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A Longitudinal Study Investigating the Predictability of the MMPI and Kuder for Diocesan Seminarians

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**A Longitudinal Study Investigating
the Predictability of the MMPI and
Kuder for Diocesan Seminarians**

by

James J. Murtaugh

**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**

Life

James J. Murtaugh was born in Chicago, Illinois, January 16, 1923. He graduated from Quigley Preparatory Seminary in June, 1941. He was ordained a Catholic Priest for the Archdiocese of Chicago at St. Mary of the Lake Seminary, Mundelein, Illinois in May, 1948 with the degree of Master of Arts in Philosophy and Baccalaureate in Sacred Theology. He served as assistant pastor at St. Tarcissus Church and Holy Name Cathedral before appointment as Director of the Catholic Family Consultation Service in June, 1958. He began his studies in the Graduate School of Psychology at Loyola University, Chicago, Illinois in September, 1958.

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Chapter I

Statement of the Problem

The importance and purpose of the present investigation.

The Church has always been concerned and will continue to show concern over the selection of qualified candidates for the religious life. The evaluation of religious candidates is a very difficult and very complex task. The candidate must qualify physically, intellectually, morally, spiritually and psychologically. The last qualification is perhaps the most difficult of all to evaluate. For a long, long time it was overlooked or perhaps confusedly included under the qualifications of morality and spirituality. The study of Dom Moore (1936) "Insanity in Priests and Religious," pinpointed the need for psychological assessment of candidates to the religious life. Further interest in psychological assessment by religious communities was prompted by the statement of Pius XII (1954, p.9) in his encyclical letter, Sacra Virginitas, wherein he clearly urged "the use of outside professional assistance in the determination of natural, psychological suitability of candidates for the religious life."

In the last few years a growing number of religious orders of men and women have complemented the judgment of superiors with more rigorous psychological methods for screening candi-

dates. At first these tests were used only to spot, if possible, those candidates whose mental health might not withstand the demands of religious life. Intelligence and personality tests were soon added. Today it is common to use a battery of tests such as the MMPI, the Kuder, one of the many intelligence tests, and a projective test such as the Rorschach or the TAT to predict, if possible, the future performance of the individual candidate. To date, however, the tests or combinations of tests have not been able to do more than help to exclude those who, for one reason or another, may prove to be unfit for the religious life. Thus present research is directed not only to the field of psychological deviation among religious but also toward the selection, from among the healthy applicants, of those who are most likely to succeed.

There is little available literature on vocational selection with clerics and religious as subjects, i.e. very little of the research has been published in periodicals. The bulk is in the form of unpublished master's theses and doctoral dissertations, usually emanating from three centers: the Catholic University of America, Fordham University, and Loyola University in Chicago. Research generally has progressed along two lines: first, investigation of the personality traits of candidates to seek predictors of later maladjustment and instability; and secondly, exploration of vocational interests so as to guide youth to a more satisfying and self-fulfilling

vocation. Along these two lines respectively, the MMPI and the Kuder Preference Record have been favorite instruments of research.

Most authors agree that longitudinal studies are necessary to honestly evaluate the reliability, stability and predictability of psychological tests. This thesis is a longitudinal study intended to test or give evidence of the reliability of the MMPI and Kuder Preference Record as predictors of performance of candidates to the diocesan priesthood. By statistically testing the predictability and the discriminatory power of the MMPI and the Kuder Preference, it is hoped this longitudinal study will contribute positively and scientifically toward a positive evaluation of these inventories.

Wauck (1956) presented to the Graduate School of Loyola University in Chicago a doctoral dissertation entitled "An Investigation into the Use of Psychological Tests as an Aid in the Selection of Candidates for the Diocesan Priesthood." The tests employed were the Ohio State Psychological Examination, the Kuder Preference Record, Form BB, the Minnesota Multiphasic Personality Inventory, Group Form, and the Group Rorschach Technique. The criterion was the consensus-ratings provided on a ten variable, five point rating-scale by seven prefect-raters, yielding a single total adjustment score for each of the subjects. The tests were administered to 206 major seminarians over a period of three years. Fortunately, the data of Wauck's

dissertation has been preserved, thus making it possible for this longitudinal study of the MMPI and the Kuder Preference Record.

According to the 1963 edition of the Official Catholic Directory, published annually by P. J. Kenedy and Sons of New York City, 146 of the 206 subjects tested by Wauck were ordained diocesan priests. The MMPI and the Kuder Preference were mailed to each of the 146 diocesan priests for self-testing with a request that optimal conditions prevail during their self-testing period. Ninety of the priests ordained from five to ten years cooperated completely. Wauck's tests were administered to the seminarians at St. Francis Seminary, Milwaukee, Wisconsin over a period of three years, 1953 through 1955. The present tests were administered over a period of two months in the year 1964.

In order to pinpoint the reliability of the MMPI and the Kuder Preference as predictors of performance of candidates to the diocesan priesthood, the thesis will proceed along three lines. First, with predictability in mind, relationship will be sought between the test-results of the 90 seminarian-priests. We will use the Pearson "r" to obtain the test-retest correlations, and then we will seek the "t" values for the difference between the test-retest means on the MMPI and the Kuder scales. Secondly, with discrimination in mind, Wauck's data will be used to determine the "t" values for the difference

between the mean of the MMPI and Kuder scales of the 90 ordained seminarians and of the 55 non-ordained seminarians. Thirdly, again Wauck's data will be used to seek the "t" values for the difference between the means of the MMPI and the Kuder scales of the 90 responding ordained seminarians and of the 56 non-responding ordained seminarians. It is logical that a truly predictive instrument should have the power of discrimination. It is to be noted that the test results of five of the non-ordained seminarians were mutilated beyond usefulness. The exact nature of the tests employed and the procedures of analysis will be enlarged upon in the third chapter.

Chapter II

Review of Research

The study of Moore (1936) was the first significant publication by an American Catholic applying empirical psychological methods to the problem of vocational selection for religious. Thus, less than thirty years ago began what is now a considerable body of psychological research on the vocational problems of priests and religious. While research did not gain momentum until after the war, it is currently prospering, due to widespread interest on the part of religious communities in the psychological assessment of their candidates. Because the bulk of research is in the form of unpublished master's theses and doctoral dissertations, a review of past research is imperative.

Moore found a disproportionately high frequency of functional mental disorders among priests and religious. He suggested that most of the mental disorders occurred in persons who were "psychosis-prone," and the incidence of psychopathology among priests and religious could be markedly reduced by improved screening and selection procedures. He therefore produced a rating-scale to reveal certain prodromal factors associated with the various forms of mental illness.

Six years later two studies appeared in the Studies of

Psychology and Psychiatry of the Catholic University of America, both employing psychological tests and a rating-scale. McCarthy (1942) investigated the personality traits of seminarians, and Peters (1942) investigated the personality traits of novices, both in the hope of finding common factors which would characterize the personality of applicants for religious life. Both used and presumed the validity of the Bernreuter Personality Inventory, the Bell Adjustment Inventory, the Allport-Vernon Study of Values, the Otis Intelligence Test, the American Council Psychological Examination and a specially devised faculty-rating schedule. Because his study is directly concerned with male seminarians, it is interesting to note here that McCarthy found the average seminarian manifested a little higher neurotic tendency in comparison with the average student of his school level, also greater self-consciousness, and a more unsatisfactory total adjustment. Sociability was rated average, and only his religious interests were significantly higher in his scale of interests. He was also more submissive than average, and average in intelligence.

Burke (1947) contributed a dissertation, "Personality Traits of Successful Minor Seminarians," in an attempt to discover a battery of existing standard measures or tests which would prove practical for predicting successful adjustment. He revised McCarthy's faculty-rating scale and used it as a cri-

terion in relation to fourteen measurement tests. He inferred that an optimal I.Q. could be established as a good basis for selectivity; however, he felt the personality measures used in his study could in no sense be used to predict a successful minor seminarian. He also felt interest inventories seemed to have little positive value in screening out good material for the seminary. Only the achievement score significantly correlated with survival or success.

The next publication to concern itself in a basic way with the validity of psychological tests was the doctoral dissertation of Bier (1948). Bier limited his study to the MMPI as the most representative of the paper-pencil personality tests available. He sought to determine to what extent personality measures, standardized on the general population, are applicable to seminary groups, and to what extent changes in norms and content might be necessary, when using them with seminarians.

