



1964

A Comparative Study of Four Catholic College Groups on the Mmpi

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A COMPARATIVE STUDY OF FOUR CATHOLIC COLLEGE GROUPS

ON THE MMPI

by

Juan B. LaFarga, S.J.

A Thesis submitted to the Faculty of the Graduate School
of Loyola University in partial fulfillment of
the requirements for the degree of
Master of Arts

October

1964

LIFE

Juan B. LaFarga was born in La Piedad, Michoacan, Mexico, March 31, 1930. He was graduated from Instituto Patria High School in Mexico City, November 1947. At the Jesuit Seminary in Mexico, he obtained the Bachelor of Arts degree in 1949 and completed his studies in Philosophy and Theology for the priesthood which he received in 1959. He taught History of Philosophy and Spanish Literature at Instituto Oriente Junior College in Puebla, Mexico for three years.

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ACKNOWLEDGEMENTS

The author wishes to express his indebtedness to Dr. Thomas Kennedy, as thesis adviser, for his help in planning and carrying on this study. He is also indebted to Mrs. Donna Marlin, Miss Peggy LaPlante and Miss Ruby Collins for their invaluable contributions, and to the Religious Superiors, the Deans of Loyola University and De Paul University as well as to all the religious and lay students who made this study possible.

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CHAPTER I

RATIONALE OF CLINICAL EVALUATION OF CANDIDATES FOR THE PRIESTHOOD AND THE RELIGIOUS LIFE

In the development of techniques for psychological measurement, efforts have been made from time to time to develop scales or inventories that would include religious values. For example, the Allport-Vernon Scale of Values(1) was designed to rank various value systems of a person, including those of a religious nature. In his original Interest Blank, Strong(36) included a scale for measuring the interests of successful ministers which is still part of the inventory.

After World War II, some Catholic psychologists utilized the resources of personality testing for the purpose of screening candidates for the priesthood and the religious life. Personality and interest tests as well as psychological interviewing became essentials in the screening programs of a growing number of religious communities(40). Several articles encouraging this movement appeared in the professional journals(17), but the attitude of religious leaders was generally reserved. It was not quite clear to some of them whether or to what extent the use of psychological techniques in the screening of these candidates was advisable, on account of the supernatural factors

influencing the personality structures of seminarians and religious(5).

Some investigators(6) have appealed to the distinction between the natural and the supernatural elements of a "vocation" to define the role of psychology in such screening programs. If "vocation" has a natural aspect--and it is evident to all that it has--then it is here that psychology is able to make its proper contribution.

The traditional Catholic viewpoint is that vocation to the priesthood or to the religious life is suggested by the combined presence in the applicant of suitability plus a rightly motivated intention(14). However, it does not seem that the simple existence of these two elements and the distinction between them would allow the conclusion that suitability is the natural element while right motivation is the supernatural.

Suitability, or the qualification of the applicant, constitutes, in general, the natural aspect of vocation, while the right intention refers to its supernatural character. A right intention in the matter of vocation is the result of grace, and this clearly is its supernatural aspect (6).

Suitability, or the physical and intellectual qualification, may be the result of as many supernatural factors as the right motivation. Likewise, any right motivation may imply a complex structure of natural and supernatural volitive elements.

Granted that in the ontological order there is a real distinction between natural and supernatural entities, yet in

the order of observable phenomena those entities appear as mutually inclusive and are practically inseparable for anyone who attempts to evaluate samples of human behavior.

It seems that the role of psychology in screening candidates for the priesthood and the religious life cannot be clarified by such a distinction, since what we experience, observe and attempt to measure psychologically, are human existential realities in which the supernatural and the natural may or may not be intimately fused.

The psychological evaluation of candidates for the priesthood and the religious life seems to be valid and useful, not because it deals exclusively with the natural elements in the personality structures of those candidates, but rather because it does not seem to differ in nature from any other psychological evaluation. Supernatural elements influencing human motivation and behavior are present in those candidates as well as in other Catholic and Christians and in other men in general.

It is evident that the psychological evaluation of candidates for the priesthood and the religious life presents specific problems from a strictly psychological point of view. Nor can it be too strongly emphasized that this type of assessment is no field for those untrained in psychology. But it should also remain clear that psychological assessment cannot be the only solution to the problems of admission of candidates for the priesthood and the religious life.

CHAPTER II

STATEMENT OF THE PROBLEM

The psychological assessment of seminarians and of members of religious orders for screening purposes has a fairly short history. However, the success of the pioneer psychological studies of seminary and religious population justifies further exploratory analysis of the validity and reliability of a growing number of psychometric techniques for personality assessment of individuals within these two specific groups.

It is evident that real success in personality assessment ultimately depends upon the skilled interpretation of adequate samples of behavior and that tests and other psychological techniques with high validity and reliability indexes are of no use in the hands of the unskilled.

Yet nothing can be more useful to the psychologist who has training and experience in psychodiagnosis than further research on the validity and reliability of psychometric techniques which have proved helpful in the assessment of characteristic modes of personality adjustment of different groups.

There are two implicit assumptions in all studies that have made use of psychometric measures of group differences in recent years. First, that group differences exist that have some generality across situations and stability over time, and

second, that there are some psychometric instruments that show reasonable validity as a measure of them.

The MMPI has been widely used as a research tool for the assessment of group differences(42). Although, originally developed in a psychiatric setting for the express purpose of providing scores on traits "commonly characteristic of disabling psychological abnormality"(18) it was very soon used with normal populations as well.

... Although the scales are named according to the abnormal manifestations of the symptoms complex, they have all been shown to have meaning within the normal range(18).

Studies on characteristic MMPI profiles of certain groups have proved particularly useful in clinical settings for a more accurate interpretation of test results in psycho-diagnosis and personality evaluation.

Since the first extensive comparative study of a seminary group and four other groups on the MMPI undertaken by Bier in 1948(7), many researchers have become interested in this clinical tool as a promising aid in screening programs, not only for candidates to the seminary and to the religious life, but also for seminarians and junior members of religious institutes at different stages of their training.

Many of these studies have been conducted at Loyola University in Chicago. Some of them will be critically reviewed in our next chapter. The contribution of these studies

to make the MMPI a more effective instrument for personality assessment is unquestionable. Some of these studies, however, show a subtle ambiguity, originated in the pioneer MMPI studies with normals, as to what the specific purpose of this type of research is. Is it to produce characteristic profiles of groups to be used in vocational assessment or to provide reliable descriptions of groups in terms of MMPI scoring to be used in clinical settings.

Kobler points out to this important question in the last paragraph of his article on "Screening Applicants for Religious Life:"

A basic issue that remains to be faced is this: do we want to use the MMPI or related tests to identify the seriously disturbed or to select the most promising candidates? To select a person who is a promising candidate for office training or professional baseball or the priesthood is considerably different from determining whether or not an applicant is or is not potentially schizophrenic or psychasthenic. The two purposes are easily confused and have been confused by research workers in seminaries. In my judgment, what we want to be able to do is make a clinical contribution to the screening process and not one of vocational assessment. Whether a man perseveres in religious life or not, for example, is not the same question, nor is it of the same order of importance as that of determining whether he is psychiatrically ill or potentially so (23).

Another important issue has been aroused regarding some of those studies. Should the original form of the test be changed in order to preserve the applicability of its general norms of interpretation when the test is used with specific groups or rather the original form should be preserved and the norms of interpretation clarified through new research.

Those inclined to modifying the original form are immediately faced with a dilemma. Either they have to undertake an empirical validation of the new form which implies the establishment of new norms of interpretation, or they run the risk of jumping into clinical interpretations from a merely theoretical frame of reference or according only to the experiment's clinical experience.

The advantage of the MMPI as a personality inventory over its predecessors is that those earlier tests had mostly consisted of items scored according to the author's more-or-less accurate notion of what the item indicated. Hathaway and McKinley's contribution was that sets of items, or scales of the inventory could be developed empirically by selecting items which statistically differentiated between normal and abnormal groups. For instance, only items which depressed patients answered significantly more often than normal people were included in the depression scale. Thus, all sorts of items were useful, even those that the authors themselves might not have anticipated.

The same could be said about few other psychometric techniques. The Strong Vocational Interest Blank, for instance, made use of empirical methods of selecting items, before the development of the MMPI(37). This test, the life work of E. K. Strong, measures the degree of similarity between an

individual's interest and those of persons who have been highly successful in certain occupations and professions.

Bier made a remarkable contribution to the clarification of the general norms of interpretation of the MMPI as applied to seminary groups in his study on specific differences between his experimental group of seminarians and his control group composed of professional school students and college students, and between his two groups and the MMPI standardizing population. He even undertook an item analysis of the first 366 items as they are found in the group form of the MMPI to specify further the significance of the general-scales differences and to assess the discriminatory power of each of the items.

