain personality characteristics and has the advantage of being routinely administered to psychiatric patients in many installations. Simon and Hales found that elevated depression and psychasthenia scale scores on the MMPI are significantly related to suicidal preoccupation, i.e., thinking about committing suicide.¹ Simon and Gilberstadt attempted to construct a suicidal tendency scale on

¹Werner Simon and W.M. Hales, "Note on a Suicide Key in the MMPI," American Journal of Psychiatry, 1949, p. 458.

the MMPI. They found 23 items which significantly differentiated a group of 26 successful suicides from a control group of the same size. However, they saw no meaningful relationship between the content of the items and suicidal behavior and hence attributed their occurrence to the operation of chance factors.²

The present study was an attempt to cross-validate the Simon and Gilberstadt findings in the sense that the reliability of their 23 items would be tested. More specifically, however, the purpose of the present study was to determine if one can predict, on the basis of characteristic MMPI responses given on admission by eventual suicides, which future incoming patients will commit suicide. The hypothesis was stated as follows:

Null Hypothesis - On admission to a psychiatric hospital, eventual suicides do not respond to a significant portion of MMPI items differently than non-suicidal psychiatric admissions.

Qualifications -

- 1) In running 566 tests of statistical significance at the .05 level of confidence, one would expect to find 28 items to be significant by chance alone. Therefore, if fewer than 28 items are found to differentiate the suicides from their controls, it may be assumed that

²Werner Simon and Harold Gilberstadt, "Analysis of the Personality Structure of 26 Acutal Suicides," The Journal of Nervous and Mental Disease, Vol. 127, No. 6, 1958, p. 556.

- a) little is operating between the groups other than random chance variation, or possibly b) faulty methodological procedure or study construction interfered with the expression of real differences. More than 28 significant items must be found before scale construction will be attempted.
- 2) Only those items whose F-ratio value is significant at the .05 level of confidence for 1,76 degrees of freedom will be considered in attempting to draw up a scale.
 - 3) Significant items used in the construction of a suicide prediction scale will not be included or excluded on the basis of adjudged meaningfulness to this investigator, but rather on the basis of their demonstrated ability to differentiate statistically suicides from nonsuicidal psychiatric controls.
 - 4) Composition of the suicide and the control groups dictates that predictive statements made on the basis of the findings of this study be limited to psychiatric patients who are able to take the MMPI on admission to the hospital.

METHOD

Experimental group. The experimental group consisted of thirteen actual suicides who were or who had been patients at the St. Cloud Veterans Administration Hospital (VAH) during the years 1956-1965. Since MMPI's are administered routinely on admission and also by referral, more than one MMPI is frequently available for a given patient. The most recently administered admission MMPI for each of the suicides was used in this study.

The suicides were all Caucasian males with a mean age of 36.1 years at the time of testing and

a range of 24 to 66 years. Nine of the thirteen were single (69%) and four were married (31%). Five were Catholic (39%), seven Protestant (54%), and one a Christian Scientist. The mean level of education of the suicide group was 11.2 years. Six were diagnosed as schizophrenic reaction, undifferentiated type (46%), three as depressive reactions (23%), and one each as schizophrenic reaction, paranoid type (8%), anxiety reaction (8%), sexual deviation (8%), and manic-depressive, manic type (8%). The mean MMPI profile of the group is shown in Table VIII.

Control group. The control group was composed of sixty-five patients from the St. Cloud VAH selected systematically from the admissions register for the years 1956-1965. Through the process of random selection, this group was simply a sampling of the qualifying patient population and, therefore, included presently hospitalized, discharged, and deceased patients. The two qualifying requirements for this group were: 1) that the patient must have been administered an MMPI routinely on admission, and 2) that the patient must not have attempted or committed suicide. The routinely administered MMPI taken on the randomly selected registered admission was used.

