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CROSS VALIDATION AND SUPPLEMENTARY RESEARCH ON
THE LOYOLA SENTENCE COMPLETION
TEST FOR SEMINARIANS

by
Lawrence J. Heinrich

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

June

1967

LIFE

Lawrence J. Heinrich was born in Chicago, Illinois, October, 1939. He attended high school at St. Jude Seminary, Momence, Illinois, and graduated from Claretville Major Seminary California in 1959 with a major in Philosophy.

In 1959 he was assigned to study theology at the Claretian International College in Rome, Italy. Following his return to the United States in 1963, he completed another year of theology at the Catholic University, Washington, D.C. and obtained his S.T.L. During this time he also completed a number of undergraduate courses in psychology at the same University.

In September 1964 he entered the graduate school of Loyola University, Chicago, Illinois and completed his Master's Comprehensives in January 1967.

ACKNOWLEDGEMENTS

The writer wishes to express his sincere gratitude to Dr. Leroy Wauck, Ph.D. Professor of Psychology at Loyola U., Chicago, Illinois, for his encouragement and direction of this study; to Dr. Frank J. Kobler, Ph.D., Professor and Director of Clinical Training at Loyola U., Chicago, Illinois, for his helpful observations and suggestions; to Mr. Edward Sheridan and his wife, Assistant Professors at the Universities of Detroit (Michigan) and Windsor (Ontario), for their efforts in compiling an excellent manual and the stimulating informal conversations about this study; to Mary Rachael Torres for her many hours of typing and patient help in statistical computation; to all volunteer participants and the religious supervisors who assisted in the ratings.

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INTRODUCTION

Since the dramatic and impressive announcement of "aggiornamento" by Pope John XXIII and the subsequent Vatican II, the Church has been in a therapeutic state of self-analysis in order to adapt traditional concepts and practices to contemporary society. While it is hardly five years that this great stirring has been felt in every aspect and on every level of ecclesiastical operation, it was nearly three decades ago that some "scientific soul-searching" and critical evaluation of the clerical and religious personality was undertaken. Although the theological dictum, "grace builds on nature" was readily admitted by all theologians and seminary directors, there was some reluctance to allow psychologists to thoroughly explore the natural foundation which supports the superstructure of a special vocational grace. Even in the mid-fifties, we find authors attempting to justify and recommend the use of tests, measurements and professional services in the screening and assessment of clerical and religious personnel (Kenneally, 1954; Burke, 1955; Bier, 1954, 1959). A number of early studies often cited the Holy Father or some ecclesiastical source in order to give the research project a sort of "nihil obstat" or paternal blessing. Since the sixties, however, this scientific approach has become an accepted part of the renewal spirit and there is less need to justify these endeavors theologically. Up to this point, perhaps,

the psychologists have hardly scratched the surface of material to be investigated, but writers already point with confidence to the rapidly growing body of clinical and empirical evidence which demonstrates the psychologist can make an important contribution to vocation selection, assessment and prediction (McCarthy and Dondero, 1963; Muldoon, 1965; Coville, 1966).

As the need and importance of psychological assessment increases, we can distinguish several approaches. Some studies are purely descriptive or normative of the clerical and religious populations; others attempt to select and predict successful and effective candidates; still others are concerned with traits which favor this vocation or what type of changes and adjustment may be expected within the seminary or religious community. A more detailed synopsis will be given of some of these studies in the review of the literature.

The present investigation is part of the intensive research program encouraged at Loyola University for a more thorough assessment of the religious (priest, seminarian, brother, sister) personality. Rooney (1966) adequately outlines the numerous problems the worker in this area faces, but he is by no means pessimistic in expressing his belief that considerable progress is being made. One important step is that we are learning what we can and cannot do with the instruments presently available. For instance, writers agree that the complexity of motivational factors involved in perseverance in the priestly or religious

state render individual prediction nearly impossible. It has likewise been found that a considerable amount of deviation as measured by some tests is tolerable within the religious life (Kobler, 1964). All in all there is a general feeling that the psychologist has made a significant contribution to the screening program by eliminating certain pre-psychotic and unstable personalities who seem to gravitate towards this way of life. But the role of the psychologist implies more than the skill to diagnose pathology. He is generally called upon to make some prognosis regarding the individual's capacity to change, adjust and function effectively within a given range of activity and stress. Not infrequently the psychologist is also requested to participate in the therapy and counseling programs of the seminary. Consequently, the psychologist seeks to improve his skill not only with instruments which explore the more subtle and less obvious aspects of the personality, but he also works to improve his understanding of the less serious disturbances which affect adjustment in this way of life. In searching for instruments to assist the psychologist in these tasks, we find, perhaps unexpectedly, that the Sentence Completion Test appears to have considerable clinical validity (Goldberg, 1965) and predictive ability (Stotsky & Weinberg, 1956).