Bier recognized the fact that assessment of a religious vocation is unique, in that both theological, as well as psychological, factors are involved. No test or battery of tests can determine whether a given candidate possesses the necessary supernatural qualifications. Even failure to persevere in the religious vocation is hardly a good criterion of validation, since a person may depart from the religious life for many reasons, other than theological or psychological.

Bier accepted the social validity of the MMPI as sufficiently demonstrated on the general population, and made a comparison of the performance of seminarians with those of other professional groups. He concluded that the seminary group manifested the same deviant tendencies as the general population of the study, though in a more marked degree, i.e. the seminary group proved to be the most deviant portion of an already deviant population.

Bier further concluded that the differences in adjustment, which set the seminary group apart from the other groups, can be explained, to a large extent, by the presence in the MMPI of items, which presumably did not apply to a seminarian in his peculiar way of life. It was suggested that some items might more profitably be eliminated in adapting the test to seminary use. It is worth noting that after rejecting the unsuitable items and substituting other discriminatory items, Bier (1950) used his modified version on another religious population and found again, as in his original work, a tendency for an elevation of about half a standard deviation on most MMPI scales.

Several factors lead one to question the value of Bier's study. Wauck (1956) in his doctoral thesis, lists four objections to Bier's study. First, an objective criterion of seminary adjustment to test the validity of the MMPI is lacking, e.g. faculty ratings, survival, academic achievement, etc.

Secondly, the statistical procedure used in obtaining the two adjustment extremes of his population is questionable. Thirdly, Bier in accord with McCarthy and Burke assumed that the individual taking a pencil-paper personality, interest, or attitude inventory actually possessed adequate self-knowledge. While the MMPI does contain a validity scale, nevertheless, the test cannot take into full account the wide range of individual differences in regard to self-knowledge in the areas surveyed by the questionnaire. Fourthly, he presumed that the individual had a sincere desire to reveal himself as accurately as possible. While these factors do not necessarily invalidate the study, they do pose problems for further research.

Several noteworthy studies did result from the doctoral work of Bier with the MMPI and seminarians. Benko and Nuttin (1956) followed Bier in modifying the MMPI, adapting it to a population of European culture, using a vocational adjustment self-rating scale as an external criterion of adjustment to seminary life. They found predominant tendencies toward psychasthenia, schizophrenia, or schizoid personality, and hypochondriasis as characteristic of seminarians maladjusted to religious life. They felt that abnormally elevated results on more than two clinical scales of the MMPI indicated a lack of vocational adaptation and constituted reason for more profound examination and eventually for appropriate direction and psychological reeducation.

Rice (1958) conducted a study to test the belief of Bier that his seminarians constituted a good representative sampling of students for the priesthood and thereby stood as a good criterion for all seminarians. Rice, choosing as his sample a more homogenous group of major seminarians, compared the test results of his group with that of Bier. He found the MMPI performance so significantly different that he stated the two groups may be said to be samples of significantly different populations, and therefore Bier's contention that his seminarians represented a good sampling criterion for all seminarians must be accepted with qualifications. He felt Bier's use of the modified form of the MMPI hampers comparative MMPI research and thus is an unfortunate solution toward establishing the usefulness of the MMPI for seminarians. He further suggests that a seminary adjustment scale should be worked out for the whole MMPI.

Goodstein (1956) inspected the mean score of the MMPI Clinical Scales for 8 male colleges. He concluded that he found no evidence that geographical differences were significant determinants of MMPI means. He also discovered that college males score higher on MMPI scales than do non-college males. He found college students to be more feminine in their interests, more active, less inhibited and more worrying than the male population in general. This finding brought some relief to those who were quite concerned that seminarians, in general,

also scored high on the same scales of the MMPI, (i.e., Ma, Mf, Sc, Pt, Pd and Hy.) Rather than casting doubt on the validity of the MMPI, this fact is now interpreted as a normal phenomenon of male college students in general.

There were many other efforts to establish the reliability and validity of various self-appraisal tests, especially the MMPI. Most point out the limitation of self-appraisal techniques: first, they do not fully measure all the different traits they claim to do; secondly, lie-detection scales built into the tests only partially compensate; thirdly, they are clinically validated only to a marked degree; fourthly, their use demands caution.

Gynther and Kempson (1961) used self-rating scales, especially the MMPI, to determine whether personality or self-perception changes as a result of training. They tested six seminarians and a chaplain supervisor at the beginning and end of a three-month training period. They found no significant change. Hanley (1961) tested the "social desirability" and the "response bias" of the MMPI. Evidence indicated only a need for further study. Edwards and Walker (1961) tried to match an "agreeing response set" to Edwards' "social desirability set," using correlations of the OAS and the MMPI. They found both scales influenced by acquiescent tendencies as well as by "social desirability" tendencies. Couch and Keniston (1961)

suggested that "social desirability set" was confused with an "agreeing response." They used the OAS and Edwards' Social Desirability Scale and found related factors. They indicate that "social desirability set" measures the admission or denial of anxiety rather than conformity to conventional values.

Gorman (1961) and McDonagh (1961) used the MMPI, the Kuder Preference and the Mooney Problem Check List, together with a Faculty Rating Scale, in a descriptive study intended to be the first of a projected series of personality inventories aimed at setting up localized norms for a seminary testing program. Gorman used 4th and 5th year minor seminarians. McDonagh used a 1st year college group from the same seminary. Both found their subjects better adjusted than the average college male, except Sc; they found the Faculty Rating Scale did not confirm the test-findings; they found a "cut-off" point did significantly differentiate a small group from the entire group; finally, both found their seminary population to be homogenous.

Kobler (1962) used the MMPI as part of a battery of tests for women applicants to the religious life. On the basis of a prediction formula resulting from the results of his battery of tests, he detected emotionally unstable and pre-psychotic applicants with significant success. Kobler felt that

most psychologists abuse the measurements and tests available, confusing their designs of research, expecting too much of each test, and using inappropriate criteria for validation.

Wauck (1956) used both self-appraisal and projective techniques to determine how well the best in current psychological evaluation techniques accords with a criterion based on close and intimate observation of diocesan seminarians by peers over a period of years. He used the Kuder Preference Record, the Ohio State Psychological Examination, the MMPI and the Group Rorschach, plus a faculty-rating scale which served as the objective criterion of seminary adjustment. The data was subjected to a multiple correlation analysis to determine the extent to which the measures, taken separately and taken together, agreed with the faculty-rating scale. The obtained multiple coefficient of correlation between the battery of tests and the faculty rating scale was significant beyond the .01 level, indicating a positive but only moderate relationship between the test-battery and the faculty-rating scale. Wauck thus concluded the battery, as such, had prognostic value, but hardly could be considered as a sole criterion of selection. Obviously, the best use of the battery of tests would be in an adjuvant role, helping to clarify observable impressions and to increase the certainty of judgment.

Evaluating the tests separately, Wauck concluded that the predictive value of the Ohio State and the MMPI in his study

was practically zero. Only the Rorschach yielded a positive, though low, correlation, thus leaving Wauck to conclude that the Group Rorschach would be the best single prognosticator of seminary adjustment. Only two of the nine Kuder Preference Record Scales were significantly related to the faculty-rating scale.

Because of the generally negative nature of the correlations, Wauck decided to analyze the extremes of the population. This portion of the study yielded hope for the potential usefulness of only the Group Rorschach and the *Mf* scale of the MMPI as aids in the screening and selection of candidates for the secular priesthood. Only these two discriminated significantly between the best adjusted and the most poorly adjusted portions of that seminary population.

In his conclusion, Wauck stresses the need for extreme caution in the use of group psychological tests in seminary selection programs. Individual clinical judgment in evaluation of the test-results is absolutely necessary if the screening and selection is to be properly performed. In making a fair criticism of the tests used, Wauck rightly emphasized the uniquely selected character of his population, i.e. the ordinary intellectual, personality and moral criteria for the selection of seminarians had already been applied to his seminarians for several years. Thus the tests had to differentiate

between the suitable and unsuitable of a group already declared suitable on several other standards. The fact that any significant differences were observed at all is something of a triumph for psychological testing. Thus, Wauck feels it is necessary and would be most useful to check the test variables in his study with other criteria or with a follow-up study of adjustment after ordination.