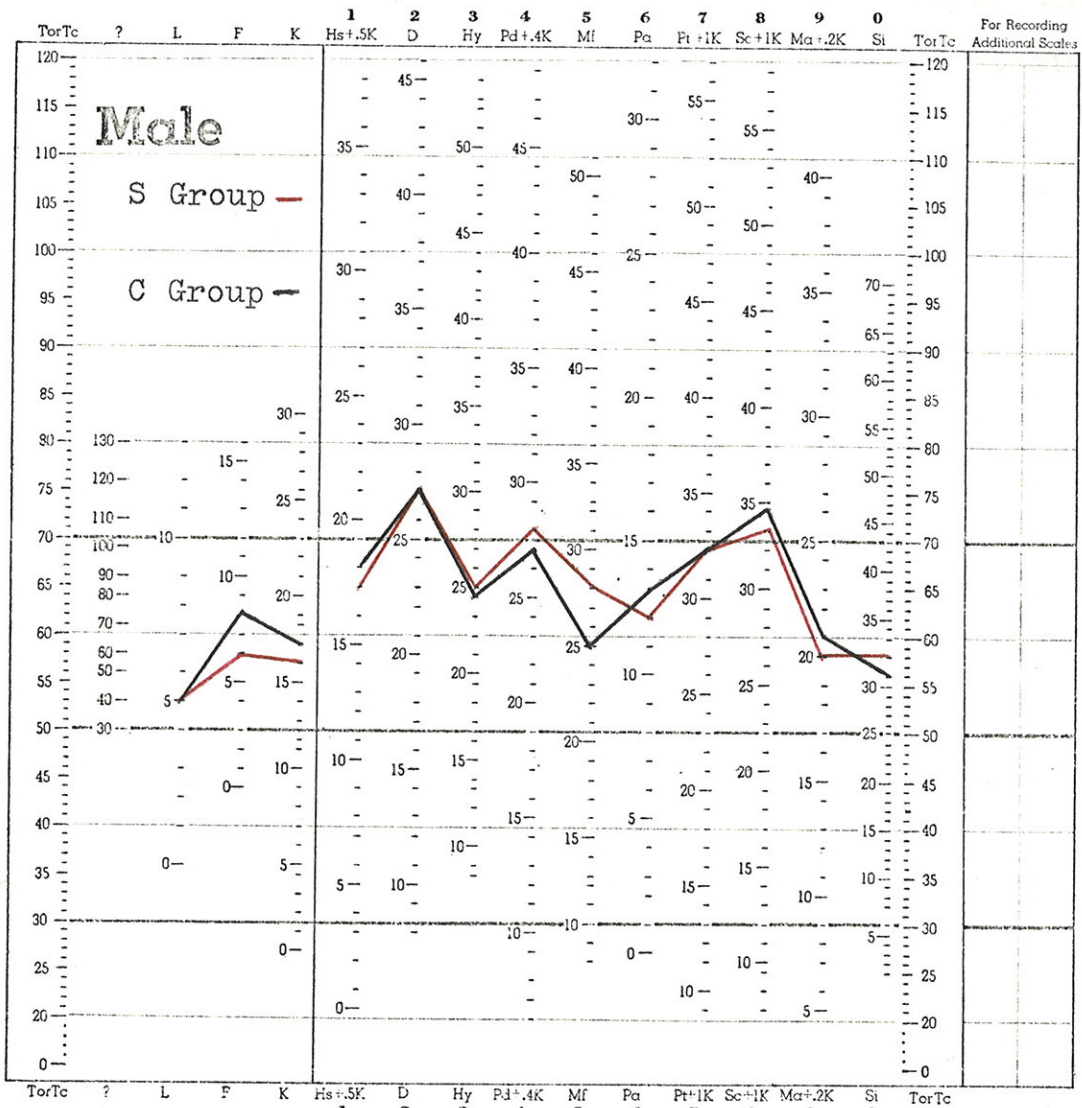
TABLE VIII

Mean MMPI Profiles of Suicide
and Control Groups

The Minnesota Multiphasic Personality Inventory

Starke R. Hathaway and J. Charnley McKinley

Scorer's Initials _____



Raw Score _____

K to be added _____

Raw Score with K _____



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65-313S

The control group patients were all Caucasian males, with a mean age of 42.7 years and a range of 27 to 69 years at the time of testing. Twenty-eight were single (43%), nineteen married (29%), three widowed (5%), ten divorced (15%), four separated (6%), and one was not indicated. Eighteen of the controls were Catholic (28%), thirty-six Protestant (55%), eight of no religious affiliation (12%), one "other," and two for whom religious status information was not available. The mean level of education obtained by the control group was 10.7 years. Diagnoses included seventeen paranoid schizophrenics (26%), twelve undifferentiated schizophrenics (19%), nine depressive reactions (14%), six each of chronic brain syndrome (9%) and anxiety reactions (9%), three each of schizo-affective schizophrenics (5%) and alcoholics (5%), and one each of manic-depressive, involuntional reaction, Parkinson's syndrome, socio-pathic personality, and passive-aggressive personality. The mean MMPI profile of this group is illustrated in Table VIII.

Procedure. All 566 MMPI responses for each of the suicides and the controls were tabulated separately for each item. The total responses of both groups for each item were then compared. The F-ratio test for significance was used to determine which variances in the frequencies of the responses for each

item were statistically significant (Lindquist, 1953).³

F-ratio

$$1) SS_A = \frac{(\sum X_s^2)}{n_s} + \frac{(\sum X_c^2)}{n_c} - \frac{(\sum X)^2}{N}$$

$$2) SS_T = \sum \sum X^2 - \frac{(\sum X)^2}{N}$$

$$3) SS_W = SS_T - SS_A$$

$$4) MS_A = \frac{SS_A}{dF_A}$$

$$5) MS_W = \frac{SS_W}{dF_W}$$

$$6) F = \frac{MS_A}{MS_W}$$

Legend

SS = sums of squares

MS = mean squares

N = total number of subjects (78)

n_s = total number of suicides (13)

n_c = total number of controls (65)

dF_A = number treatments minus one (2-1 = 1)

dF_W = N minus the number of treatments (78 - 2 = 76)

X = the sum of the responses for a given item when "true" = 1 and "false" = 0