Although Sundberg (1961) reported that the sentence completion method was second only to the MMPI among the group personality instruments, it appears that only recently a more

critical appraisal of this apparently simple and unsophisticated procedure is being undertaken (Murstein, 1965). Coville (1962) likewise reported that in his survey of thirty-four assessment programs for selecting candidates for the religious life, he also found the sentence completion method running a close second to the MMPI. While there is a great deal reported on the findings with the MMPI, very little information is available concerning the sentence completion tests. A major obstacle is, of course, lack of a standard sentence completion form and scoring procedure for the seminarian population. Over the past few years a sentence completion form devised by a number of psychologists at Loyola, Chicago was used with the diocesan seminarians at St. Mary of the Lake Seminary, Niles, Illinois. Results were quite favorable and the psychologist involved in the screening and counseling programs felt the standardization of this form would be a worthwhile project. As a doctoral dissertation, Mr. Edward Sheridan gathered the data which had accumulated for a number of years and set out to compose a scoring manual and assemble validity and reliability data. He had access to MMPI tests and ratings for all the subjects of this population. In particular, the present study represents a cross-validation of this newly devised Sentence Completion Test for Seminarians. As noted in the APA Technical Recommendations for Psychological Test and Diagnostic Techniques under C 14, "The author should base validation studies on samples, comparable in terms of selection of cases and

conditions of testing, to the groups to whom the manual recommend that the test be applied." Consequently, since the original population is composed solely of diocesan seminarians, it is "very desirable" to cross validate the test with a religious-seminarian population.

The following points are considered the main areas of investigation and hypotheses to be tested.

1) Whether any variations or significant differences appear in the overall adjustment score and/or the sub-tests scores between the diocesan and religious seminarians. The prediction is that no significant differences should appear between these populations since the primary intention in constructing the test was the measurement of seminarian adjustment.

2) Whether the sentence completion test is able to identify maladjustment among religious seminarians with the same degree of accuracy as found in the original study. In this case, the validating criteria will be the same i.e., a specified degree of deviation on MMPI scores and the ratings of supervisors. The prediction is that the sentence completion "maladjustment" score should correlate with the criteria, at least to the degree of accuracy as found in the normative population.

3) As a point of supplementary research, the test will also be administered to religious college seminarians somewhat older than the validating group. Scores will be compared to assess any changes or trends in the direction of adjustment or maladjustment.

Some evidence in the past indicated the clerical and religious training periods tend to elevate adjustment scores of certain tests.

CHAPTER II

REVIEW OF THE LITERATURE

Psychological Assessment of Seminarians

The scientific or psychological approach to the area of clerical and religious vocations was fostered by the growing awareness of the incidence of psychopathology among these groups as first reported by Moore in 1936 and later confirmed by Kelly in 1958. More recent studies of Kelly (1961) and McAllister and Vanderveldt (1961) on hospitalized populations, indicate a higher incidence of schizophrenia and sociopathic personality disturbances among priests and religious, while psychotic and psychoneurotic depressive reactions appeared more frequently among the lay populations. As Hakenewerth (1966) notes, the question of apparent increased incidence of hospitalization among religious might be a function of greater openness on the part of religious superiors to psychiatric evaluation rather than a base increase of serious disturbance. Further, it is uncertain whether it is the unique occupational tensions and stress which facilitate the onset of serious disorders or whether it is that certain pre-psychotic personalities are attracted to religious life. The study of McAllister and Vanderveldt seemed to indicate that a considerable percentage of their hospital population manifested serious emotional problems in the seminary

(1961, p.84). This finding dramatically emphasizes the need for psychological testing as part of the seminary screening and assessment program.

The implications of Moore's study as well as subsequent confirmations initiated a rapid growth of interest in evaluating the psychological fitness of candidates for the priesthood and religious life. The earlier studies chose a descriptive or normative approach to the clerical and religious personality. While many of these studies did not answer the question of the origin of typical traits, i.e., whether they were brought to the religious life or fostered within that particular environment, this type of research did identify some noteworthy characteristics of the population and encouraged further investigation along these lines with new instruments.