Four important studies were produced through a project supported in part by a grant to Loyola University, Chicago, from the National Institute of Mental Health under the direction of Herr (1962). In the first study, Arnold offered the TAT Sequential Analysis as an easy-to-learn, easy-to-use method for screening religious candidates. While this method was used originally for clinical purposes, later a scoring system was added for the prediction of performance in a variety of occupations. It is worth noting that this type of test does not depend on norms derived from the general population; nor does it depend on adequate self-knowledge. Arnold claimed that the TAT Sequence Analysis uniquely reveals a man's motivational pattern, his values, his goals in life, his attitudes, his convictions, his concerns. She substantiated her theory by presenting the results of studies by Burkhardt (1958), Garvin (1960) and Quinn (1961). She hoped in the near future to publish a manual of the TAT Sequence Analysis

which will describe the method in greater detail and enable psychologists to score the imports according to well-defined scoring criteria. She insisted that the formulation of imports be learned under expert supervision, which will require only one semester for a trainee with a master's background in psychology. This would facilitate the testing of candidates by persons proper to the religious institution involved. Rosaire (1964) used the TAT Sequential Analysis in her doctoral dissertation and verified Arnold's claims.

In the second Loyola study, Hispanicus (1962) sought to determine the traits or qualities necessary for a successful candidate for the priesthood. He sought to learn whether or not the standard I.Q. and the MMPI might be useful in selecting the most suitable candidates for the priesthood. Objective test-criteria were arbitrarily set up: one was the judgment of staff-members in the seminary; the other was the comparison of test-scores made by successful, as opposed to non-successful seminarians. He found very satisfactory agreement among the three judges in every category. He found the I.Q. test was a partial factor in predicting success and was so utilized by the raters. Finally, he found that the judges gave a higher rating to those seminarians who were on the desirable or well-adjusted end of the MMPI scales. He thus concluded the I.Q. and the MMPI can be useful instruments in

an over-all assessment program. He definitely felt both are worthy of further serious research.

The third Loyola study presented a survey by Weisgerber (1962) of the results of five years of a screening-program in a large seminary for religious. Unfortunately, only those are included who actually entered the novitiate, 141 in number. The objective criterion was that of perseverance in religious life. The test chosen was Bier's 1949 revision of the MMPI. The test means of those who left differed hardly at all from the means of those who persevered. Analysis of the individual profiles of the two groups again revealed similarity. Nevertheless, he concluded that a conservative use of profile analysis is helpful in identifying those who are relatively poor risks and those who will need special attention. In 1956, a further revised edition of the MMPI was put to use by Weisgerber and a Sentence Completion Test was added to the program. A scientific study of the results is planned.

The fourth and last Loyola study was a review of research on the vocational interests of priests, brothers and sisters by D'Arcy (1962). Most researchers have studied interests on a much broader plane. Few have studied interests exclusively and intensively. The usual instruments are the Kuder Preference Record and the Strong Vocational Interest Blank.

The first reported use of the interest-type of inventory was made by Burke (1947). He hoped but failed to realize any distinctive pattern of interest characteristic of Catholic Priests or seminarians. Lahota (1948) produced the first full-scale study devoted exclusively to interests. He attempted to develop a scale for the Strong Vocational Interest Blank to measure the interests of diocesan priests. He tested 262 model parish priests with an average age of 39 years from all over the United States. He again tested the scale on 208 diocesan major seminarians to assess its validity.. Seventy-one per cent of the priests scored an "A," whereas 60 per cent of the students scored "A." This was significant insofar as only 31 per cent of the priest group received an "A" on the Minister Scale. The clergy were found to be significantly different from all other groups in comparison of their mean standard scores, on their own scale, and on all other occupational scales.

D'Arcy developed a new Strong scale, The Missionary Priest, based on the responses of 311 Foreign Missionary Priests, all belonging to one society, Maryknoll. His criterion was ordination in this Society. Two seminary groups were tested with the Strong and the Kuder, the young group of 134 with a mean age of 15 years, and an older group of 166 with a mean age of 24. All Strong blanks were scored on the new Missionary

Scale and the eleven group scales, plus the three non-occupational scales. All nine Kuder scales were used, giving 27 variables in all.

In conclusion, D'Arcy strongly suggested the need of a Diocesan Priest Scale, as distinct from the Minister Scale of the Strong. On the Kuder he found the seminary groups to be uniformly high and uniformly low. He found successful and unsuccessful candidates remarkably similar to each other, though different from the general population. He also concluded that the interest pattern of seminarians is not static, but rather changes systematically with age and with certain environmental factors. D'Arcy concluded the study with a plea for greater care in the design of future studies. Without longitudinal studies he can see no way of adequately accounting for the differential effects of training, maturation and selection. It is hoped the present thesis will contribute significantly toward that goal.

Two more studies must be considered before we proceed to the next chapter of this thesis. Richard Vaughn (1961) produced a study, attempting to estimate the efficiency and validity of a psychological assessment program of candidates to religious life. The subjects were 218 young men between the ages of 18 and 30 who applied for admission, were accepted and entered an order of religious men. The study covers a

five year period. Fifty-five subsequently left the religious life; 163 remained. The criterion of validation in this study was failure to continue in the religious life. Since a person may fail to continue in the religious life for many reasons other than psychological, Vaughn admits questionability of this criterion. Before entrance, each subject completed a battery of four personality tests: the MMPI, the Sentence Completion Test, an abbreviated Rorschach and a Personal Evaluation Essay. The basic results of these tests served as one of the factors enabling the major superior to accept or reject the candidates. Candidates rejected on psychological evidence were not included in this study; thus, only a few candidates with very poor test results were accepted in the study, which fact Vaughn admits limits the usefulness of his study.

First, he compared the test-results of those who left with those who remained, and secondly, compared the clinical report for the two groups. A statistical analysis of the validating and clinical scales of the MMPI failed to indicate any significant differences between those who left and those who remained. The number of clinical scales in the abnormal range also failed as predictors. The patterning of those who left significantly tended to center around higher Hy, Pd and Ma peaks. The Sentence Completion Test proved to be a fairly effective instrument and predictor of failure in about one-fourth

of the former seminarians. A statistical analysis of the psychological reports failed to show a significant difference between the persevering seminarians and the former seminarians.

Of special interest are the test-records of the two former seminarians who became psychotic during their stay in the novitiate. In both cases, all MMPI scores were within the normal range. The Sentence Completion Test gave indications of pathology in only one instance. Another seminarian, who after three years was rated by his superiors as adequately adjusted with no special problem, had particularly high MMPI scores: Pd 96, Pa 70, Pt 88, and Sc 78, and his clinical report was rated "unfavorable." He thus concludes that psychological assessment programs, as described in this study, are not adequate screening devices in themselves, but when used with prudence and caution and joined with other sources of information they can be helpful in determining the suitability of candidates for religious life.

McCarthy and Dondero (1963) combined on a paper, focusing attention on predictor variables and on criteria of success. This was a particularly difficult undertaking because the psychologist in establishing criteria of success must rely on observable behavior; whereas, the religious relies on perfection in the spiritual realm as the cardinal criterion of success. The psychologist must show a relationship between the observable

behavior and the spiritual life, or he must settle for criteria of success peripheral to the spiritual aspect of the vocation. It is recognized that various professional and non-spiritual tasks are integral to the life of the religious, and therefore criteria on these tasks would provide relevant and useful information.

Bechtold (1951) had pointed out two aspects to a selection study: one, establishment of a criterion category in which people are classified according to the way they perform; and two, establishment of a predictor category in which persons are classified according to any attributes they possess. Thus, McCarthy and Dondero agreed that the first task in establishing criteria of success is to establish appropriate performance criteria and then to search for predictor variables related to performance. Afterward one could look for intellectual, motivational and personality characteristics proper to religious life, for social practices, beliefs and attitudes that might predispose one to a vocation, and also for natural motives appropriate to a religious vocation.

Next the authors stressed that vocational selection should be based on empirical studies rather than on "a priori" grounds, under empirical conditions rather than experimental conditions, because the very nature of religious life imposes serious restrictions on experimental procedures, and because the various

environmental variabilities require an experimental design that would separate those variabilities from the effects of treatment and from measurements of error.