SUMMARY TABLE

<u>Source of variation</u>	<u>dF</u>
Treatments (A)	a - 1
Within Groups (W)	N - a
Total (T)	N - 1

³E.F. Lindquist, Design and Analysis of Experiments in Psychology and Education (Houghton Mifflin Co., Boston, 1953), pp. 55-65.

RESULTS

A statistical analysis of the 566 items revealed 24 items which significantly differentiate the suicides from their controls. However, since one would expect 28 ($.05 \times 566 = 28.3$) significant items by chance alone when running 566 significance tests at the 5 per cent level, this number of significant items precludes any attempt to construct an MMPI scale for the prediction of suicide. The striking similarity of the mean profiles of the two groups further supports this interpretation. The significant items are listed in Table IX and the computations for these items in Appendix A.

The assumption underlying the construction of the MMPI is that clusters of items have practical utility for the clinician and the diagnostician solely on account of their demonstrated ability to differentiate statistically the various characteristics. Simon and Gilberstadt discredited their 23 significant items because of the small number and general lack of meaningfulness, i.e., their apparent unrelatedness to what is known about suicide. None of Simon and Gilberstadt's 23 items were found to be significant in this study.

TABLE IX

Items which were found to significantly differentiate
13 suicides from their controls

<u>Item</u>	<u>Direction of S Group Response</u>	<u>Level of Confidence</u>
41) I have had periods of days, weeks, or months when I couldn't take care of things because I couldn't get going.	false	.01
46) My judgment is better than it ever was.	false	.05
51) I am in just as good physical health as most of my friends.	true	.05
64) I sometimes keep on at a thing until others lose their patience with me.	false	.01
78) I like poetry.	true	.05
117) Most people are honest chiefly through fear of getting caught.	false	.05
133) I have never indulged in any unusual sex practices.	false	.05
140) I like to cook.	true	.05
170) What others think of me does not bother me.	false	.01
180) I find it hard to make talk when I meet new people.	false	.05
182) I am afraid of losing my mind.	true	.05
237) My relatives are nearly all in sympathy with me.	false	.05