His conclusion was that:

The most obvious allowance for the different significance of these items with respect to the seminary group would be made if modified norms were developed on the various MMPI scales for special use with this group. This would be minimum requirement if this test is to be adapted for use with a special group. On the basis of the present study . . . it would appear that the effect of introducing such modifications in the MMPI norms for the seminary group would be to raise the level of the T scores which would be accepted as normal for this group. In other words, a certain elevation of the MMPI profile would be accepted as normal for this group, and individual interpretation made upon this basis(10).

It is suggested here, however, that some modifications should also be introduced in the content of the MMPI in adapting it to seminary use. More specifically, it is suggested that certain items should be eliminated. This proposal is based upon the assumptions, expressed above, that certain MMPI items have no application to the seminary group and upon the experimental fact that a number of these items do not discriminate between the well-adjusted and the poorly-adjusted seminarians. When

these two criteria agree in picking up the same items, the author believes that such items can be eliminated from the test without loss when the test is used with seminary groups. The author wishes, however, to go one step further and suggest that the elimination of these items would be beneficial(9).

Following his suggestions, Bier constructed an abbreviated form of the MMPI for use with seminarians and candidates for the priesthood. Rice considers this modification "an unfortunate solution to the difficulties of applying the genuine MMPI to seminarians" (Rice, p. 45) for the reason that those who use a modification cannot benefit fully from the rich and increasing literature devoted to the full-length MMPI.

Hathaway and Meehl comment on the current research in differential diagnosis through the MMPI:

The current research by users of the MMPI emphasizes that: To get the most out of this instrument, the clinician must treat the data in a configural rather than an atomistic fashion. There is an increasing tendency to start with the test, i.e., to arrange or sort patients on the basis of the test results and then to examine these "test-similar" patients for resemblances in history, symptoms, dynamics, course, and diagnosis. This approach seems to be more fruitful and more in harmony with actual clinical practice . . .(18).

Bier provided useful empirical information on the general norms of interpretation of the MMPI as applied to his different groups and particularly as applied to his seminary group. He presented evidence on the discriminatory power of certain items to differentiate between the arbitrarily selected portion of "well-adjusted" and "poorly-adjusted" individuals in each one of his groups, but the usefulness of his suggested new form

in clinical settings remains highly questionable.

Finally, further comparative research on group differences, so important for the clinical use of the test, demands the administration of a standard form.

The same and "a fortiori" should be said about Benko and Nuttin's "adaptation of the test for population of European culture, and more specially for Belgian University students"(3). Having modified the test to suit European culture, they modified it again to adapt it to seminarians. Following Bier's suggestion, they altered the wording (and, in many cases, the content) of items especially related to religion and to social activities and attitudes. They claimed that their modified version was essentially the same test as the full-length English version of the MMPI, despite the fact that they dropped 188 items and reworded 25 others(4) and didn't even make use of Bier's empirical criterion of item selection(10).

This study is an attempt to test further the hypothesis that the MMPI shows reasonable validity as a measure of group differences.

Its specific goal is knowing if there is a characteristic MMPI profile of college student members of religious orders in the Chicago area significantly different from a profile of lay-Catholic college students in the same geographical area. It also intends to investigate if the profiles of these two populations differ significantly from the profiles of the MMPI standardizing

population.

Arbitrarily dividing the experimental population into "well adjusted" and "poorly adjusted" groups on the only basis of their scoring on the MMPI scales following Bier's experimental model seems to deserve no purpose. It is "arbitrarily" anticipating the conclusion, since such a division of the population can only be legitimately effected if an independent criterion is already available.

This research is limited to the comparative analysis of the MMPI profile of four specific groups that might be used as an aid for interpreting the MMPI in clinical settings.

Three null hypotheses shall be tested at the .05 level of confidence: 1) There is no significant difference between the MMPI performance of religious seminarians and lay students. 2) There is no significant difference between the MMPI performance of college student nuns and of lay female students. 3) There is no significant difference between each one of the four groups and the MMPI standarizing population.

CHAPTER III

REVIEW OF THE LITERATURE

The possibility of self-deception in religious experiences has often been emphasized by Catholic writers(2), (25). Modern psychology tends to reinforce their warnings by supplying empirical evidence of the concealed adjustment problems of some of the candidates who knock at the doors of seminaries and convents. Excessive submissiveness, for example, or fear of the competition in life, might easily appear as orthodox religious motives of contempt for the world and a desire for perfection. In such cases where the individual is only superficially aware of his motivation, his strivings for higher values should be carefully examined. This analysis is seldom easy, and it is here that experts in psychology have an invaluable contribution to make. We must realize that it is not the sincerity of many people that is under question, but rather the nature of their motivation. In the instances cited above, for example, individuals should be identified before they make serious commitments.

But the function of psychology is not to be limited to screening. Its resources should also be exploited for developing better seminary and religious training programs, fostering a more effective adjustment of individuals and groups through counseling, and preventing serious emotional disturbances.

Research on techniques of personality assessment, by providing more valid norms of interpretation, will facilitate the attainment of these objectives. During the past thirty years, there have been several studies of seminary and religious populations in which psychometric measures of group characteristics have been employed.

A landmark in this Catholic application of personality test research was a study published almost thirty years ago by Moore(31) on the rate of mental illness among priests and religious. This study was followed by a second, in which he recommended procedures for screening pre-psychotic individuals seeking admission to the religious life(32).

Moore's original work gave rise to more detailed investigations along two main lines. The one has been aimed at determining whether priests and religious differ as a group from other professional groups in regard to personality and interests. The other has investigated the reasons for personality differences between priests and religious as a group and other Catholics.

According to Moore's first study, the overall incidence of mental disorders was lower for priests and religious than for the American population as a whole in 1936. But the incidence of certain kinds of mental disorders was found to be higher for priests and religious than ordinarily would be expected. Thus, by comparison with the general American

population, there was found a higher incidence of the schizophrenic disorders and of paranoia. There was a higher incidence of involuntional psychoses among female religious; among male religious there was a higher incidence of alcoholism and the manic-depressive psychoses.

Moore's study was based almost exclusively on data collected from individuals committed to mental institutions. Further research on the personality characteristics and interests of priests and religious in general was indicated. Thus, at the Catholic University of America, where Moore was teaching, several studies were undertaken to describe through a great variety of psychometric and rating devices the characteristic traits of seminarians and members of religious orders. Peters (1942), Burke (1947), Bier (1948), Lhota (1948) and McCarthy (1956) each contributed a study related to this research.

These studies collectively gave a consistent picture of the American seminarian and religious in training. He is a person somewhat more submissive, dependent, introspective and self-conscious than the average American. Compared with other populations of persons in training, Bier concluded, this population is the most deviant in the direction of neuroticism.

Burke(15) studied a group of minor seminarians by means of tests and rating scales filled out by superiors. He concluded that the most certain index of success in the minor seminary is the battery of achievement tests taken before

entrance. Burke also administered to his research population a battery of standard tests from which he derived a general factor which he considered to be legitimately interpreted as "general moral fitness to go into the priesthood."

Lhota in 1948 and D'Arcy in 1954, in independent studies, demonstrated that the interests of priests are sufficiently different from those of men in other occupations to warrant a special scale for their measurement. Moreover, the interests of priests differ sufficiently according to their type of ministry to warrant special scales for diocesan priests and for religious missionaries(41).

McCarthy undertook a considerably more elaborate investigation(27). He administered a battery of tests, including the Bell, the Benreuter, and the Allport-Vernon Study of Values, to 85 major and 44 minor seminarians. In addition, three faculty members rated each of the seminarians on a rating scale constructed for the purpose. McCarthy reports the following picture of his "average" seminarian: 1) In comparison with the average student of his school, the seminarian manifests a little higher "neurotic tendency," a higher degree of self-consciousness and a more unsatisfactory total adjustment as measured by the Bell Scale. 2) With regard to introversion and sociability as measured by the Benreuter Scale, his scores are about the same as the average student's, though he is more submissive. 3) On the Allport-Vernon Study of Values, his aesthetic, social, political, economic, and

theoretical interests are about average, but his religious interests are significantly higher and are clearly dominant in his interest profile.

In 1948, Bier administered the MMPI to 924 subjects divided into five matched groups. Four groups consisting of medical, law, dental and undergraduate college students were selected to act as standards of comparison for a seminary group. All subjects were Catholic. The group of seminarians was rather heterogeneous, being drawn from diocesan seminaries and from three different religious orders in three geographically separate areas of the United States. All were major seminarians, i.e., men who had completed seminary studies at the high school level and were engaged in the study of philosophy or theology at the time of this research. Analysis indicated a number of intragroup differences. All groups used in this study gave evidence of less satisfactory adjustment on the basis of the MMPI than did the standardizing population. 40 per cent of the seminary group showed scores on one or another clinical scale of the MMPI that were two standard deviations above the mean score of the Minnesota normal male group. Bier concluded:

The seminary group manifests the same deviant tendencies though in a more marked degree than the other groups . . . If the .05 level of significance is accepted, 55 per cent of the differences between the seminary and the other groups are significant; 40 per cent of such differences are significant at the .01 level. Of these statistically significant differences, 80 per cent are in the direction of greater deviation, i.e., poorer adjustment for the seminary group. In other words, the seminary group is

the most deviant portion of an already deviant population (i.e., the Catholic college and professional school population)(11).