They also note that the limited population for study makes sampling procedures almost impossible and that the small samples, typically used in many studies published today, indicate that the predictor variables in criteria of success are not normal. Perhaps larger samples would be desirable for greater precision. All this makes it very difficult to make direct comparison between the studies of religious already reported in literature. They suggest the selection psychologist could use various criteria of success, for example, terms of entry, terms of perseverance, or terms of adjustment to religious life. All these could be used to establish predictor variables. Typical studies along this line are the works of Lahota (1948), D'Arcy (1954, Mastej (1954), McCarthy (1956, 1962), Vaughn (1956) and Murray (1958). Predictor variables considered in these studies are the main ones currently available for passing judgment on applicants.

In conclusion, on the positive side, we note that Lahota developed a Diocesan Priest Scale on the Strong Vocational Inventory, which proved particularly efficient in differentiating the religious from the lay person. Kennedy (1958, 1959) and D'Arcy did much the same with the Missionary Priest Scale.

McCarthy used the Kuder Preference Record, Occupational, for research on teaching brothers and teaching sisters. He demonstrated that both groups have identifiable interests which distinguish them respectively from men in general, and women in general. McCarthy found a number of differences between the drop-out and the perseverer on the Cattell 16 pf Questionnaire for teaching brothers and teaching sisters.

On the negative side, we have several problems. Illustrative is a problem posed by the Borden Study (1953) which showed differing degrees of personality deviation at different levels of religious formation. D'Arcy pointed out that interests tend to become more homogenous with increased identification with a vocational group. Thus, a high priestly-interest score is meaningful as a good sign of promise, whereas a low score could have little or no meaning, and promise here means entering, not necessarily persevering, in the vocation. One limitation to a valid approach is a tendency to regard those already in a career as prototypes of those who should be in. Thus, those who differ from the norm group in certain personality traits may be discouraged from entering, even though they otherwise qualify. Another factor to consider is that applicants, who score like the typical religious in training or professed, may not in fact be scoring as those people did when they applied. McCarthy and Dondero concluded that a longitudinal study is

required to provide the information necessary to develop predictability. Again, it is hoped that this thesis will provide useful research material.

Chapter III

The Measuring Instruments and the Statistical Procedure

This longitudinal study is intended to test or give evidence of the reliability of the MMPI and Kuder Preference Record as predictors of performance of candidates for the diocesan priesthood. While the MMPI and the Kuder Preference Record are very well-known instruments of research, it might well serve the reader to review briefly a description of these two tests.

Hathaway and McKinley (1951) in their revised Manual describe the MMPI as a "psychometric instrument designed ultimately to provide, in a single test, scores on all the more important phases of personality." The importance of a trait in this case is determined by the clinical or personnel worker assaying those traits that are commonly characteristic of disabling psychological abnormality. The instrument itself comprises 550 statements, covering a wide range of subject matter from the physical condition to the moral and the social attitudes of the individual being tested. The subject is asked to sort all the statements into three categories: "True," "False" or "Cannot say." Scores are commonly counted on four validity scales and nine clinical scales. The time required

for administration varies, rarely more than 90 minutes, and commonly as short as 30 minutes. Very little instruction and supervision are required, i.e. according to the Manual, the examinee can work on the test as he sits in a waiting room if necessary.

Personality characteristics may be assessed on the basis of the scores of nine clinical scales. These scales are: Hs (hypochondriasis), D (depression), Hy (hysteria), Pd (psychopathic deviate), Mf (masculinity-femininity), Pa (paranoia), Pt (psychasthenia), Sc (schizophrenia) and Ma (hypomania).

Although these scales are named according to the abnormal manifestation of the symptomatic complex, according to Hathaway and McKinley (1951, p.6) they have all been shown to have meaning within the normal range. Raw scores of the measured trait are usually translated into a standard score, (the T score), and plotted on a profile chart, the pattern of which facilitates analysis of the relative strengths of the various phases. According to Hathaway and McKinley (1951, p.6) the basic concept assumes that among the 550 items there are some items which when grouped, form numerous potential scales. As developed, the whole procedure permits introduction of each new scale, as it is derived, without additional equipment, other than a new scoring key and standards. Since the older record blanks can be scored on a new key, the clinician can immediately compare the scores on new scales with his clinical experience

simply by a sampling of old records.

The scales were developed by contrasting the normal groups with carefully studied clinical cases, of which over 800 were available when the test was published. According to Hathaway and McKinley (1951, p. 6) the chief criterion of excellence was the valid prediction of clinical cases as against the neuropsychiatric staff diagnosis, rather than against the statistical measures of reliability and validity. Nevertheless, statistical studies regarding reliability and validity have been taken seriously and the results appear to be quite satisfactory, according to the Manual (1951).

Realizing the test-retest reliability coefficient will vary with the population tested, Hathaway and McKinley used the Individual Form with selected normals for both test and retest, with intervals of three days to more than one year between testings. Cottel reported the test-retest coefficients for unselected normals using the Individual Form alternately with the Group Form for test and retest, both testings occurring within three days. Because the present study will present the test-retest correlations for 90 seminarians over a ten year interval, it might be helpful for comparison to present these test-retest coefficients as reported in the Manual (1951, p. 7).

Test-Retest Reliability Coefficients

Reported for the MMPI

<u>Scale and Abbreviation</u>	<u>Hathaway and McKinley*</u> Normals (N = 40-47)	<u>Cottle</u> Normals (N = 100)	<u>Holzberg and Alessi</u> Psychiatric Patients (N = 30)
Question (?)			.75
Lie (L)		.46	.85
Validity (F)		.75	.93
K (K)		.76	
Hypochondriasis (Hs)	.80	.81	.67
Depression (D)	.77	.66	.80
Hysteria (Hy)	.57	.72	.87
Psychopathic Deviate (Pd)	.71	.80	.52
Masculinity-Femininity (Mf)		.91	.76
Paranoia (Pa)		.56	.78
Psychasthenia (Pt)	.74	.90	.72
Schizophrenia (Sc)		.86	.89
Hypomania (Ma)	.83	.76	.59

It is worth noting that a high-score on a scale has been found to predict positively the corresponding final clinical diagnosis or estimates in more than 60 per cent of new psychiatric admissions. For more data on validity and for the actual inter-correlations of the various scales, the reader should consult An Atlas for the Clinical Use of the MMPI (Hathaway & Meehl, 1951) which has 968 short histories of clinical cases plus an extensive bibliography.

According to Hathaway & McKinley (1951 p.7) the MMPI was designed partly to lessen the conflict between the psychiatric conception of the abnormal personality and that of the psychologist and other professional workers who must deal with abnormality among more nearly normal persons. The Manual stresses that the MMPI profile is not in itself an adequate basis for evaluation, i.e. the profile must be subjectively interpreted by the clinician in terms of his conception of the significance of the symptoms to the subject's self-concept, and to the prognosis relative to the particular environment of the subject. The MMPI profile does not directly provide definitive evidence as to disability or diagnosis even with the majority of psychiatric patients. It was designed only to provide an estimate of symptomatic syndromes commonly recognized among persons with clinical problems. It is to be noted that the MMPI scales show considerable variability from one testing to another, even within a matter of hours. The

profile may also follow the shifting patterns of symptomatology as the client progresses through therapy.

It would be most ill-advised and unfair to attempt a diagnosis about a person from MMPI data alone, without some study of the person himself and without consideration of his environmental culture and the circumstances under which he answered the items. It should be clearly understood that adequate interpretation of the MMPI can be achieved only by persons with extensive clinical experience and with particular training with the Inventory itself.

Form BB, of the Kuder Preference Record, was used in this study. A check on career choice is very desirable before vocational preparation is far advanced because adolescents sometimes select their career on the basis of superficial qualities, or for reasons often unrelated to the occupation itself. The immensity of surveying the whole range of occupations is discouraging. People often need some way of narrowing the field so as to more easily investigate the occupations most likely suitable. The Kuder helps to make a systematic approach to this problem by measuring preferences in nine broad areas: 1. mechanical, 2. computational, 3. scientific, 4. persuasive, 5. artistic, 6. literary, 7. musical, 8. social service, 9. clerical.