251) I have had blank spells in which my activities were interrupted and I did not know what was going on around me.	true	.05
252) No one cares much what happens to you.	true	.001
267) When in a group of people I have trouble thinking of the right things to talk about.	false	.01
279) I drink an unusually large amount of water every day.	false	.05
308) At times I have very much wanted to leave home.	true	.05
315) I am sure I get a raw deal for life.	false	.05
387) The only miracles I know of are simply tricks people play on one another.	false	.05
406) I have often met people who were supposed to be experts who were no better than I.	false	.05
433) I used to have imaginary companions.	true	.05
440) I try to remember good stories to pass them on to other people.	false	.01
469) I have often found people jealous of my good ideas just because they had not thought of them first.	false	.05
510) Dirt frightens or disgusts me.	false	.05

DISCUSSION

The experimental group consisted of only 13 subjects. It was therefore necessary, in order to add credence to the reliability of the statistical tests, to use sixty-five subjects in the control group, a ratio of five-to-one, controls to suicides.

The use of the MMPI in this study illustrates a particular problem of suicide research: the data do not necessarily accurately reflect the personality state of the suicide at the time of his demise. The MMPI's used in the study were those administered routinely on admission, and therefore were taken by the suicide group patients anytime from one day to a year before they committed suicide. However, in this study the MMPI need not accurately reflect the personality state of the suicide at the time of his demise, since the expressed purpose of this study was to determine the characteristic MMPI responses on admission to the hospital by those who eventually commit suicide.

The small number of significant items and the lack of correspondence between them and those found by Simon and Gilberstadt suggest that it is very likely that the significant items found in this study are a function of chance factors. Specifically, no real difference appears to exist

between the personality characteristics of eventual suicides and non-suicides on admission.

This study exemplifies another of the problems of suicide research. The St. Cloud VAH has approximately 1100 hospitalized patients at any given time, and has averaged only slightly over two suicides per year for the past fifteen years. This figure also includes patients who committed suicide after being discharged from the hospital. Thus, even among neuro-psychiatric patients, suicide is a low-incidence event. It follows that any attempt to establish meaningful and legitimate standards for screening the characteristics of successful suicides within a given installation results in a disturbingly small experimental group.

The more important implication, however, concerns prediction. Rosen has convincingly pointed out that the prediction of any infrequently occurring event inevitably nets a staggering percentage of false positives.⁴ In practical terms, since the St. Cloud VAH has a yearly admission rate of approximately 600 patients, and an incidence of suicide of 2 per year, one could accurately predict suicide 99.7% of the time by simply saying that none of the admissions will commit suicide! To construct a suicide prediction scale which is only a fraction

⁴Rosen, loc. cit.

as accurate would be an extremely formidable task even if one has a significant number of differentiating items.

SUMMARY

Item by item MMPI responses of thirteen suicides and sixty-five controls from the St. Cloud Veterans Administration Hospital were compared and analyzed using the F-ratio test for significance for frequency data. Only MMPI's administered routinely on admission were used.

Statistical analysis revealed that 24 items significantly differentiate the suicides from their controls while 28 items could be expected by chance alone when running 566 significance tests. No claim is made that these items will differentiate eventual suicides from non-suicides, due to the small number of significant items.

APPENDIX A

Computations for items which significantly differentiate thirteen suicides from their controls:

Legend

S = suicide group
 C = control group
 T = number of true responses
 F = number of false responses
 NA = no answer

Item

41. I have had periods of days, weeks, or months when I couldn't take care of things because I couldn't "get going."

	T	F	NA
S	1	12	-
C	28	36	1

$$SS_A = \frac{(1)^2}{13} + \frac{(28)^2}{65} - \frac{(29)^2}{78}$$

$$= \frac{1}{13} + \frac{748}{65} - \frac{841}{78}$$

$$= .08 + 12.06 - 10.78 = 1.36$$

$$SS_T = 29 - 10.78 = 18.22$$

$$SS_W = 18.22 - 1.36 = 16.86$$

$$MS_W = \frac{16.86}{76} = .22$$

$$F = \frac{1.36}{.22} = 6.18 \text{ significant at } .05 \text{ level of confidence}$$