As was pointed out before, the main weakness of this study (and to some extent the weakness of the previous ones) seems to be the lack of independent criteria to justify fully what is concluded. It does not seem quite justifiable to conclude in terms of more or less deviation without such criteria. For the question is, precisely, what do those statistically significant deviations from the normal MMPI population mean, if we consider that we are dealing with highly selected groups.

A second series of studies was carried out, primarily by students of Bier at Fordham University, to account for the deviations found in the previous studies on various personality test scales. Moore had appealed to the notion that a pre-psychotic individual would be attracted to the religious life, in order to account for the incidence of insanity among priests and religious as revealed by his study(32). Alternative explanations of this phenomenon have been proposed(27). Perhaps the particular training received in seminaries and convents might lead to deviation or perhaps, certain personality types might be attracted to the seminary or to the religious life, where the nature of the training might deepen and extend already deviant personality traits.

Four cross-sectional studies completed at Fordham were aimed at determining whether certain personality types

are attracted to religious life, and whether religious life influences personality development in the indicated direction to a significant degree. Mastej (1954)(30), Vaughn (1956)(38), and Sandra (1957)(35), considered women religious; Murray (1957) dealt with men religious (33).

All four studies pointed to a typical personality pattern among those who enter religious life, that is, a tendency to score higher on the "neurotic" scales than do other Catholics of the same age and the same educational and social backgrounds. Specifically, they tend to be more dissatisfied with life and family, and are somewhat more submissive, introspective, dependent and self-conscious than a comparable sample drawn from the laity.

The four studies also concluded similarly that religious life exerts an influence on personality after entrance, but the studies do not agree as to the direction of this influence. One suggests that the degree of deviation increases in direct proportion to the amount of time spent in religious life (Mastej)(1954)(30).

Another suggests that the direction of deviation depends upon the type of religious life, since those in active religious groups tended to become less deviant with increasing time in religion, while those in contemplative orders tended to be more deviant as time in religion increased (Vaughan, 1956)(38).

The other two studies indicate that amount of time in

religion is less important as a determinant of personality changes than is the particular stage of religious training (33), (35). It was suggested that at those stages where insecurity might be expected to be higher, scores were more deviant. Thus, for example, novices were found to be more deviant than the junior professed and major seminarians were found to be more deviant than minor seminarians. For the ordained, there was a tendency toward mitigation of the deviation found at earlier levels.

McCarthy carried out at the University of Ottawa a complementary, longitudinal study dealing with personality changes in men religious (29). This study showed that while certain personality traits did change during religious life, the change was associated with critical choice points and the particular demands made on individuals at those points, rather than with mere increase of time in religion. One critical choice point, for example, was the profession of first vows, following which there was a decrease in nervous tension and an increase in emotional stability.

The other changes found by McCarthy to occur in religious life were increases in conforming behavior and in withdrawal. Finally, it was found for each of five groups studied that religious training was influencing only certain aspects of personality, the nature of the influence being essentially the same for all within groups undergoing similar training. With respect to other aspects of personality, individual differences among these men

religious were as wide as one would expect to find in any other group.

Regarding the methodology of the reviewed studies, one may wonder about the lack of criticalness on the part of investigators in the matter of validity of standardized techniques used in carrying out these experiments with selected groups. Such research studies are indeed expected to provide more empirical information about the specific traits of the population under study. But at the same time the accuracy of the instruments used to measure such traits is expected to be checked and controlled if inferences are to be kept in due perspective. Research on the accuracy of clinical tools in reflecting group characteristics seems to have priority over any other type of group experiment at this time.

It is mainly for this reason that several MMPI studies on seminarians that have been conducted at Loyola University in Chicago during the past decade have particular importance, and seem especially relevant to the present investigation.

The first of these studies was done by Rice in 1958(34). He wanted to know to what extent the MMPI profile of the seminarian presented by Bier was representative of the American seminarian. He administered the MMPI to a homogeneous group of 79 seminarians, members of the same religious order. He found significant differences on four scales between his own experimental group and Bier's group. He also found significant

differences on eight scales between his group and the Minnesota normal male group. He concluded that for more effective use of the MMPI in seminaries and religious orders, these institutions should promote research similar to his, since his investigation indicated that there is no one identifiable "seminarian profile" for the MMPI.

The second study of this group, but perhaps the first in importance, was that done by Wauck(39). His research was designed to investigate the usefulness of several well-known and widely used psychological tests as screening devices in the selection of candidates for the diocesan priesthood. The tests used were the Ohio State Psychological Examination, the Kuder Preference Record Form B, the MMPI and the Group Rorschach Technique. The criterion was the consensus rating provided on a scale of variables by seven "prefect-raters." The tests were administered to 206 major seminarians over a period of three years. The data were subjected to a multiple correlational analysis. This resulted in a multiple coefficient of correlation of .38 with a standard error of 4.26, which was found to be significant beyond the .01 level.

With regard to the MMPI, Wauck found that the "better adjusted" group (according to the "prefect-raters") obtained higher scores on scales D and Pt, although not significantly higher, than the rest of the group; and that the same "better adjusted" seminarians were singularly low in signs of depression

and psychasthenia on the Rorschach. No significant differences were found between this group and the Minnesota normal male population.

The overall elevation of the average MMPI profile of this group could be legitimately interpreted in the light of results obtained from the other tests as well as independent raters' evaluations. It conveys the image of a well adjusted seminarian of superior intelligence who is strongly interested in people and ideas and tends toward greater-than-average anxiety, but with insight and emotional control. To interpret this profile of a highly selected group exclusively in terms of the general norms would not be justifiable.

In 1961, Gorman conducted a similar study(19). He administered the MMPI, the Kuder Preference Record and the Mooney Problem Check List to a group of 188 minor seminarians. He also used as an independent criterion the ratings of several faculty members. The characteristic MMPI profile of this group is also generally high as compared with the Minnesota normal male group, but not significantly higher. Checked against other test results and the judgments of independent raters, it conveys the image of a well adjusted group who tend to be more quiet, orderly, ritualistic and conforming than the average, definitely interested in people and ideas, and less committed emotionally than might be expected.

To date, studies dealing with psychological aspects of

religious life, and the lives of other groups as well, have been largely descriptive in nature. However, some few have already started to deal more directly with the important issue of prediction.

Using the MMPI and an intelligence test, Herr in 1962 presented a study on two independent groups of 50 and 52 diocesan seminarians(21). The MMPI profiles of these two groups were checked against the ratings of several faculty members. The protocols of those who left the seminary during the first year after testing were compared with the protocols of those who stayed. 10 subjects of the first group and 7 of the second left, leaving 40 of the first and 45 of the second who stayed. Positive correlations were found between the faculty ratings and the MMPI results. The profiles of those who stayed and of those who left showed generally parallel configurations, but with significant differences on scales Pd, Pt and Sc being found in both of the independent groups.

Although elevations on scales Pd, Mf, Pt and Sc are not necessarily indicative of present or future maladjustment in candidates for the seminary--Herr concluded--exaggerated elevations on at least two of those scales, the Mf scale not included, deserve serious consideration. Particularly would this be true if other independent indicators of maladjustment are discovered.

The same year, 1962, Weisgerber presented a survey of

five years of a screening program in a religious order of men (41). The psychological evaluations were made by a psychologist on the following bases: the candidate's scores on the MMPI Individual Form, adapted by Bier for use with seminarians; some background information regarding the candidate; and a behavior rating form filled out by three teachers who knew the candidate well. During those five years, 70 of the 211 candidates evaluated left the order, while 141 persevered. The results were: 1) Of those whom the psychologist declared satisfactory, about 70 per cent persevered; of those he declared doubtful or unsatisfactory, 55 per cent. The difference was significant at the .05 level. 2) The profiles of the candidates who left hardly differed from those of the ones who stayed. 3) Significant differences were found on the four scales *Mf*, *Pd*, *Sc* and *Ma*, between the profiles of the two seminarian groups and that of the Minnesota normal male group.

Although the difference between the MMPI profiles of Weisgerber's "successful" and "unsuccessful" seminarians were negligible, it is important to note that these profiles follow again the characteristic pattern of elevations on scales *Pd*, *Mf* and *Sc*--as did Bier's, Rice's, Wauck's, Gorman's and Herr's seminarian populations. This is in spite of the fact that Weisgerber used Bier's modified MMPI form for seminarians.

Weisgerber's most important contribution to clinical prediction is the statistical analysis of his criteria to

identify the seminarian who will not be successful. Although the author does not consider these empirically derived criteria as substantially validated by his experiment, he nevertheless offers them as clues for clinical practice and hypotheses for new research.