The search for the "typical personality" was spearheaded by McCarthy (1942) and continued in the work of Peters (1942), Burke (1947) and Kimber (1947). Using a battery of tests, the Bell Adjustment Inventory, the Bernreuter Personality Inventory, the Allport-Vernon Study of Values and a Faculty Rating Scale, McCarthy analyzed a "g" factor which suggested the average seminarian is more submissive, introverted and experienced inferiority feelings more than the average student (according to these instruments). Peters used the same battery and statistical techniques in studying the traits of women candidates for the religious life. She described three factors: Factor I appeared

as sulkiness, anxiety, depression and irritability; Factor II as a sense of judgment, capacity to adjust, emotional control and punctuality; Factor III as leadership, sociability, dominance and social adjustment. Burke attempted to expand the battery of tests and devise measures or means which would enable the tester to discriminate between probable successful candidates and those likely to drop out. Burke reported that no single measure or combination of measures he used could pick out the seminary drop-out with adequate certainty. He did emphasize the fact that good academic achievement was a favorable sign of success. This indicator, however, is common to nearly all professional groups. Kimber, in studying a group of Bible Institute students, found this group had high social standards, a high sense of personal worth, but it also appeared they had less freedom from nervous symptoms than the average person. It is interesting to notice that as empirical evidence mounted, many of these early observations are confirmed or expanded in later studies even though the terminology may be somewhat altered.

The introduction of the Minneapolis Multiphasic Personality Inventory (MMPI) with seminarians by Bier (1948) initiated a vast program of research which still flourishes today. Regardless of its clinical background or its pathological nomenclature, the MMPI has been an extremely popular instrument in all types of settings including vocational selection and counseling. In a review by Dunn (1965) of the psychological assessment of priests

and religious, it is easy to ascertain the variety of research endeavors in which the MMPI has been employed. It has been used in normative and descriptive studies by Bier (1948), Rice (1958) Gorman (1961) and McDonagh (1961); effect-of-training and longitudinal studies were conducted by Sandra (1957), Vaughan (1956), Murray (1957), Murtaugh (1965), Hakenewerth (1966), Murray and Connolly (1966); the greater number of studies fall within the area of screening and predictive uses of the MMPI, thus Godfrey (1955), Wauck (1957), Weisgerber (1962), Vaughan (1963), Sweeney (1964), Herr (1964).

It is important to note that in the studies cited above, the MMPI was generally used within a battery of tests. Consequently, the research was not merely to establish norms for seminarian and religious MMPI scores, but there was a specific purpose such as to correlate personality types (according to MMPI scores) and interest patterns, or rate the adjustment scores on the MMPI against other personality measures and checklists, or compare MMPI scores against a criteria of success (e.g. faculty ratings and/or perseverance). The nature and number of studies with the MMPI has proliferated so extensively in the past ten years that it is impossible to survey them individually. The present study as well as that of Mr. Sheridan rely on the MMPI as a concurrent validity indicator of adjustment or maladjustment. Consequently, we must examine our assumption that the MMPI is a fairly accurate indicator of adjustment, and

become familiar with any expected variation of scores with this population. Fortunately, some writers have attempted to summarize the research in this area e.g., Kobler (1964), Dunn (1965) and Menges and Dittes (1965).

As one surveys the literature on the MMPI, there appear a number of unresolved issues which tend to mitigate any naive rejoicing that the MMPI has proved itself an ideal instrument for the assessment of the clerical and religious personality. Bier's original study (1948) compared five college groups on the MMPI: seminary, medical, law, dental and liberal arts. Although he found that all groups scored higher than the normative group, it appeared that the seminary population was the most deviant portion of an already deviant population. By comparing intra-group variations, Bier nonetheless concluded that the MMPI was sensitive enough to serve as a discriminating measure between the poorly-adjusted and well-adjusted seminarian. He was saying in effect that the MMPI is assessing the level of adjustment in seminarians because it accomplishes for them the same thing as it does for similar groups of students. To sharpen the discriminatory power of the MMPI, Bier devised a modified version which hopefully would be more accurate by dropping non-relevant items. Some authors agreed with this procedure or at least with the principle that special norms have to be established for seminary populations (Rice, 1958; Sweeney 1964). A number of writers, however, have insisted that a clinical instrument which

emphasizes pathology should not and cannot be used effectively on such a highly-selected, supposedly normal group as seminarians. The discriminatory capacity of the MMPI within a select population has continuously been challenged. In criticizing the MMPI, Markert (1963) observed:

The question of validity (except perhaps face validity) cannot be answered adequately without comparing the MMPI scores of seminarians with other criteria drawn from their behavior which can be assumed to reflect their adjustment (p.65)

As we shall see, the question of adequate criteria has indeed proved to be a stumbling block.