dF = 1,76

Item

46. My judgment is better than it ever was.

	T	F	NA
S	3	10	-
C	35	30	-

$$\begin{aligned}
 SS_A &= \frac{(3)^2}{13} + \frac{(35)^2}{65} - \frac{(38)^2}{78} \\
 &= \frac{9}{13} + \frac{1225}{65} - \frac{1444}{78} \\
 &= .69 + 18.84 - 18.51 = 1.02
 \end{aligned}$$

$$SS_T = 38 - 18.51 = 19.49$$

$$SS_W = 19.49 - 1.02 = 18.47$$

$$MS_W = \frac{18.47}{76} = .24$$

$$F = \frac{1.02}{.24} = 4.25$$

significant at .05
level of confidence
dF = 1,76

Item

51. I am in just as good physical health as most of my friends.

	T	F	NA
S	12	1	-
C	39	26	-

$$\begin{aligned}
 SS_A &= \frac{(12)^2}{13} + \frac{(39)^2}{65} - \frac{(51)^2}{78} \\
 &= \frac{144}{13} + \frac{1521}{65} - \frac{2601}{78} \\
 &= 11.08 + 23.40 - 33.34 = 1.14
 \end{aligned}$$

$$SS_T = 51 - 33.34 = 17.66$$

$$SS_W = 17.66 - 1.14 = 16.52$$

$$MS_W = \frac{16.52}{76} = .22$$

$$F = \frac{1.14}{.22} = 5.18$$

significant at .05
level of confidence
df = 1,76

Item

64. I sometimes keep on at a thing until others lose their patience with me.

	T	F	NA
S	1	11	1
C	32	32	1

$$\begin{aligned}
 SS_A &= \frac{(1)^2}{13} + \frac{(32)^2}{65} - \frac{(33)^2}{78} \\
 &= \frac{1}{13} + \frac{1024}{65} - \frac{1089}{78} \\
 &= .08 + 15.75 - 13.96 = 1.87
 \end{aligned}$$

$$SS_T = 33 - 13.96 = 19.04$$

$$SS_W = 19.04 - 1.87 = 17.17$$

$$MS_W = \frac{17.17}{76} = .23$$

$$F = \frac{1.87}{.23} = 8.13$$

significant at .01
level of confidence
dF = 1.76

Item

78. I like poetry.

	T	F	NA
S	11	2	-
C	36	29	-

$$SS_A = \frac{(11)^2}{13} + \frac{(36)^2}{65} - \frac{(47)^2}{78}$$

$$\frac{121}{13} + \frac{1296}{65} - \frac{2209}{78}$$

$$9.31 + 19.94 - 28.32 = .93$$

$$SS_T = 47 - 28.32 = 18.68$$

$$SS_W = 18.68 - .93 = 17.75$$

$$MS_W = \frac{17.75}{76} = .23$$

$$F = \frac{.93}{.23} = 4.04$$

significant at .05
level of confidence
df = 1,76

Item

117. Most people are honest chiefly through fear of being caught.

	T	F	NA
S	2	11	-
C	31	30	4

$$\begin{aligned}
 SS_A &= \frac{(2)^2}{13} + \frac{(31)^2}{65} - \frac{(33)^2}{78} \\
 &= \frac{4}{13} + \frac{961}{65} - \frac{1089}{78} \\
 &= .31 + 14.78 - 13.96 = 1.13
 \end{aligned}$$

$$SS_T = 33 - 13.96 = 19.04$$

$$SS_W = 19.04 - 1.13 = 17.91$$

$$MS_W = \frac{17.91}{76} = .24$$

$$F = \frac{1.13}{.24} = 4.71$$

significant at .05
level of confidence
dF = 1,76

Item

133. I have never indulged in any unusual sex practices.

	T	F	NA
S	6	7	2
C	51	12	2

$$\begin{aligned}
 SS_A &= \frac{(6)^2}{13} + \frac{(51)^2}{65} - \frac{(57)^2}{78} \\
 &= \frac{36}{13} + \frac{2601}{65} - \frac{3249}{78} \\
 &= 2.77 + 40.02 - 41.65 = 1.14
 \end{aligned}$$