Using the coding system of Hathaway as a convenient way of classifying the various profiles, Weisgerber compared the seminarian group who persevered and the group who left with reference to their highest and second highest scales. Only profile types Pd, Mf, Pt and Sc occurred often enough to yield reliable percentages. Five tables of data were presented on incidence, percentage, and probability significance of incidence of the most common profiles, as related to perseverance(41).

In January of 1964, Kobler published the results of an attempt to interrelate many dispersed data collected from various studies of seminary and religious groups--most of them done at Loyola--using the MMPI, the Kuder Preference Record and the Mooney Problem Check List(22). He also analyzed the results of three of those studies in which essentially the same design was used, in order to determine the present usefulness of the tests mentioned in the psychological evaluation of religious.

Regarding the MMPI as the most widely used test of the battery, and having compared 1000 profiles of religious of various types with those of 5000 college students, he concluded

that:

. . . the differences were seen to be negligible or nonexistent. However, within the religious groups there were certain noted differences that led to some tentative conclusions. Some religious groups scored considerably higher on certain scales than did others. The mean scores varied by as much as 17 points. The *Mf* scale was uniformly high and may be disregarded except for scores above 70 on profiles with other high scores. There was no special sex pattern that could be discovered. Applicants for religious life differed considerably from those who had been in religious training for a number of years. Where conformity is stressed in the minor seminary, independence and originality may be stressed at the graduate levels. Whether this difference is due to the continuing process of selection or to the results of growth and training is a good unanswered question. To attempt to obtain profiles of "successful" or "adjusted" religious for use in selection may therefore be meaningless. To determine what the profiles of successful religious were like at entrance may be more useful. Individuals applying for admission to religious orders may have considerably different profiles from those of students who apply for training as diocesan clergy. It seems reasonable to suggest that every institution that has or plans to have a testing program will want to use a custom-tailored approach to the selection of applicants. It will not depend much, if at all, on norms obtained by other institutions or groups.

Results on the tests are determined to an appreciable, but unknown, degree by the setting in which they are given, by the time when they are given, by whom they are given, and by the conditions under which they are given. In several of the studies, for example, *K* varied from a mean of 51 to 61. This was a difference significant for those samples at the .01 level.

Significant scores are likely to be found on the *Pt* and *Sc* scales, although extreme scores not characteristic of a group are likely to be more significant. Apparently a considerable amount of deviation, as revealed by tests, is tolerable in an applicant for religious life. On both the *MMPI* (*Mf*) and the *Kuder*, subjects who are poor risks show extreme scores in the same general direction, as the scores of their own groups, rather than any similarity to the scores of the opposite sex. Perhaps certain personality types are attracted to a religious

group on the basis of the applicant's own conception of that group or in relation to the more objectively visible goals, ideals, and mission of the group(23).

Kobler offered a preliminary operating principle in the use of the three tests for screening applicants for religious life:

If the applicant has a mean score of 58+ on the MMPI scales including one or more scores at or above 70, and high scores especially on the Pt or Sc Scales, and if the Kuder profiles are either exaggerated in the indicated direction or if they are flattened, including no pronounced interests, and if the Mooney for men shows 20 or more problems checked, with 10 or more of most concern, then the applicant should be further clinically evaluated regarding suitability for religious life(24).

An analysis of the MMPI, Kuder, and Mooney protocols of 390 subjects, in conjunction with available follow-up data, showed that approximately one-fourth of this total, or 102 subjects, satisfied the MMPI criteria for further clinical evaluation. In approximately one-half of these 102 subjects selected through the MMPI, the Kuder criterion of exaggerated or flattened profiles and the Mooney criterion of the specified number of troublesome and more serious problems were found to apply. All of the women, eight in number, identified by all three test criteria have already left religious life or are considered so maladjusted personally that they are expected to leave or will be advised to do so. For the men, the check on the criteria has just begun. Seven men, to this date, have been referred for extensive clinical evaluation because of

emotional problems. All but one of these men were identified by the three criteria.

In summary, research to date indicates the following:

- 1) Persons attracted to the religious^{life} generally have specific personality characteristics and interests which can be identified through some psychometric devices.
- 2) While it is true that religious and seminarians as a group follow characteristic score patterns when some standardized techniques are used, it is also true that they show individual differences as broad as one would expect to find in any occupational group.
- 3) Separate, normative studies should be undertaken at different levels of training for religious life and for the priesthood, as well as after ordination.
- 4) The methods used in further research should be determined by more clearly specified goals. Selecting promising candidates for the priesthood or the religious life is different from determining whether candidates are emotionally maladjusted or potentially so.

CHAPTER IV

DESIGN OF THE RESEARCH

SUBJECTS:

The subjects of this experiment were 100 students, ages 18 to 25, all Catholic, unmarried, attending school at the college level within the Chicago area. It was assumed that their intelligence was above average on the basis of their present qualification as college students. The group was composed of individuals taken from four different populations: 24 seminarians, members of three different institutes; 25 nuns, members of two religious congregations; 27 men attending Loyola University or De Paul University, and 24 women attending either of the same universities.

The first group of 24 seminarians (which henceforth will be called group A) was made up of religious in training, approved by their superiors, who had taken the perpetual vows of poverty, chastity and obedience. They were considered to be at least minimally adjusted to their life, since all had been members of their orders for at least five years. Their supervisors were asked to give the booklet form of the MMPI to 12 of their subjects in training who had the necessary qualifications of age and education and who would volunteer to take it. Information given to the subjects about the project and the test was uniform, in the form of a letter (Cfr. Appendix). Eleven members of one institute

filled out the protocols and nine and four members of the others respectively, which made a total of twenty-four subjects.

The second group of 25 nuns (henceforth to be called group B) likewise was composed of nuns in training with characteristics parallel to those of group A, except that none of the nuns had taken perpetual vows. Their superiors were asked to give the booklet form of the MMPI to 14 of their subjects. Thirteen members of one institute took the test and twelve of the other, which made a total of twenty-five.

The college groups of men and women (henceforth to be called group C and group D respectively) were selected at random from the general registration lists of both universities, with the consent of the dean of students in each case. Sixty numbers taken from a table of random numbers picked out thirty men and thirty women from a list of 6234 students at Loyola. A similar procedure picked out the same number of subjects from a list of 3467 students at De Paul. The subjects were contacted by mail and given uniformly the same information that was being given to the religious groups. Fourteen men and eleven women from Loyola and thirteen men and thirteen women from De Paul filled out the protocols, which made a total of twenty-seven men and twenty-four women. Two protocols were rejected: one filled out by a Loyola man who was not a Catholic, and one filled out by a seminarian who left more than fifty items unanswered.

MATERIALS:

The materials for this research were the booklet form of the MMPI designed for group administration, the letter of information on the project, the test and the IBM answer sheet for use with the pamphlet. The standard hand-scoring stencils were used.

PROCEDURE:

Each answer sheet was scored for each of the four validating scales and for each of the ten clinical scales. This procedure yielded raw scores on each of the fourteen scales. These raw scores were then translated into T-scores with a mean of 50 and a standard deviation of 10. The raw scores on five of the clinical scales (Hs, Pd, Pt, Sc, Ma) were corrected with the addition of some percentage of the K score according to the normal procedure, and corresponding T-scores were calculated for these corrected raw scores. The procedure so far leaves four sets of scores: raw scores without K; T-scores corresponding to raw scores without K; raw scores corrected by addition of K percentages; T-scores corresponding to raw scores corrected for K.

For the statistical analysis of differences, T-scores corresponding to raw scores without K will be used, since the T-score values of the standard profile form were derived from raw scores of the standardizing population without the K correction.

Research on the construction and clinical use of scale K

done by McKinley, Hathaway and Meehl(16) has lead to the establishment of reliable formulas for the transformation of raw scores with K correction into T-scores for scales Hs, Pd, Pt, Sc and Ma in the standard profile. However, since the experimental groups of the present study will be compared directly with the adult standardizing population of the MMPI and there is no way to correct the raw scores of this population with their own K scores, it was decided not to use the K correction. However, the K-corrected profiles of our experimental groups are presented on pages 52 and 53 for clinical speculation.

There is a further consideration in that recent studies on the use of the K correction with non-psychiatric subjects suggest that the meaning of K elevations in the profiles of such subjects is still uncertain(18').

For a similar reason the experimental groups of the present study will not be compared with the standardizing MMPI adult groups on scale Si. Like the K scale, this scale was developed later, with other groups of subjects than were used for the validation of the original scales.

To test the two first hypotheses, that there are no intragroup differences within the experimental group, this group was divided into the four sub-groups A, B, C, D. Groups A and C, the male population, and groups B and D, the female population, were compared independently. The ranges, means, standard deviations, critical ratios, and the probabilities of the critical

ratios for these two comparisons were calculated on each of the 9 clinical scales. Two-tailed tests were employed because the direction of possible deviations of each group from the other was unpredictable. The .05 level of confidence was accepted in advance.