This test is widely used and its major purpose is to

indicate relative interest in a fairly small number of rather broad areas, rather than in a large number of specific occupations. After an individual's preferences are identified, he then can investigate those occupations consistent with the types of activities he enjoys. Because it reveals the preference of interests, the Kuder is a valuable instrument for the screening and placement of employees. The Kuder is often used to overcome the motivational problem in improving reading skills by helping to identify material especially interesting for each student.

The Administrator's Manual for the Kuder Preference Record, revised and published in August, 1950, reveals that the high scores are the ones of most value. However, if a person's interests are so evenly balanced that no one field stands out, then the low scores will demonstrate those occupations which he does not like and which will most probably impede success. The Manual warns that a check be made to determine whether a person's interest in a particular field is that of an active participant or merely of an observer; the latter would deserve little consideration. While studies reveal a low correlation between interest and success as measured by grades, nevertheless it is recommended that interest be measured because interest scores improve prediction when combined with other measures in multiple correlation formulas. Intelligence tests such as

the Revised Stanford-Binet Intelligence Scale, the Wechsler -Bellevue Adult Intelligence Scale (WAIS) or the Wechsler -Bellevue Intelligence Scale for Children (WISC) must be considered with the Kuder score if one wishes scientifically to determine general patterns of vocational aptitudes, or to determine aptitudes for specific vocational fields. For the interpreting of scores and the profiling of occupational groups the reader is referred to the Administrator's Manual (1960, Pp. 9-22).

Because this study is statistically concerned with the reliability of the Kuder Preference Record as a predictor of performance a brief review of research is necessary. According to the Manual, Kuder based the validity of the Inventory on the fact that the correlation of the mean profiles for the occupational groups studied indicate that the names assigned to the various scales are appropriate in terms of the type of occupation entered, as well as in terms of the activities for which the scale is scored (1940, p40). Traxler (1941) noted: 1. the test-retest reliability of the scales of the Kuder is rather high; 2. the scales on the Kuder do not seem to be influenced by practice; 3. the scores on the Kuder appear to have value for long-time prediction for adults; 4. mean-scores indicate significant preferential differences between high school and college boys and girls.

Triggs (1943) found the scales highly reliable for counsel-

ing individuals. She found fair agreement between interest measured by the group scales of the Strong Vocational Interest Blank and the Kuder. She also concluded that interest and achievement are not totally unrelated and that both the Kuder and achievement tests are necessary for counseling. Christensen (1946) used the Thorndike Word Scale to show that 21 key-words found in the Kuder Preference Record were unintelligible to high school groups, thus accounting for some confusion in Kuder results.

Super (1949, p. 640) in the Third Mental Measurements Year Book related that "enough data is on hand for the Kuder to be used with some confidence in vocational guidance. The close agreement of Trigg's means and standard deviations with those in Kuder's manual gives one more confidence in the validity of his data for smaller groups". Carter, (1953) in the Fourth Mental Measurements Year Book, while admitting that there is room for further research to clarify its value, stated that the Kuder Preference Record is a carefully constructed and well-planned instrument, clearly one of the best available instruments of its type, and its practical values justify extensive use by school teachers, and counselors.

Levine (1954) concluded that interests measured by the Kuder in adolescents are positively related to the occupations engaged in seven to nine years later. A study by Sternberg

(1953) successfully demonstrated that personality trait patterns are related to the major subjects students pick in college. Schaffer (1953) reported that the Kuder revealed significantly different interest patterns for doctors, lawyers and businessmen. Cronbach (1960) identified the Kuder as being homogenous and pointed out the fact that the results found by the Kuder generally support the logical expectations. Finally, Kuder himself reported an average reliability for the different scales of the Kuder Preference Record as close to .90; the median is .91, (1951, p.6).

Having completed the investigation of the MMPI and the Kuder, the measuring instruments of this study, it now remains to examine the procedure. Because this is a longitudinal study, reference will often be made to the doctoral dissertation of Wauck (1956). It will be recalled that Wauck employed the Ohio State Psychological Examination, the Kuder Preference Record, Form BB, the Minnesota Multiphasic Personality, Group Form, and the Group Rorschach Technique, plus an objective criterion consisting of a Faculty Rating Scale which yielded a single total adjustment score for each of the subjects. The tests were administered to 206 major seminarians over a period of three years, 1953 to 1955. The author of the present study established that 146 of the 200 seminarians were ordained diocesan priests. Thus, the MMPI and the Kuder

Preference were mailed to each of the 146 diocesan priests for self-testing, with the request that optimal conditions prevail during the self-testing period. (cf. appendix) The 90 priests who responded did so within a period of two months in the summer of 1964.

It is admitted that mailing the MMPI and Kuder to the subjects for self-testing is not following the best traditions of scientific investigation. However, the fact remains that it would have been impractical, if not impossible, to gather the 146 priests in one spot for supervised and controlled testing conditions. It must be assumed that the 90 responding priests appreciated the importance of this study and cooperated in a mature, responsible manner. The author recalls that the Manuals state that the MMPI could be administered in a waiting room if necessary, and the Kuder requires only a testing room that is quiet, well-lighted and well-ventilated. Since the scoring of the MMPI and the Kuder are well known and highly standardized, the reader is referred to the respective Manuals for an account of the scoring of these tests and no attempt will be made to review the details here, (1951, p. 5; 1960, p. 12).

The statistical analysis will proceed along three lines. First, we will compare the test-retest results of the 90 responding seminarian priests. The Pearson "r" will be used

to obtain the test-retest correlations of the various scales of the MMPI and Kuder. Then "t" values will be sought for the difference between the test-retest means of the MMPI and the Kuder scales. Secondly, using Dr. Wauck's data and looking for discriminating power, we will seek the "t" values for the difference between the mean of the MMPI and Kuder scales of the 90 responding ordained seminarians and of the 55 non-ordained seminarians. Thirdly, again using Dr. Wauck's data, we will seek the "t" values for the difference between the means of the MMPI and the Kuder scales of the 90 responding ordained seminarians and the 56 non-responding ordained seminarians. The test protocols of five of the non-ordained seminarians were mutilated beyond usefulness.

The first null hypothesis is that no significant relationship exists between the test and retest scores of the various scales of the MMPI and Kuder. In order to quantify the relationship between the test and retest results, correlational techniques have been devised. This study employs the Pearson Product Moment correlation coefficient. It is also variously referred to as a Pearson "r", a simple "r", or an ordinary "r".

It must be remembered that a correlation does not prove a cause and effect relationship between the test and retest. However, when a strong significant correlations exists between the test and retest results, then support is felt for rejecting

the null hypothesis. A positive and high, but not necessarily perfect, correlation means that most individuals which are above the mean on one test are also above the mean on the other test, and that only a relatively few are above the mean on the one test and below the mean on the other test. A positive low correlation means that most individuals above average in one test are above average in the other, and vice versa, but now there will be a larger number of instances in which the individuals above average on one test are below average on the other test.

To pinpoint the reliability of the predictability of the MMPI and Kuder scales, it is necessary not only to test for the significance of relationship between test and retest but also necessary to compute the significance of differences between the test and retest scores of the 90 priests. In general, the "t" test involves the ratio of the size of the difference between the two means to the size of the standard error of the difference between the two means. The "t" may be used in dealing with either large or small samples and is simply the evaluation of a statistic in terms of its reliability. This study, then, employs the "t" test to discover whether the means of the two test results are far enough apart to allow one to say that a significant difference exists between them. The null hypothesis here assumes that any difference

achieved between the test and retest results of the various scales is not significant, i.e. it is due to chance alone.

If the two means of the scales are so far apart as to almost preclude their occurrence by chance, then we should at a certain level of confidence reject the null hypothesis, and then we must question the reliability of the predictability of the MMPI and the Kuder, i.e. we should expect insignificant differences between the means test results if the various scales of the MMPI and the Kuder are truly predictive. The test-retest correlations can be found in Table I. The "t" values for the difference between the means of the MMPI scale is contained in Table II, for the Kuder in Table III.