Despite criticism, the popularity of the MMPI with the seminary and religious population did not diminish. The issue of the adequacy of the MMPI became quite clouded, however, when many of the studies began establishing criteria which for all practical purposes identified perseverance, success, and effectiveness with low scores on the MMPI. Thus Godfrey (1955), Wauck (1956), Herr (1962), Weisgerber (1962) and Sweeney (1964) all compared the MMPI scores of "successful" candidates with those who dropped out of the seminary or religious training. Perhaps perseverance versus drop-out is a convenient criterion, but it makes the unwarranted assumption that only the well-adjusted (as measured on the test) persevere and only the poorly-adjusted drop out. There is no evidence or reason to assume that a well-adjusted individual who has been in the seminary or

religious life a number of years cannot make a mature decision to leave that way of life and be equally successful in another field. The empirical evidence cited earlier concerning the incidence of psychiatric hospitalization of clergy and religious also liquidates the assumption that only the well-adjusted persevere. On the other hand, the wide variety of occupations and functions which clergy and religious engage in permits considerable flexibility and a fairly wide range of acceptable adjustment levels. In general, proposed cut-off scores from these studies have proven ineffective and there has been a good deal of discrepancy among the different populations as to which were the significantly high scales for the dropout.

Kobler (1964) stresses the fact that there is considerable difference in using the MMPI to identify a disturbed individual and in using this instrument to select the most promising candidate or predict perseverance. This certainly appears logical when we consider the test's origin and structure. Consequently, although many examiners do admit that the MMPI is more effective as a predictor of adjustment in the religious vocation than of perseverance in it, this has not been clear in the experimental design or assumptions of many of the studies. While Kobler seems to imply that the psychologist should be satisfied with a solid clinical contribution in the area of vocational selection, McCarthy and Dondero (1963) feel it is within the psychologists' realm to utilize all available means

and assess vocational eptness as well as attempt to predict vocational success. All the writers would probably agree, however, that this proposes the weighty problem of finding adequate instruments and discovering accurate criteria. Rooney (1966) in reviewing needed research on the psychological assessment of religious, points to the fact that effectiveness and success in priestly or religious life is extremely hard to define and we will likely need a variety of criteria to be studied on different groups under varied circumstances.

Even if we were not to rely upon the MMPI as a predictor of perseverance and restrict its use to clinical assessment, we are still faced with problems of finding concurrent criteria of satisfactory adjustment. One of the most common checks of adjustment is observed behavior. Long before Markert's remarks about adequate validity criteria, Wauck (1956) used a variety of tests and a faculty rating to assess adjustment. In his study and subsequent reproductions of the technique by Gorman (1961) and McDonagh (1961), little correlation was found between faculty ratings and MMPI scores. Besides the problem of adequately defining adjustment in the raters' minds, we know for a fact that MMPI scores are not an infallible or even highly accurate reflection of overt behavior. Another factor which must be taken into consideration is noted by Wauck: a paper and pencil test presumes a) adequate self-knowledge and b) a sincere desire to reveal oneself. The question of being

threatened by a psychological examination and attempts at faking-good have been much discussed by Rice (1958) and Sweeney (1964). They suggest the MMPI scores cannot be taken at face value and some allowance should be made when the tester is dealing with voluntary and non-voluntary groups. Rice had relatively high T scores with his population and he argues that each Institute must establish its own norms and in some cases (e.g. his) eliminate the K from the T scores. By way of comment, it might be mentioned that Rice did not take age into consideration as a factor for elevated scores, nor did it occur to him that his population might really be somewhat atypical. In general, it appears safe to say these modifications in reporting scores or even the use of modified versions of the MMPI complicates and confuses comparison of studies in this area. The ever expanding literature and research on the MMPI with special populations can be quite helpful when using the test with seminarians and religious. Homemade innovations make the application of this general fund of knowledge all the more difficult.