To test the third hypothesis, that there are no significant differences between the experimental group and the MMPI population of normals, the experimental group was divided again into groups A, B, C, and D; each was then compared with its respective group in the MMPI standardizing population. The same procedure described above for testing the first hypothesis was followed, except that one-tail tests were used. This was in consideration of the fact that all studies of college groups in general, and of seminarians and religious in particular, show deviations from the MMPI standardizing group in the direction of higher scores. It was decided that the .05 level of confidence would be accepted.

THE TEST:

Midway in the 1930's, Hathaway, a clinical psychologist, and McKinley, a neuropsychiatrist, saw great potential in complementing the psychiatric interview with an inventory of statements that could be subjected to statistical analysis. For example, the patient could be asked to respond "true" or "false" to such statements as "I frequently have headaches,"

"Someone is plotting against me," and "My family does not want the kind of friends I have." Earlier tests had consisted mostly of items scored according to the author's notions of what the item indicated. This approach assumed that the designer of the test knew the meaning of the item to the subject and, second, that the subject was giving an honest self-report. The most important idea of Hathaway and McKinley was that sets of items, or scales of the inventory, could be developed empirically by selecting items which differentiated statistically between normal and abnormal groups.

Other important ideas grew out of this notion. For instance, the MMPI makes use of scales of test-taking attitude, providing some indications of when a patient is distorting or faking his responses. Research starting in 1937 with the WPA project(18) had produced by 1945 the major validation part of the test. Since that time an incredibly large amount of research based on clinical and extraclinical usage has added at least one hundred additional scales or sets of tests that attempt to measure personality characteristics such as anxiety, ego strength, and hostility. The MMPI has occasioned more publications than any other personality inventory to date.

The booklet form of the MMPI consists of 566 statements which are to be read and scored by the subject on an IBM answer sheet as "true" or "false" as applied to him. The scoring scales identify and group the responses into fourteen categories. There

are currently four validating and ten clinical scales of the standard test. The original clinical scales developed by the authors are these:

- | | | |
|--------------------------------|---|---------------------------------|
| 1. Hs - hypochondriasis) | } | the so-called "neurotic triad" |
| 2. D - depression | | |
| 3. Hy - hysteria | | |
| 4. Pd - psychopathic deviate | | |
| 5. Mf - masculinity-femininity | | |
| 6. Pa - paranoia | } | the so-called "psychotic triad" |
| 7. Pt - psychasthenia | | |
| 8. Sc - schizophrenia | | |
| 9. Ma - | | |

In 1946 E. Drake developed scale O, which aims at measuring the tendency to withdraw from social contacts. The scale items were chosen by contrasting groups of students in the guidance program at the University of Wisconsin who scored above the 65th centile rank and those who scored below the 35th on the subscale for social introversion-extroversion on the Minnesota T-S-E Inventory(18")

Rice has done a critical evaluation of the validation of the original scales and scale Si(34'). The standardizing population of the MMPI, which is to be used as the control group in the present experiment, was obtained from several sources. The first was the Minnesota University Hospitals (724 cases), where the subjects taken were not themselves under psychiatric care

or otherwise ill, but were bringing or visiting relatives or friends. The assumption that they were in good health might not always have been correct. Another so-called normal group was taken from the testing bureau of the same university (265 cases). The latter were mainly high school graduates who had come for pre-college guidance, but there were a number of college students as well.

Another group was one of skilled workers from local projects (254 cases). Still another was composed of patients in general, not having obvious psychiatric conditions, who were in the same hospitals (254 cases). The final group was made up of in-and-out patients from the psychopathic unit of the same hospitals who were not too disturbed or otherwise unusable, regardless of their diagnoses (221 cases).

The first group of 724 cases constitutes the normative group for standard scoring of the MMPI. The other groups of normals were employed in much of the subsequent work on scale derivation. The group that was used to establish the T-score values in the standard profile form included only married subjects taken from the general normative groups.

The experimental group of this study will be compared with a selected population of 198 men and 314 women, married and between the ages of 16 and 65, taken from the Minnesota normal groups. Most of the standard MMPI profiles for use in clinical settings are constructed in terms of deviation from the average

scores of this particular selected group.

CHAPTER V

ANALYSIS OF RESULTS

The first question to be answered statistically concerns the homogeneity of the experimental sub-groups. Specifically, are the MMPI scores of religious seminarians attending school within the Chicago area significantly different from those of lay students of the same age and educational level, attending Catholic universities within the same geographical area? A similar question shall be answered tentatively regarding a group of Catholic nuns and a corresponding student group of laywomen.

The most extensive and most widely known MMPI studies on college population, Black's MMPI Results for Fifteen Groups of Female College Students(12) and Goodstein's Regional Differences in MMPI Responses among Male College Students(20), show that regional differences among college groups are negligible, and that there is a characteristic profile for college women as well as for college men. It is important to note that the mean T-scores of the male population on all nine clinical scales are above the expected mean value of 50. Goodstein suggests that the typical deviation of college students' MMPI profiles from those of the general standardizing adult population should not be interpreted to mean that the MMPI cannot be useful in evaluating

the adjustment of college students. This typical or "normal deviation," as it were, should rather be seen to support the idea that separate norms for this group are not only desirable but essential.

The similar score pattern found among 5035 male students from eight colleges across the country was characterized by consistent elevations on the Pd, Mf, Pt, Sc and Ma scales. It is interesting at this point to note that the profiles of the various groups of seminarians discussed above showed in general the same or slightly more pronounced elevations on the same scales.

A comparison between these profiles and Black's profiles of 5014 college women shows the males to have higher mean scores on all the clinical scales with the exception of Pa, where male and female scores are nearly identical. The largest sex differences are on the D, Hs, Mf, Pt and Ma scales. The women's scores fall below the expected mean value of 50 on the Hs and D scales, while the men's scores are consistently above 50.

This research seems to support Goodstein and Black's hypothesis that while there is a characteristic profile for the college student which differs little from college to college, this profile is markedly different from that of the non-college adult population.

Table 1 shows that the average ages of the male groups in our experiment differ by only one year, the religious group being the older. The difference in average age between the

Table 1

Distribution of Experimental Group According to Ages.

AGES	NUMBER OF SUBJECTS			
	Group A	Group B	Group C	Group D
18			4	6
19	4		5	10
20	4		9	4
21	3	6	3	4
22	9	13	5	
23	1	4		
24	1	2		
25	1			
N	23	25	26	24
Total N=98				
Age Means	21	22	20	19
Age Mean of the Experimental Group= 20½ years.				

female groups is three years, again the religious group being the older.

Tables 3 and 4 show that, in fact, the religious and lay populations of the experimental group perform homogeneously on practically all scales of the MMPI. Between the two male

groups there are no statistically significant differences on any scale. Between the two female groups two significant differences were found: one on scale Pd, which was beyond the .05 level of significance but not reaching the .01 level; the other, on scale Si, which was significant beyond the .01 level. On the other eight scales no significant differences were found between the female groups.

Figures 1 and 2 show how the profiles of the religious and lay populations follow the same general patterns. The profile of the religious male group shows a slight general elevation over that of the lay male group (figure 1), whereas the reverse happens with regard to the female groups (figure 2).

Thus the first null hypothesis for this experiment, namely, that there are no significant differences between the male sub-groups in terms of their scores on the MMPI, cannot be rejected at the .05 level of confidence. The second, namely, that there are no statistically significant differences between the female sub-groups is rejected in only twenty percent of the scales at the .05 level of confidence.

This does not mean that the differences shown ought to be disregarded, nor that the MMPI is not providing any valid information on the experimental populations. It does suggest that we are dealing with highly similar groups, and that the differences found are to be considered and interpreted only in conjunction with other independent information available on

Table 2

Age and Educational Characteristics of the Minnesota
revised Normal Sample (1957).

Item	Males	Females
Mean age in years	33.1	33.9
Mean school grades completed	9.7	10.0
N	226	315

Source: Hathaway and Briggs (20*)

those groups.

Figure 1 shows that the highest peaks in both male profiles are on scale Mf. The profile of the religious group reaches a T-score of 65, one and a half standard deviations above the mean of the Minnesota normal males; the profile of the lay students reaches a T-score of 61, a little more than one standard deviation above the mean. It is now widely thought that although the Mf scale generally identifies the male with feminine characteristics, it does not discriminate between him and the educated male with a broad variety of interests. It has been often reported that college and professional students rather consistently produce high scores on this scale(13), (20). Such findings are almost to be expected if it is recalled that the Minnesota normal males were drawn largely from rural populations with a limited span of interests (Table 2). The fact

that both religious and lay populations score high on this scale confirms the previous findings and lessens the significance of the elevation itself.

The differences between the male profiles on scales Hs, D and Hy, may confirm Rice's hypothesis(34) that the religious more than the lay population tends to seek outlets for tension through concern about bodily functions, but that at the same time the religious are more energetic and alert as a group and function well at a higher level of anxiety. The difference on scale Pt points to the fact that the religious group is by training accustomed to more careful planning and orderly proceeding, which if exaggerated might develop into obsessive and compulsive symptoms.