In the second statistical procedure, this study seeks the "t" values for the difference between the means of the MMPI and the Kuder scales of the 90 responding ordained seminarians and of the 55 non-ordained seminarians. The author here uses Wauck's (1956) data for both groups in an attempt to indicate the discriminatory power of the MMPI and the Kuder. A predictive instrument should discriminate between allegedly successful and non-successful candidates. The null hypothesis states that the difference between the means of the scores on the various scales for the two groups is not significant and therefore the Scales of the MMPI and the Kuder do not discriminate in this instance. The "t" values for the

difference between the mean of the MMPI scales are contained in Table IV, for the Kuder scales in Table V.

In the third statistical procedure, this study seeks the "t" values for the difference between the mean of the MMPI and Kuder scales of the 90 responding ordained seminarians and of the 56 non-responding ordained seminarians. Again, the author uses Wauck's (1956) data for both groups in an attempt to indicate the discriminatory power of the MMPI and Kuder scales. It is thought that perhaps a predictive instrument would discriminate between successful responding and successful non-responding candidates. The "t" values for the difference between the means of the MMPI scales are contained in Table VI; for the Kuder in Table VII.

Chapter IV

Statistical Results and Discussion

Table I presents the test-retest correlations, using the Pearson "r", for the 90 seminarian priests over the ten year interval. In the case of the MMPI, the correlation coefficient is significant at the one per cent level on the two validity scales, i.e. F and K. It should be noted that the F score is not a personality scale but serves only as a check on the validity of the whole Inventory regarding carelessness, lack of comprehension or recording-errors. The K score is used essentially as a correction factor to sharpen the discriminatory power of the clinical variables measured by the inventory. As such K acts as a suppressor variable. While these two factors check the validity of the inventory, they hardly reflect upon the predictability, as such, of the inventory. Only one of the MMPI clinical scales was significant at the one per cent level of confidence, i.e. *Mf* (masculinity-femininity). Only three of the MMPI clinical scales were significant at the five per cent level of confidence, i.e. *Hy* (hysteria), *Pt* (psychasthenia) and *Ma* (hypomania). The correlation coefficients of the remaining five scales show no significant correlation. Thus, we cannot with confidence reject the null

Table I
 Test-Retest Correlations
 (Seminarian-Priest over
 Ten Year Interval)

MMPI Scale	Pearson r	Kuder Scale	Pearson r
K	.37*	Persuasive	.44*
F	.32*	Literary	.54*
Hs	.0026	Musical	.36*
Hy	.24**	Social Service	.47*
Pd	.14	Clerical	.55*
D	.20	Computation	.62*
Mf	.45*	Mechanical	.69*
Pa	.19	Scientific	.68*
Pt	.21**	Artistic	.65*
Sc	.19		
Ma	.25**		

* Significant at .01 level.
 ** Significant at .05 level.

Note. - N of ordained priests = 90.

hypothesis and therefore, it cannot be determined in this instance that the MMPI as a whole is a reliable instrument of predictability. It should be observed, however, that all MMPI scales are within normal clinical limit on both the test and retest.

The correlation coefficient for every scale of the Kuder Preference Record is significant at the one per cent level of confidence. The value of the correlation coefficient required for significance at the one per cent level is .267; for significance at the five per cent level it is .205. Four of the scales are above .62. Two of the scales are above .54. Two of the scales are above .44 and the remaining lowest scale is .36. Thus the null hypothesis may be rejected with confidence and it seems that the Kuder scales as such have some reliability as predictors of performance. The correlation coefficients are not high enough to consider the Kuder as a sole criterion of prediction. The correlations are, however, definitely high enough to recommend the use of Kuder in an adjuvant role for clarifying impressions and for increasing the certainty of judgments of prediction.

Table II reveals the "t" values for the difference between test and retest mean of MMPI scales for the 90 seminarian priests over the ten year interval. The "t" values for the two validity scales, i.e K and F, are significant at the one

Table II

t Values for Difference between
Test-Retest Means of MMPI Scales

(Seminararian-Priest over
Ten Year Interval)

Scale	Test Mean	Retest Mean	t	Direction of Change
K	57.68	62.38	4.37*	Increase
F	52.78	50.19	3.32*	Decrease
Hs	54.11	55.82	1.42	Increase
Hy	57.32	59.69	8.82*	Increase
Pd	57.39	58.88	1.12	Increase
D	52.18	53.02	.95	Increase
Mf	61.63	60.18	1.36	Decrease
Pa	56.91	57.15	.26	Increase
Pt	59.92	57.81	2.27**	Decrease
Sc	58.47	58.61	.008	Increase
Ma	55.76	58.83	2.66*	Increase

* Significant at .01 level.
** Significant at .05 level.

per cent level of confidence. The "t" value for the K scale shows a significant increase; for the F scale a significant decrease. These two changes indicate a significantly greater psychological defensiveness, but more carefully and validly prepared protocols on the retest. These changes are expected and understandable due to priestly experience and maturity.

Of the nine clinical scales of the MMPI, Pt (psychasthenia) shows a moderate decrease, significant at the five percent level; Ma (hypomania) shows a low, but significant, increase at the one per cent level; Hy (hysteria) shows a marked and significant increase at the one per cent level. The slight decrease on the Pt scale demonstrates a trend toward less concern for minutia, less scrupulosity, and less obsessive-compulsive tendencies. The slight increase on the Ma scale indicates a slightly greater tendency to overt behavior, less social constriction, less behavioral inhibition. These two changes can be charged to the environmental difference between seminary life and priestly life. Certainly the former is more confining and demanding, while the latter allows more freedom of expression and less time for introspection. The significant increase on the Hy (hysteria) scale is reasonable in that it correlates with the observable fact that many diocesan priests develop gastric or intestinal complaints and cardiac symptoms, due however to externally

caused frustrations and worries rather than to excessive introversion or compulsive tendencies, as noted above by the lower Pt scale.

The "t" values for the other six scales of the MMPI demonstrate no significant differences between the test and retest means even at the five per cent level. These results indicate that the difference between the mean of the test-retest results of the scales of the MMPI evaluated as a unit are not significant. The few significant changes seem logical, understandable and due to environmental changes, rather than due to any defect in the predictability of the MMPI itself.

Thus the insignificant differences between the test-retest means for each scale of the MMPI favors acceptance of the reliability of the MMPI as a predictive instrument, i.e. this indicates no or little group-tendency to change. However, this finding is really meaningless because the coefficient of correlation on every scale of the MMPI is so low, even on the three clinical scales which demonstrated some significance of correlation, that individual changes evidently were fairly numerous and significant. Therefore, we must hold the reliability of the MMPI as a predictive instrument in doubt. The insignificant differences between the means would have meaning only if the coefficients of correlation were much higher.

Table III contains the "t" values for the difference between the test-retest means of the Kuder scales for the 90 seminarian priests over the ten year interval. The "t" values for three of the nine Kuder scales are significant at the one per cent level of confidence. The Persuasive and Social Service scales show a significant increase which, however, is logical and understandable. Certainly the duties and environment of the average diocesan priest demand development of persuasiveness and social service to a much greater extent than seminarian life did. The Mechanical scale showed a significant decrease, which again is logical and understandable due to the demands of the duties and environment of the diocesan priestly life. The "t" values for the other six scales of the Kuder reveal no significant difference even at the five per cent level of confidence. Thus, we conclude that the test-retest results are fairly constant and the Kuder appears to be a reliable predictive instrument and rather helpful in an adjuvant role toward increasing the certainty of judgments of predictability of performance of candidates.

In Table IV we have the "t" values for the difference between the means of the MMPI scales of the 90 responding ordained seminarians and the 55 non-ordained seminarians. Using Wauck's (1956) data, we are testing the discriminatory

Table III

**t Values for Difference between
Test-Retest Means of Kuder Scales**

**(Seminarman-Priest over
Ten Year Interval)**

Scale	Test Mean	Retest Mean	t	Direction of Change
Persuasive	67.09	72.59	3.20*	Increase
Literary	52.75	54.00	.80	Increase
Musical	22.99	23.94	.39	Increase
Social Service	95.52	102.11	3.77*	Increase
Clerical	45.17	45.94	.48	Increase
Computation	28.87	27.08	1.70	Decrease
Mechanical	62.99	54.69	3.64*	Decrease
Scientific	56.01	54.13	1.26	Decrease
Artistic	44.61	46.06	1.02	Increase

* Significant at .01 level.