$$SS_T = 57 - 41.65 = 15.35$$

$$SS_W = 15.35 - 1.14 = 14.21$$

$$MS_W = \frac{14.21}{76} = .19$$

$$F = \frac{1.14}{.19} = 6.00$$

significant at .05
level of confidence
dF = 1,76

Item

140. I like to cook.

	T	F	NA
S	11	2	-
C	33	32	-

$$SS_A = \frac{(11)^2}{13} + \frac{(33)^2}{65} - \frac{(44)^2}{78}$$

$$\frac{121}{13} + \frac{1089}{65} - \frac{1936}{78}$$

$$9.31 + 16.75 - 24.82 = 1.24$$

$$SS_T = 44 - 24.82 = 19.18$$

$$SS_W = 19.18 - 1.24$$

$$MS_W = \frac{17.94}{76} = .24$$

$$F = \frac{1.24}{.24} = 5.17$$

significant at .05
level of confidence
dF = (1, 76)

Item

170. What others think of me does not bother me.

	T	F	NA
S	2	10	1
C	31	32	2

$$SS_A = \frac{(2)^2}{13} + \frac{(31)^2}{65} - \frac{(33)^2}{78}$$

$$\frac{4}{13} + \frac{961}{65} - \frac{1089}{78}$$

$$.31 + 14.78 - 13.96 = 1.13$$

$$SS_T = 33 - 13.96 = 19.04$$

$$SS_W = 19.04 - 1.13 = 17.91$$

$$MS_W = \frac{17.91}{76} = .24$$

$$F = \frac{1.13}{.24} = 4.71$$

significant at .05
level of confidence
df = 1,76

Item

180. I find it hard to make talk when I meet new people.

	T	F	NA
S	1	9	3
C	28	37	-

$$\begin{aligned}
 SS_A &= \frac{(1)^2}{13} + \frac{(28)^2}{65} - \frac{(29)^2}{78} \\
 &= \frac{1}{13} + \frac{784}{65} - \frac{841}{78} \\
 &= .08 + 12.06 - 10.78 = 1.36
 \end{aligned}$$