The two statistically significant differences between the female experimental sub-groups (Table 4), viz. on scales Pd and Si, might be explained tentatively in terms of the different orientations of the two groups. The lay group tend to be more independent, perhaps more critical of social conventions and more heterosexually oriented, whereas the religious tend to be more interdependent, more identified with social and religious models and definitely less invested in heterosexual interactions as such.

The two profiles are surprisingly similar. Both resemble the profile or the "leader" described by Black in his study of fifteen groups of female college students(13).

Table 3

Differences between Means of Groups A (Religious Male N=23)
and C (Lay Male N=26) in terms of MMPI T-Scores without K.

Scale	Group	Range	Mean	SD	t-ratio	p*
Hs	A	42-72	55	6.8	2.00	<.05
	C	42-69	50	10.1		
D	A	34-80	56	14.95	0.43	<.05
	C	34-89	58	16.3		
Hy	A	44-73	60	7	1.83	<.05
	C	42-75	56	7.59		
Pd	A	45-81	59	11	0.99	<.05
	C	42-75	56	9.95		
Mf	A	45-86	65	8.42	1.45	<.05
	C	41-78	61	10.3		
Pa	A	38-73	53	7.30	1.78	<.05
	C	41-70	51	7.9		
Pt	A	41-78	59	9.55	1.39	<.05
	C	42-67	55	10		
Sc	A	41-87	58	9.55	0.66	<.05
	C	37-80	56	7.45		
Ma	A	41-75	54	7.9	0.86	<.05
	C	41-72	56	8		
Si	A	32-79	55	12.2	0.84	<.05
	C	41-77	52	12.05		

* is calculated for a two-tailed test.

Table 4

Differences between Means of Groups B (Religious Female N=25)
and D (Lay Female N=24) in terms of MMPI T-Scores without K.

Scale	Group	Range	Mean	SD	t-ratio	p*
Hs	B	37-63	46	9.8	1.48	<.05
	D	27-73	50	10.2		
D	B	38-65	48	7.3	0.47	<.05
	D	36-61	47	7.12		
Hy	B	49-63	53	4.9	0.93	<.05
	D	31-77	55	8.94		
Pd	B	40-63	52	6.55	2.11	<.01>.05
	D	42-92	58	12.2		
Mf	B	32-70	50	8.50	0.40	<.05
	D	39-66	51	8.54		
Pa	B	44-70	55	7.65	0.27	<.05
	D	33-76	55	9.2		
Pt	B	36-65	47	7.9	1.17	<.05
	D	36-75	50	10.6		
Sc	B	40-63	51	7.0	0.33	<.05
	D	41-81	57	7.45		
Ma	B	43-61	52	6.45	1.66	<.05
	D	39-80	56	13.05		
Si	B	36-72	59	10.04	3.04	>.01
	D	37-71	51	8.1		

* is calculated for a two-tailed test.

Table 5

Differences between Means of Experimental Male Sub-groups A and C (N=23 and 26 respectively) and the Means of the Minnesota Male Normative Group (N=226, Mean in every scale 50, SD in every scale=10) in terms of MMPI T-Scores without K.

Group A			Group C		
Scale	t-ratio	p*	Scale	t-ratio	p*
Hs	3.08	>.01	Hs	0	.00
D	1.83	>.05	D	2.39	>.05
Hy	6.06	>.01	Hy	5.88	>.01
Pd	2.68	>.01	Pd	2.83	>.01
Mf	7.77	>.01	Mf	5.05	>.01
Pa	1.76	>.05	Pa	0.57	<.05
Pt	4.15	>.01	Pt	2.36	>.05
Sc	3.69	>.05	Sc	3.64	>.01
Ma	2.18	>.05	Ma	3.24	>.01

* are calculated for a one-tailed test.

The next question to be answered is whether the four experimental sub-groups differ from the Minnesota normative populations; and if so, to what extent. Tables 5 and 6 show that even at the .01 level of significance, the four experimental sub-groups differ on most of the scales from their respective groups of normative subjects.

Group A differs from the normative group on scales Hs, Hy, Pd, Mf, Pt (and Sc) beyond the .01 level of significance,

Table 6

Differences between Means of Experimental Female Sub-groups B and D (N=25 and 24 respectively) and the Means of the Minnesota Female Normative Group (N=15, Mean in every scale=50, SD in every scale=10) in terms of MMPI T-Scores without K.

Group B			Group D		
Scale	t-ratio	p*	Scale	t-ratio	p*
Hs	1.92	>.05	Hs	0	.00
D	1.26	<.05	D	1.89	>.05
Hy	2.95	>.01	Hy	1.57	<.05
Pd	1.38	<.05	Pd	3.06	>.01
Mf	0	.00	Mf	0.54	<.05
Pa	3.01	>.01	Pa	2.00	>.05
Pt	1.76	>.05	Pt	0	.00
Sc	0.65	<.05	Sc	0.72	<.05
Ma	1.38	<.05	Ma	2.52	>.01

* are calculated for a one-tailed test.

and on scales D, Pa and Ma beyond the .05(Table 5).

Group B differs from the normative group on scales Hy and Pa beyond the .01 degree of significance, and on scales Hs and Pt beyond the .05.

Group C differs from the normative group on scales Hs, Pd, Mf, Ma and Sc beyond the .01 degree of significance, and on scales D and Pt beyond the .05.

Group D differs from the normative group on scales Pd and Ma beyond the .01 degree of significance, and on scales D and Pa beyond the .05.

Both male groups differ significantly from the normative group on seven scales D, Hs, Pd, Mf, Pt, Ma and Sc; and both female groups on only one, scale Pa.

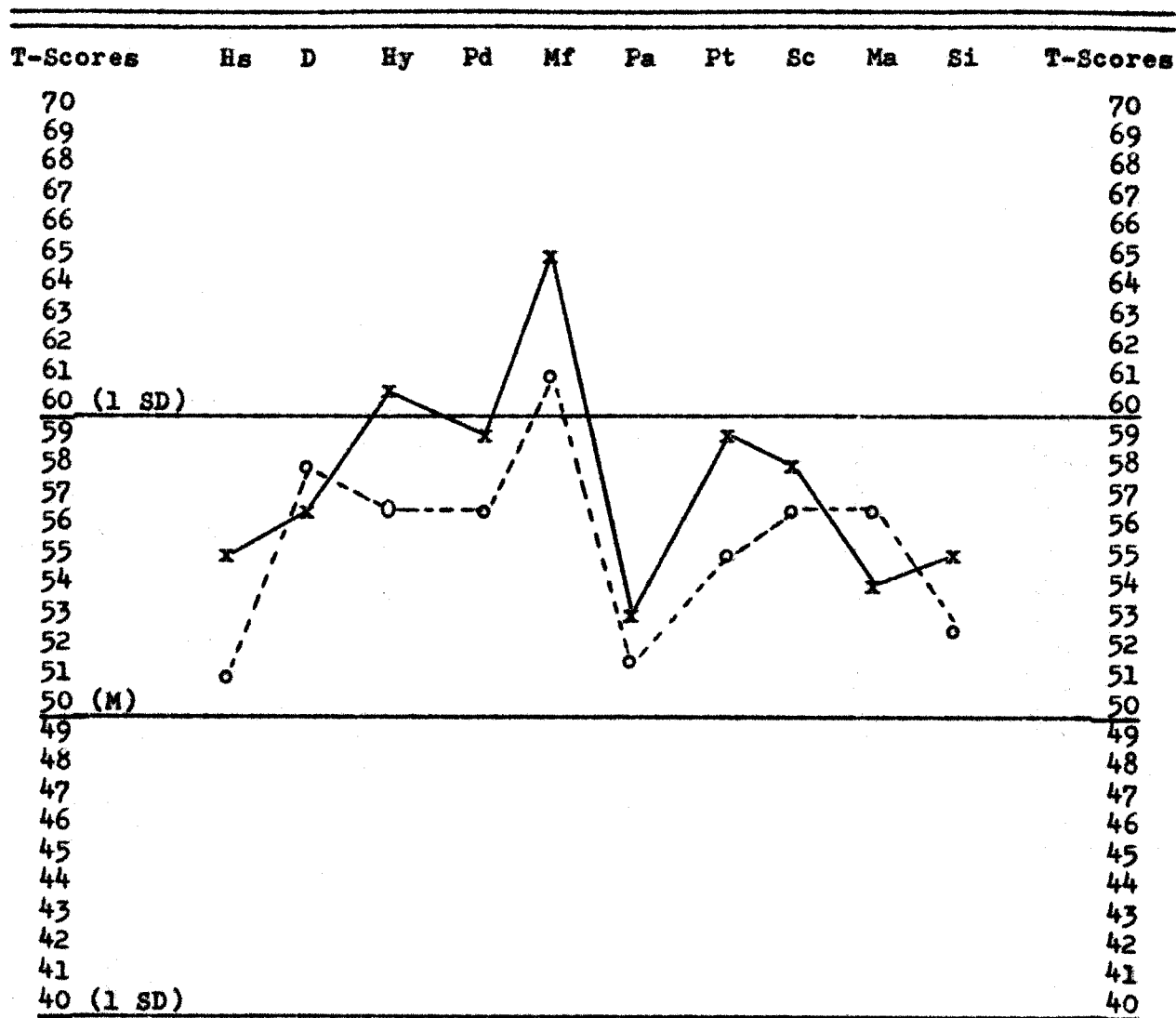
On the assumption that random samples taken from the general registration lists are fairly representative of the general population of lay college students in the two Catholic universities of Chicago, and that religious in training from five different institutes are also representative of their group of college students, we may conclude that the clinical norms of MMPI interpretation cannot be used with these highly selected groups unless due consideration be given to the significant differences existing between them and the normative population. In other words, MMPI profiles of individual college students or seminarians at variance with the profiles of the normative groups might not reflect any pathological way of adjustment, or at least not such that one could identify from a prima facie analysis of the profiles.