Table IV

t Values for Difference between MMPI
Scale Means of Responding Ordained Seminarians
and Non-Ordained Seminarians

Scale	Ordained Mean	Non-Ordained Mean	t
F	52.78	51.78	.92
K	57.68	58.20	.33
Hs	54.11	53.87	.18
D	52.18	50.67	.92
Hy	57.32	57.04	.22
Pd	57.39	58.42	.70
Mf	61.63	59.38	1.31
Pa	56.91	53.09	2.73*
Pt	59.92	58.65	.77
Sc	58.47	58.48	.02
Ma	55.14	55.85	.42

* Significant at .01 level.

Note. - N of ordained group - 90. N of non-ordained group - 55.

power of the MMPI. The null hypothesis states that any difference between the mean of the test results of the two groups is not significant and therefore the MMPI is not discriminatory.

On only one scale of the MMPI i.e. Pa (paranoia), is there a "t" value significant at the one per cent level of confidence.

This "t" value indicates that the responding ordained seminarians were significantly more paranoid, i.e. more sensitive, more worried, more suspicious than the non-ordained or non-successful seminarians. This statistic would lead us to conclude that the MMPI does discriminate among the paranoid tendencies of candidates. We do not however conclude that candidates with greater paranoid tendencies will be more successful candidates, because the "t" value, although significant, is not high enough to have much meaning. We also note the Pa mean for the ordained seminarian is well within the normal range, i.e. below the .70 which indicates abnormality. It might better be said that the successful seminarian is more conscientious, more anxious to please his superiors, more anxious to persevere and therefore more sensitive, more worried, more suspicious, especially when his superiors put him on trial or test him. It should be added that high scores on this scale must be handled with special appreciation of the implication and must be checked by clinical judgment.

The "t" value for all other scales on the MMPI demonstrate no significant difference even at the five per cent level of confidence. Thus we must conclude that in this instance, the MMPI, as a whole failed to discriminate between successful and non-successful candidates for the diocesan priesthood.

Table V contains the "t" values for the difference between the mean on the Kuder scales of 90 responding ordained seminarians and 55 non-ordained seminarians. Here this study, using Wauck's (1956) data for both groups, attempts to evaluate the discriminatory power of the Kuder scales. The "t" values on all nine scales of the Kuder are not significant, even at the five per cent level of confidence. All "t" values are so low that we must conclude that in this instance the Kuder did not discriminate between allegedly successful and non-successful candidates.

Table VI reveals the "t" values for the difference between the means of the MMPI scales of responding ordained seminarians and non-responding ordained seminarians, again using Wauck's (1956) data to investigate the discriminatory power of the MMPI. The F scale shows a "t" value significant at the one percent level of confidence. This would indicate the responding ordained seminarians were more careful and more exact in responding to the Inventory. On the clinical scales of the MMPI, Mf (masculinity - femininity) and Pa (paranoia)

Table V

t Values for Difference between Kuder
Scale Means of Responding Ordained Seminarrians
and Non-Ordained Seminarrians

Scale	Ordained Mean	Non-Ordained Mean	t
Mechanical	62.99	63.64	.16
Computation	28.81	27.09	.44
Scientific	56.00	54.36	.31
Persuasive	65.86	68.04	.65
Artistic	44.56	44.05	.18
Literary	52.98	52.56	.15
Musical	23.13	27.42	1.54
Social Service	95.76	91.95	1.35
Clerical	45.01	44.52	.19

Note. - N of ordained group = 90. N. of non-ordained
group = 55.

Table VI

t Values for Difference between
MMPI Scale Means of Responding
Ordained Seminarians and
Non-Responding Ordained Seminarians

Scale	Responding Mean	Non-Responding Mean	t
F	52.78	50.63	3.41*
K	57.68	58.16	.27
Hs	54.11	55.39	1.71
D	52.18	52.30	.13
Hy	57.32	58.07	1.07
Pd	57.39	59.09	2.07**
Mf	61.63	58.75	2.97*
Pa	56.91	53.82	3.64*
Pt	59.92	58.96	.91
Sc	58.47	57.63	.86
Ma	55.14	55.82	.67

* Significant at .01 level.
** Significant at .05 level.

Note. - N of responding group = 90. N of non-responding group = 56.

have a significant "t" value at the one per cent level of confidence. In both instances the scores are higher for the responding ordained seminarians. In agreement with the Kuder results for the same groups, this indicates that the responding ordained seminarians were more introspective and more self-concerned. The "t" value for the Pd (psychopathic deviate) shows a difference significant at the five per cent level of confidence. In this instance the non-responding ordained seminarians scored higher which again agrees with the Kuder finding that the non-responding ordained seminarians are less introspective and more outer-directed. The "t" values for the other scales of the MMPI show no significant difference even at the five per cent level of confidence. Thus outside of noting a greater tendency toward introspection and self-concern for the responding ordained seminarians this statistical analysis fails to demonstrate the possible discriminatory power of the MMPI as a whole.

Table VII presents the "t" values for the difference between the mean of the Kuder scales of 90 responding ordained seminarians and 56 non-responding ordained seminarians, using Wauck's (1956) data to investigate the discriminatory power of the Kuder Preference Record. The "t" values of three scales of the Kuder reveal a significant difference at the one per cent level of confidence, and on one scale at the five per cent level of

Table VII

t Values for Difference between
Kuder Scale Means of Responding Ordained Seminarians and
Non-Responding Ordained Seminarians

Scale	Responding Mean	Non-Responding Mean	t
Mechanical	62.99	63.07	.03
Computation	28.81	28.68	.10
Scientific	56.00	54.77	.41
Persuasive	65.86	69.98	2.15**
Artistic	44.56	40.18	3.00*
Literary	52.98	47.59	3.41*
Musical	23.13	21.58	1.17
Social Service	95.76	100.96	3.13*
Clerical	45.01	44.98	.02

* Significant at .01 level.

** Significant at .05 level.

Note. - N of responding group = 90. N of non-responding group = 56.

of confidence. The "t" value for the Artistic and Literary scales was significantly higher for the responding ordained seminarians. The Social Service scale was significantly higher for the non-responding ordained seminarians at the one per cent level of confidence. The Persuasive scale was higher for the non-responding ordained seminarians at the five per cent level of confidence. These "t" values are too low to have significant meaning. We can only conclude that the non-responding ordained seminarians were a bit more aggressive, not so introspective, more outer-directed and less concerned with introspective processes; whereas, the responding ordained seminarians had a greater bent toward the arts and self-refinement. The "t" values for the remaining five scales of the Kuder reveal no significant difference even at the five per cent level of confidence. Thus the discriminatory power of the Kuder scales is not evident in this statistical comparison.

Chapter V

Summary and Conclusion

Research in the field of psychological testing for religious candidates is directed not only toward detection of psychological deviation among candidates, but also toward the selection from among the healthy applicants of those who are most likely to succeed. Extreme caution has been the by-word in the use of group psychological tests in seminary selection programs. Research has provided religious superiors with definite confidence in the use of certain tests to reveal psychological deviation among religious members and candidates. However, research has not presented the same confidence when these tests are used as predictors of stability, perseverance and success.

Research generally has progressed along two lines. First, investigation of personality characteristics of candidates to seek predictors of later maladjustment and instability, and, secondly, exploration of vocational interests so as to guide youth to a more satisfying and self-fulfilling vocation. Along these two lines respectively, the MMPI and the Kuder have been favored instruments of research. This thesis is a longitudinal study expressly designed to investigate the usefulness and the reliability of the Minnesota Multiphasic Personality Inventory,

Group Form, and the Kuder Preference Record, Form BB, as predictors of performance of candidates for the diocesan priesthood.

Over a period of three years, 1953 through 1955, Wauck (1956) administered the MMPI and Kuder as part of a battery of tests to 206 major seminarians at St. Francis Seminary, Milwaukee, Wisconsin. One hundred forty six of the 206 seminarians were ordained priests for the Archdiocese of Milwaukee, Wisconsin. In 1964 the MMPI and the Kuder were presented to each of the 146 diocesan priests, all of whom were ordained from five to ten years. Ninety of these priests cooperated.