$$SS_T = 29 - 10.78 = 18.22$$

$$SS_W = 18.22 - 1.36 = 16.86$$

$$MS_W = \frac{16.86}{76} = .22$$

$$F = \frac{1.36}{.22} = 6.18$$

significant at .05
level of confidence
df = 1,76

Item

182. I am afraid of losing my mind.

	T	F	NA
S	6	7	-
C	11	53	1

$$SS_A = \frac{(6)^2}{13} + \frac{(11)^2}{65} - \frac{(17)^2}{78}$$

$$\frac{36}{13} + \frac{121}{65} - \frac{289}{78}$$

$$2.77 + 1.86 - 3.70 = .93$$

$$SS_T = 17 - 3.70 = 13.30$$

$$SS_W = 13.30 - .93 = 12.37$$

$$MS_W = \frac{12.37}{76} = .16$$

$$F = \frac{.93}{.16} = 5.81$$

significant at .05
level of confidence
dF = 1,76

Item

237. My relatives are nearly all in sympathy with me.

	T	F	NA
S	4	9	-
C	42	22	1

$$SS_A = \frac{(4)^2}{13} + \frac{(42)^2}{65} - \frac{(46)^2}{78}$$

$$\frac{16}{13} + \frac{1764}{65} - \frac{2116}{78}$$

$$1.23 + 27.14 - 27.13 = 1.24$$

$$SS_T = 46 - 27.13 = 18.87$$

$$SS_W = 18.87 - 1.24 = 17.63$$

$$MS_W = \frac{17.63}{76} = .23$$

$$F = \frac{1.24}{.23} = 5.39$$

significant at .05
level of confidence
dF = 1,76

Item

251. I have had blank spells in which my activities were interrupted and I did not know what was going on around me.

	T	F	NA
S	7	6	-
C	15	49	1

$$SS_A = \frac{(7)^2}{13} + \frac{(15)^2}{65} - \frac{(22)^2}{78}$$

$$\frac{49}{13} + \frac{225}{65} - \frac{484}{78}$$

$$3.77 + 3.46 - 6.20 = 1.03$$

$$SS_T = 22 - 6.20 = 15.80$$

$$SS_W = 15.80 - 1.03 = 14.77$$

$$MS_W = \frac{14.77}{76} = .19$$

$$F = \frac{1.03}{.19} = 5.42$$

significant at .05
level of confidence
dF = 1,76

Item

252. No one cares much what happens to you.

	T	F	NA
S	11	1	1
C	9	55	1

$$SS_A = \frac{(11)^2}{13} + \frac{(9)^2}{65} - \frac{(20)^2}{78}$$

$$\frac{121}{13} + \frac{81}{65} - \frac{400}{78}$$

$$9.31 + 1.25 - 5.13 = 5.43$$

$$SS_T = 20 - 5.13 = 14.87$$

$$SS_W = 14.87 - 5.43 = 9.44$$

$$MS_W = \frac{9.44}{76} = .12$$

$$F = \frac{5.43}{.12} = 45.25$$

significant at .001
level of confidence
dF = 1,76

Item

267. When in a group of people I have trouble thinking of the right things to talk about.

	T	F	NA
S	9	4	-
C	23	41	1

$$\begin{aligned}
 SS_A &= \frac{(9)^2}{13} + \frac{(23)^2}{65} - \frac{(32)^2}{78} \\
 &= \frac{81}{13} + \frac{529}{65} - \frac{1024}{78} \\
 &= 6.23 + 8.14 - 13.13 = 1.24
 \end{aligned}$$

$$SS_T = 32 - 13.13 = 18.87$$

$$SS_W = 18.87 - 1.24 = 17.63$$

$$MS_W = \frac{17.63}{76} = .23$$

$$F = \frac{1.24}{.23} = 5.39$$

significant at .05
level of confidence
 $df = 1, 76$

Item

279. I drink an unusually large amount of water each day.

	T	F	NA
S	0	13	-
C	20	43	2

$$SS_A = \frac{(0)^2}{13} + \frac{(20)^2}{65} - \frac{(20)^2}{78}$$

$$\frac{0}{13} + \frac{400}{65} = \frac{400}{78}$$

$$0 + 6.15 - 5.13 = 1.02$$

$$SS_T = 20 - 5.13 = 14.77$$

$$SS_W = 14.77 - 1.02 = 13.75$$

$$MS_W = \frac{13.75}{76} = .18$$

$$F = \frac{1.02}{.18} = 5.67$$

significant at .05
level of confidence
dF = 1,76

Item

308. At times I have very much wanted to leave home.

	T	F	NA
S	10	3	-
C	28	35	2

$$SS_A = \frac{(10)^2}{13} + \frac{(28)^2}{65} - \frac{(38)^2}{78}$$

$$\frac{100}{13} + \frac{784}{65} - \frac{1444}{78}$$

$$7.69 + 12.06 - 18.51 = 1.24$$

$$SS_T = 38 - 18.51 = 19.49$$

$$SS_W = 19.49 - 1.24 = 18.25$$

$$MS_W = \frac{18.25}{76} = .24$$

$$F = \frac{1.24}{.24} = 5.17$$

significant at .05
level of confidence
dF = 1,76

Item

315. I am sure I get a raw deal from life.

	T	F	NA
S	0	13	-
C	16	49	-

$$\begin{aligned}
 SS_A &= \frac{(0)^2}{13} + \frac{(16)^2}{65} - \frac{(16)^2}{78} \\
 &= \frac{0}{13} + \frac{256}{65} - \frac{256}{78} \\
 &= 0 + 3.94 - 3.28 = .66
 \end{aligned}$$