The profiles of the male groups (figure 1) follow very closely the MMPI patterns of seminarian groups studied by Wauck(39) and Gorman(19). Our scores are slightly higher than Gorman's and slightly lower than Wauck's.

The four most important elevations, viz, on scales Hy, Mf, Pt and Sc, are explained by Wauck and Gorman on the basis of other criteria of interpretation, independent of the general MMPI norms. These elevations are interpreted then as conveying the image of a well-adjusted group with tendencies to be quiet, orderly, ritualistic and conforming, tending toward more anxiety, definitely interested in people and ideas and less committed emotionally(19), (39). The hypotheses of Wauck and Gorman seem to be supported by this study, if we judge by the evident similarities of profiles.

There are very few studies on female religious populations that use independent criteria to evaluate MMPI profiles. Black(13) presents a profile of female college students evaluated by their classmates as "leaders" which has the same elevations on scales D, Pd, Pa and Ma as the female groups of this study. These elevations convey the image of a woman of superior intelligence, critical of people and ideas, creative and self-assertive. The differences between the religious and lay groups could be interpreted this way on the basis of studies on male religious populations(19), (39), viz. that the religious group is more anxious and ritualistic and the lay group is more committed emotionally.

Figure 1

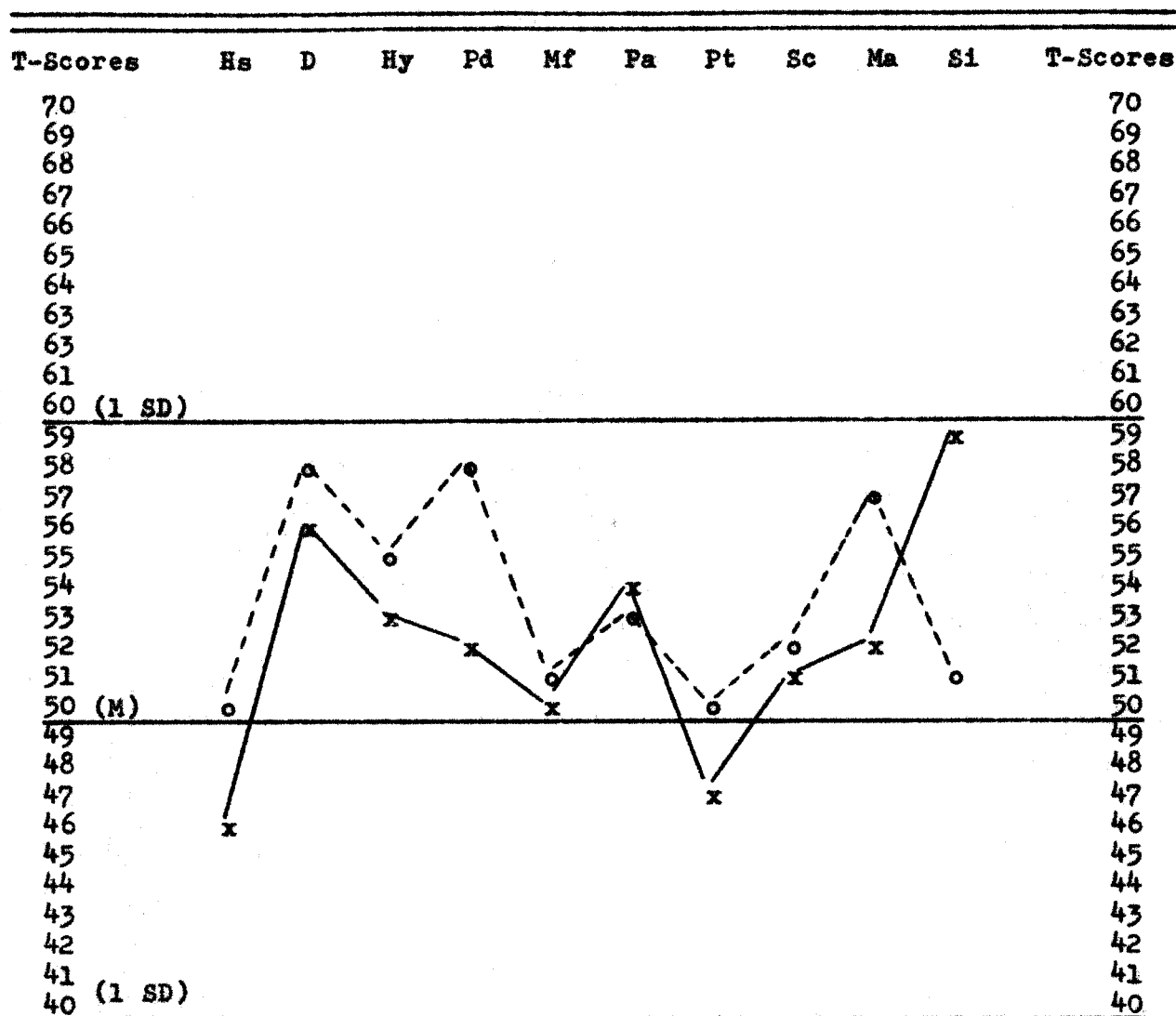


MMPI profiles of the two male groups based upon transformation of raw scores into T-scores without K correction.

Religious Group _____ x _____

Lay Group -----o-----

Figure 2

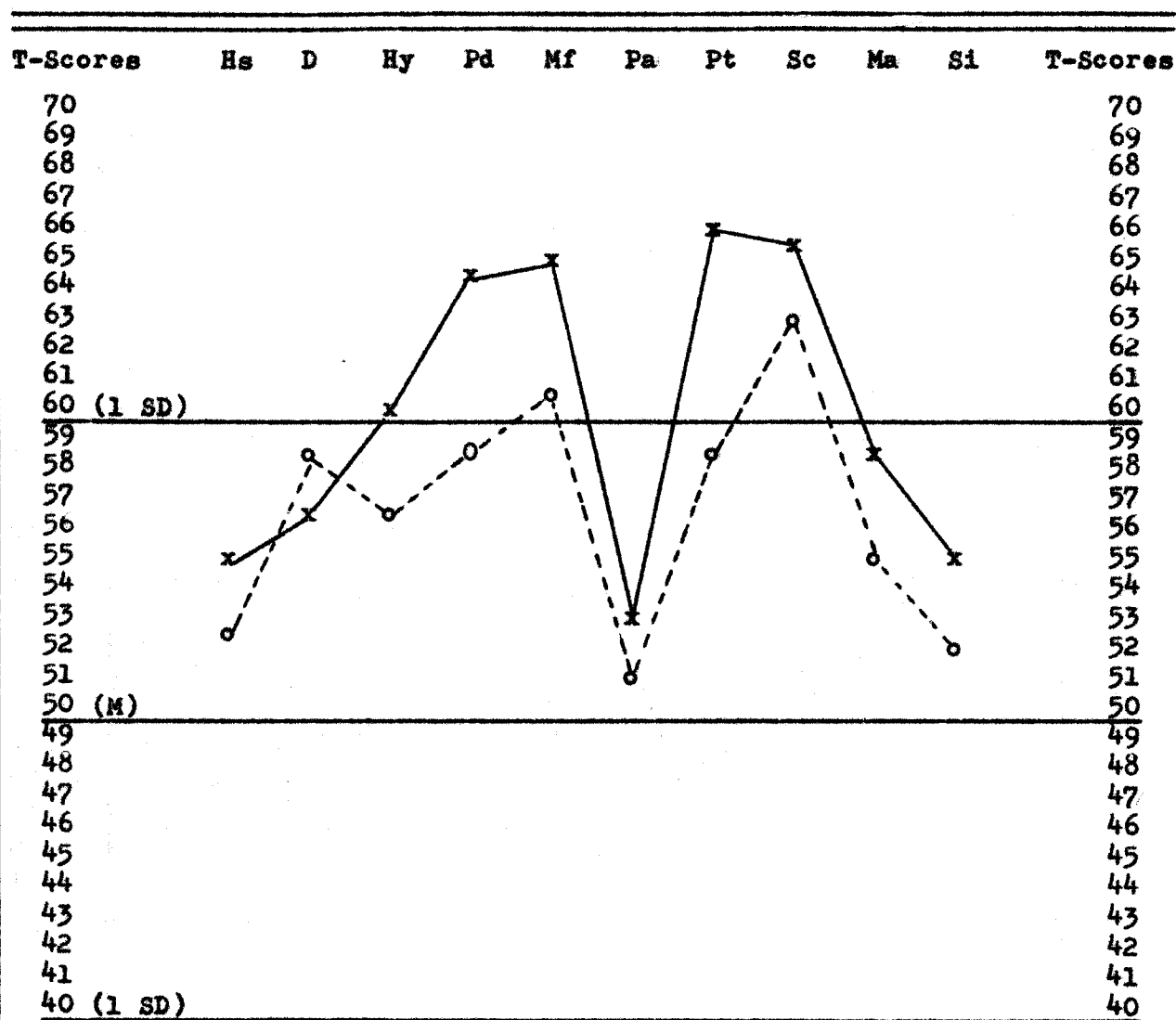


MMPI profiles of the two female groups based upon transformation of raw scores into T-Scores without K correction.