To determine the reliability of the MMPI and the Kuder as predictors of performance, this study proceeded along three lines. First, the Pearson "r" was used to obtain the test-retest correlations and the "t" values were sought for the difference between the test-retest means of the various scales of the two inventories. Secondly, using Wauck's original test data, "t" values were sought to determine whether the two inventories discriminated between the 90 responding ordained seminarians and the 55 non-ordained seminarians. Thirdly again using Wauck's original test data, "t" values were sought to determine whether the two inventories discriminated between the 90 responding ordained seminarians and the 56 non-responding ordained seminarians. It was thought that a truly predictive instrument might have discriminated between the allegedly successful and

the non-successful seminarians and possibly between the responding successful seminarians and the non-responding successful seminarians.

The coefficients of correlation and the "t" values for the test-retest of the MMPI failed to support the reliability of that instrument as predictor of performance. While the "t" values revealed that the group change was not significant, the very low coefficients of correlation on every scale indicated that individual changes were numerous and significant. The "t" values of the MMPI scales failed also to show discrimination between successful and non-successful seminarians and also between responding and non-responding successful seminarians, all of which militates against the use of the MMPI as a reliable predictor of future performance at least in this instance. It is thought that perhaps these negative findings will contribute toward a necessary refinement of the MMPI. Perhaps Bier and Rice will someday substitute sufficient discriminatory items and devise adjustment scales which will support reliability for the MMPI as an instrument of prediction and discrimination. It appears that further research with the MMPI requires a cautious and conservative use of profile analysis even in identifying those candidates who may need special attention in their training.

The correlations and the "t" values for the test-retest of the Kuder give definite though not conclusive support for the

reliability of that instrument as a predictor of performance. However, the "t" values of the Kuder fail to discriminate between successful and non-successful seminarians and also between responding and non-responding successful seminarians. This failure negates in part the positive findings of the test-retest. In other words, the positive findings on the Kuder seem to have value only in that failure to possess such interest patterns would give reason to question the suitability of a given candidate. Thus, it appears to be a reliable and helpful instrument to be included in a battery of tests in an adjuvant role to clarify impressions and to help predict future performance of candidates.

While the findings of this study deny the reliability of the MMPI as a predictor of performance and relegate the Kuder to an adjuvant role in a battery of tests seeking prediction, it is interesting to note that this study reveals that the MMPI and the Kuder combine fairly well to pinpoint certain personality characteristics and certain interest patterns appropriate to seminary and priestly life.

The low but significant correlation coefficients for the K and F scales of the MMPI indicate a stability of test results over a good number of years. The "t" values for K and F indicate more carefully and validly prepared protocols on the retest plus a reserved type of self-awareness of the subjects which is in keeping with the maturity expected of ordained priests.

The low but significant changes on the Pt (psychasthenia), Ma (hypomania), and Hy (hysteria) scales bear witness to the environmental difference between seminary life and parochial life. The confinement and the demand for excellence in the seminary promotes meticulousness, conscientiousness and sensitivity to emotional involvement; whereas, parochial life promotes greater self-expression and social freedom. The increased preoccupation with bodily complaints revealed on the retest supports the observable fact that many diocesan priests suffer heart and gastric illnesses seemingly accountable more to external frustration rather than to excessive self-introspection or compulsive tendencies.

The low but significant changes on the Persuasive, Social Service and Mechanical Scales of the Kuder are logical and understandable due to environmental demands of the priesthood and actually enhance the predictive quality of the Kuder. This finding tends to support the prevalent notion that the clergymen should and do try to motivate people and show grave concern for their welfare. However, possession of these interest patterns is no guarantee of success either in the priesthood or in the seminary. Such a pattern of interest might be a condition for success but certainly is not its cause.

The few low, but significant differences observed in seeking the discriminatory power of the MMPI and the Kuder are meaningful only in terms of trends. The significantly higher "t"

value for the Pa (paranoia) scale of the MMPI for the successful seminarian is well within the limits of normalcy. It indicates that the successful seminarian tended to be more sensitive, more worried and more suspicious than the non-successful seminarian. It seems logical that the seminarian, who is more anxious to please his superiors and more anxious to persevere, would also be more sensitive, more worried and more suspicious, especially when his superiors put him on trial or test him. This finding agrees with Wauck's (1956) statement that seminarians, as a group, tend to be more conscientious, socially sensitive and tactful and that seminary life, when taken seriously, does increase temporary or situational anxiety over one's well-being. Perhaps this factor should be tied in with the significantly higher Mf (masculinity-femininity) score of the successful seminarians, all of which indicates that the successful responding seminarians were more introspective and self-concerned, more sensitive and more interested in self-improvement.

While this conclusion is fairly well supported by the trend observed in the test-retest findings, we cannot conclude that such qualities are causal factors or predictors of success or stability. The import of the various scales cannot be accepted at face value. They merely confirm the well recognized fact that the more serious, more conscientious, more self-respecting seminarian will more likely appreciate the rigors and demands of

seminary life, more likely acclimate himself and more likely persevere.

It is interesting to note that our findings indicate that these same self-centered seminarians later did adapt to the environmental demands of the diocesan priesthood in that their social service and persuasive abilities increased. While their so-called paranoid tendencies as seminarians remained fairly constant, these tendencies did not inhibit their priestly social behavior.

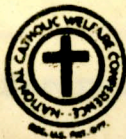
In conclusion, it appears that further research on the MMPI as a reliable predictor of performance must include, first, revision of the whole instrument by substitution of sufficient discriminatory items and adjustment scales which will correlate well with the peculiarities of the religious vocation and, secondly, experimentation with larger and less homogenous populations. Perhaps testing of seminarians at the senior high school level or early college level would produce more significant and meaningful results. The positive but limited usefulness of the Kuder Preference as a predictor seems to support the opinion of D'Arcy (1962) and others that the Kuder be modified according to the peculiar needs of the religious vocation involved. Further research on a diocesan priest scale for the Kuder or for the Strong Vocational Inventory might prove particularly helpful for prediction purposes or for differentiat-

ing the diocesan seminarian from the religious seminarian as well as from the layman.

As a result of the reading required for the composition of this study it is the closing opinion of this writer that religious vocational testing should employ both actuarial and projective techniques, and that testing be done on an individual basis by a qualified and experienced clinician who is familiar with the unique demands of religious life. Researchers might also take much more care in observing the limitations of the various psychological tests now available, in selecting appropriate objective criteria for validation and finally in clarifying their design of research.

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May 25, 1964

Reverend and dear Father:

When you were a student at St. Francis Seminary, you were given a battery of psychological tests under the supervision of Dr. Le Roy Wauck who was then at Marquette University. The program was a research investigation which attempted to ascertain the usefulness of certain well-known and widely-used tests as screening devices in the selection of candidates for the diocesan priesthood. This was a pioneer effort. Much has been done by other investigators and at other seminaries throughout the country.

A further necessary step in checking on the predictive validity of these instruments is now in order. To my knowledge, no one has yet carried out a longitudinal study following up the results of prior testing with the same group of people. We are interested in knowing if any significant changes in test performance occur after the individual priest has been ordained and actively engaged in his work for a period of roughly five to ten years. We have no way of knowing or predicting in advance the possible direction of these changes in test results. I am earnestly soliciting your cooperation and participation in such a follow-up study. We are not interested in your individual test performance, but rather with any overall changes in mean test performance for the group as a whole. Any individual responses you may make to the test items themselves will remain anonymous, since they will be converted to numerical statistics through the scoring procedures. Naturally, I place myself under grave obligation to keep secret all names, addresses, and scores.

I am doing this research at Loyola University under the direction of Dr. Wauck as a partial fulfillment of the requirements for the M.A. degree in psychology. As you well understand, without your full and prompt cooperation, the project cannot be successful. We are asking you only to retake the Minnesota Multiphasic Personality Inventory and the Kuder Interest Inventory. After you have finished the tests please note "Test Attitude Scale" in the enclosed envelope and complete it. This will take only a few minutes, and return it with the tests.

I do appreciate the time taken from your busy schedule at a hectic time of the year. Dr. Wauck sends his personal greetings and best wishes.

With gratitude and prayers for a favorable reply,

Sincerely yours in Christ,

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APPROVAL SHEET

The thesis submitted by Reverend James J. Murtaugh 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.

30 May 1985
Date

Robert A. Wavsek, Ph.D.
Signature of Adviser