$$SS_T = 16 - 3.28 = 12.72$$

$$SS_W = 12.72 - .66 = 12.06$$

$$MS_W = \frac{12.06}{76} = .16$$

$$F = \frac{.66}{.16} = 4.13$$

significant at .05
level of confidence
dF = 1,76

Item

387. The only miracles I know of are simply tricks that people play on one another.

	T	F	NA
S	0	11	2
C	21	42	2

$$SS_A = \frac{(0)^2}{13} + \frac{(21)^2}{65} - \frac{(21)^2}{78}$$

$$= \frac{0}{13} + \frac{441}{65} - \frac{441}{78}$$

$$= 0 + 6.78 - 5.65 = 1.13$$

$$SS_T = 21 - 5.65 = 15.35$$

$$SS_W = 15.35 - 1.13 = 14.22$$

$$MS_W = \frac{14.22}{76} = .19$$

$$F = \frac{1.13}{.19} = 5.95$$

significant at .05
level of confidence
df = 1,76

Item

406. I have often met people who were supposed to be experts who were no better than I.

	T	F	NA
S	3	9	1
C	37	28	-

$$\begin{aligned}
 SS_A &= \frac{(3)^2}{13} + \frac{(37)^2}{65} - \frac{(40)^2}{78} \\
 &= \frac{9}{13} + \frac{1369}{65} - \frac{1600}{78} \\
 &= .69 + 21.06 - 20.51 = 1.24
 \end{aligned}$$

$$SS_T = 40 - 20.51 = 19.49$$

$$SS_W = 19.49 - 1.24 = 17.25$$

$$MS_W = \frac{17.25}{76} = .23$$

$$F = \frac{1.24}{.23} = 5.39$$

significant at .05
level of confidence
df = 1,76

Item

433. I used to have imaginary companions.

	T	F	NA
S	5	7	1
C	7	57	1

$$SS_A = \frac{(5)^2}{13} + \frac{(7)^2}{65} - \frac{(12)^2}{78}$$

$$\frac{25}{13} + \frac{49}{65} - \frac{144}{78}$$

$$1.92 + .75 - 1.84 = .83$$

$$SS_T = 12 - 1.84 = 10.16$$

$$SS_W = 10.16 - .83 = 9.33$$

$$MS_W = \frac{9.33}{76} = .12$$

$$F = \frac{.83}{.12} = 6.91$$

significant at .05
level of confidence
dF = 1,76

Item

440. I try to remember good stories to pass them on to other people.

	T	F	NA
S	5	7	1
C	49	14	2

$$\begin{aligned}
 SS_A &= \frac{(5)^2}{13} + \frac{(49)^2}{65} - \frac{(54)^2}{78} \\
 &= \frac{25}{13} + \frac{2401}{65} - \frac{2916}{78} \\
 &= 1.92 + 36.94 - 37.38 = 1.48
 \end{aligned}$$

$$SS_T = 54 - 37.38 = 16.62$$

$$SS_W = 16.62 - 1.48 = 15.14$$

$$MS_W = \frac{15.14}{76} = .20$$

$$F = \frac{1.48}{.20} = 7.40$$

significant at .05
level of confidence
dF = 1,76

Item

469. I have often found people jealous of my good ideas just because they had not thought of them first.

	T	F	NA
S	0	13	-
C	21	44	-

$$\begin{aligned}
 SS_A &= \frac{(0)^2}{13} + \frac{(21)^2}{65} - \frac{(21)^2}{78} \\
 &= \frac{0}{13} + \frac{441}{65} - \frac{441}{78} \\
 &= 0 + 6.78 - 5.65 = 1.13
 \end{aligned}$$

$$SS_T = 21 - 5.65 = 15.35$$

$$SS_W = 15.35 - 1.13 = 14.22$$

$$MS_W = \frac{14.22}{76} = .19$$

$$F = \frac{1.13}{.19} = 5.94$$

significant at .05
level of confidence
dF = 1,76

Item

510. Dirt frightens or disgusts me.

	T	F	NA
S	0	12	-
C	18	45	2

$$SS_A = \frac{(0)^2}{13} + \frac{(18)^2}{65} - \frac{(18)^2}{78}$$

$$= \frac{0}{13} + \frac{324}{65} - \frac{324}{78}$$

$$0 + 4.98 - 4.15 = .83$$

$$SS_T = 18 - 4.15 = 13.85$$

$$SS_W = 13.85 - .83 = 13.02$$

$$MS_W = \frac{13.02}{76} = .17$$

$$F = \frac{.83}{.17} = 4.88$$

significant at .05
level of confidence

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