Religious Group ———x———

Lay Group -----o-----

Figure 3

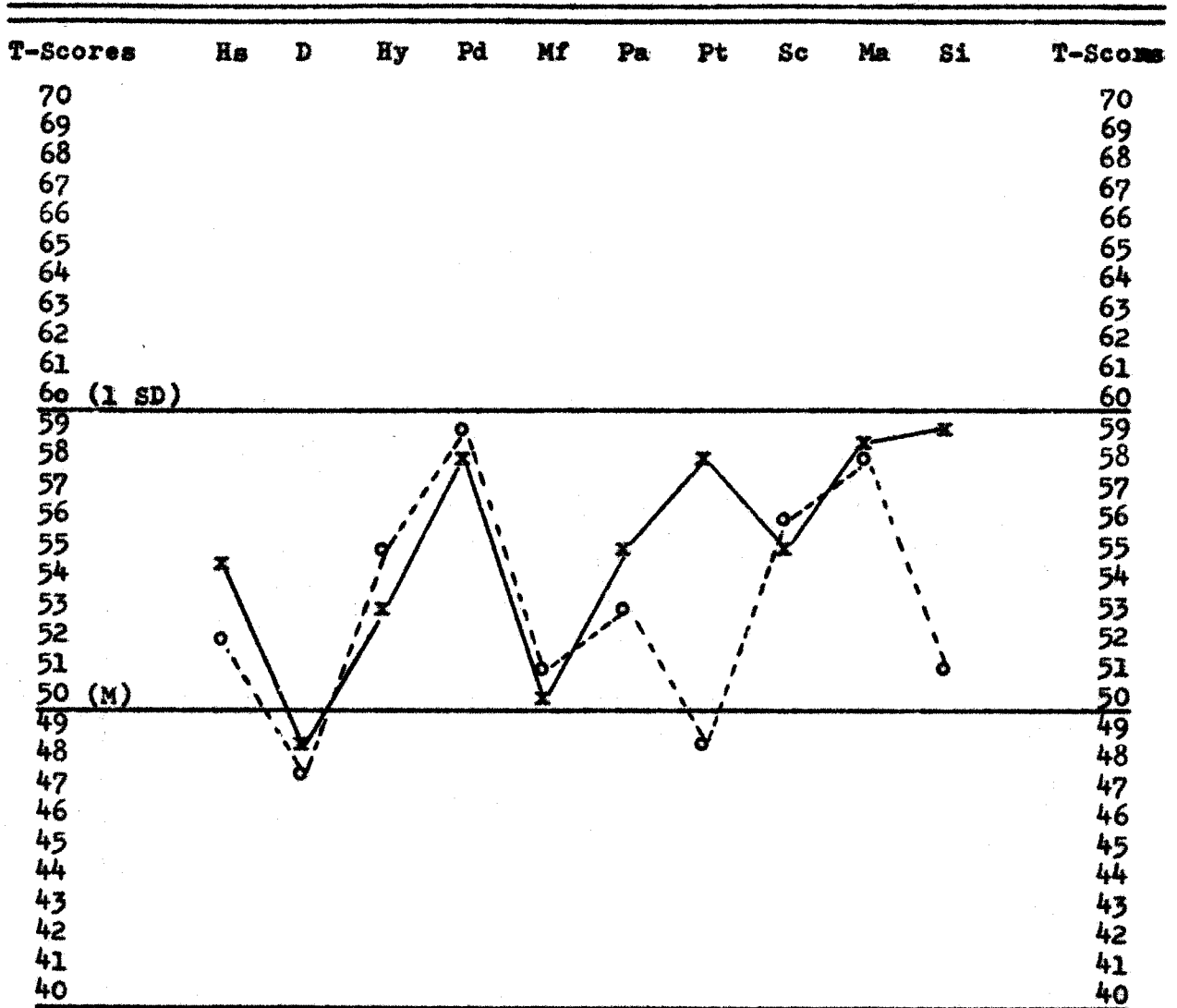


MMPI profiles of the two male groups based upon transformation of raw scores into T-Scores with K correction.

Religious Group ———x———

Lay Group -----o-----

Figure 4



MMPI profiles of the two female groups based upon transformation of raw scores into T-Scores, with K correction.

Religious Group ———x———

Lay Group -----o-----

SUMMARY AND CONCLUSIONS

The MMPI was administered to 98 college students, ages 18 to 25, attending school within the Chicago area: 23 seminarians from three different religious orders, 25 nuns from two different institutes, 25 male students attending Loyola University or De Paul University, and 24 female students attending either of the same universities. All subjects were Catholic and unmarried. It was assumed that their intelligence was above average on the basis of their qualification as college students. Their social status was estimated as middle class.

The lay subjects were selected at random from the general registration lists at both universities. The religious subjects were volunteers from five different institutes who had the requirements of age and education.

The purpose of the experiment was two-fold. First, to investigate whether religious in training within the Chicago area differed significantly from lay college students in terms of their scores on the MMPI. And second, whether and to what extent religious and lay college students differed from the Minnesota revised normative group (Hathaway and Riggs, 1957).

No significant differences in MMPI performance were found between seminarians and male lay students. In twenty percent of the scales, significant differences were found between the

nuns and the female lay students. Differences significant beyond the .05 level of confidence were found on most of the scales between each of the four sub-groups and the MMPI revised normative population.

Conclusions: 1) The statistical differences between MMPI scores of religious and college students in the Chicago area are negligible. 2) In any attempt to evaluate the MMPI profiles of those highly selected groups, attention should be paid to the significant differences between the means of the Minnesota normative groups and the means of characteristic samples of normals taken from the selected groups. 3) The differences between college groups, and the differences between ^{College groups and} the Minnesota normative groups should be evaluated according to the general norms of interpretation of the test in conjunction with other independent criteria.

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APPENDIX

Instructions given to all subjects

Dear S and S:

Under the auspices of Loyola University a study on the MMPI test (Minnesota Multiphasic Personality Inventory) is being conducted. The purpose of this study is to further elucidate the validity of the test as a clinical device for counseling at the college level.

Four groups of Catholic college students will be compared on the basis of their scoring on the test: 25 seminarians, members of three different religious orders, 25 nuns from three different institutes, 25 male college students attending Loyola U. and De Paul U. and 25 female college students attending the same universities.

The students were selected at random from the general indexes of their schools and you were one of them. Your contribution will be priceless if you have an hour and a half to take the test. We realize that you are busy and presumably engaged in various activities, this renders your cooperation still more valuable.

We are interested in how your college group compares with the other three groups of students your same age, education and socio-cultural background.

If you decide to cooperate by taking the test you do not have to write your name on the scoring sheet, but we would appreciate it very much if you would give us your age, your sex and your socio-economic status. Anonymity will help you to answer with absolute frankness to the questions. Sincerity in answering them will be the most important element for the success of the study.

While taking the test, please be sure to be alone and do not discuss your responses with anyone. We count on your seriousness and discretion.

If you think you will not be able to take the test within the course of a week, we would appreciate it very much that you would return the test materials to us at your earliest convenience so that we may send them to another student as soon as possible.

Since the amount of information given has to be the same for all, please try to do the best you can without further clarification of the instructions given on the first page of the test.

"As applied to you" means either that the content of the statement applies to you or that you agree with what is said.

TO RETURN the answer sheet and the test materials, whether you have
taken the test or not, please use the enclosed envelope. Thank you again
for your kind cooperation. Many people will profit from it.

APPROVAL SHEET

The thesis submitted by Juan B. LaFarga, S.J. has been read and approved by three members of the Department of Psychology.

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

The thesis is therefore accepted in partial fulfillment of the requirements for the Degree of Master of Arts.

February 9, 1965
Date

Thomas M. Kennedy
Signature of Adviser