Since the purpose of the present study is to utilize the MMPI not as predictor of success or perseverance, but as a concurrent validity measure to assess "need of psychotherapy" i.e. maladjustment which warrants special attention, we must focus attention on emphasizing this approach. Gardner (1964) proposed to validate the MMPI against individually administered projective tests such as the Rorschach which are supposedly free

of role playing and attempts at faking. In one phase of the study, using the Rorschach Prognostic Rating Scale (RPRS), he found at least seventy-one percent agreement in each of three groups of minor seminarians between the RPRS and MMPI scores. He concluded: "These results indicate not only that the RPRS performs exceptionally well as an actuarial instrument, but also that the MMPI results in the seminary population can probably be accepted at face value in all but a very few cases." (p.108) Although we might ask . . . are we certain enough with either test to validate one against the other, Gardner feels that the MMPI scores are a good measure of psychological adjustment.

Herr (1964) evaluated fifty seminarians through a battery of tests and three faculty advisors. Although he compared scores of those who persevered with the scores of ten drop-outs of the group, he was also interested in the agreement of adjustment ratings and MMPI scores. He devised a fairly sophisticated analysis of the scores and patterns: e.g. emotional control was assessed in scales Pd, Pa, Pt; doubts, anxiety and guilt were examined on scales Hs, D, Hy, Pt; relation to authority was checked on Pd; self-regarding attitudes were measured on Sc and Ma; social adjustment was indicated by Si. Herr concluded the MMPI was effective in confirming the faculty rating in the area of worry, anxiety and concern over health, although it disagreed with the rating on emotional withdrawal and cyclic moodiness. Although the size of the sample did not permit a great deal of

analysis of scores, Herr did feel the higher (well-adjusted) ratings were usually found with those scoring on the well-adjusted end of the MMPI.

Kobler (1964) collected the empirical data from a variety of studies, most of them done at Loyola University, Chicago. With respect to the MMPI, he was able to compare the MMPI's of 1152 religious with MMPI test results of approximately 5,000 college students. He notes:

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 the tests, is tolerable in an applicant for religious life. (p.169)

Kobler also attempted to deduce an operating principle for screening purposes. This principle was defined, however, only in relation to and with certain conditions existing in other test measurements Kobler was analyzing i.e., the Kuder Preference Record and the Mooney Problem Check List. With respect to the MMPI, he suggested further clinical evaluation of applicants is recommended if there is a mean T of at least 58, one or more scales at or above 70, and high scores especially on the Pt and Sc scales.

Dunn (1965), after his extensive survey of research, does not attempt a good deal of theorizing about the effectiveness of the MMPI, nor does he offer concrete suggestions about cut-off points. He does, however, interpret the rather consistent

findings of high Pt, Sc and Mf scales throughout a large percentage of studies as indicative of a group which tends to be worrisome, perfectionistic, introversive, socially inept and in some cases, isolated and withdrawn. It is interesting to note the similarity of these findings and those of McCarthy (1942) and other writers in the forties. Most authors agree that moderately high Mf scores on the MMPI reflect an interest pattern and education trend rather than being an adequate indicator of sexual adjustment.

Finally, one other research approach exists which sharpens our awareness as to what might be expected in terms of high or varied MMPI scores within the clerical or religious group. There appears some evidence that MMPI scores are affected by the amount of time spent in the seminary or religious life (Murray, 1957; Gorman, 1961; McDonagh, 1961; Murtaugh, 1965). Murray's study with minor, major seminarians and priests seemed to indicate that the seminary situation tends to elevate scores, but the condition after ordination relieves the pressure somewhat and lowers the scores in general. Gorman and McDonagh studied fourth and fifth year students of a homogenous population and demonstrated that the older class scored higher on every scale than the younger class. Murtaugh fundamentally supported the hypothesis that the stress and introversive atmosphere of the seminary tends to elevate scores, but tensions and pressures are altered after ordination. A very recent study of the effects of

religious life as measured by the MMPI was completed by Hakene-
werth (1966). This project is of particular interest to the
present study in that it attempts to account for some differences
between a diocesan and religious population. In comparing the
mean MMPI scores for a group of eighty religious brothers on the
test-retest method, it appeared that after a number of years in
the religious life, the retest scores were significantly higher
at the .01 level of confidence on scales Mf and Sc and at the
.05 level on scales F, Hy and Pt. The rise in scores, however,
did not change the original personality pattern revealed in the
first testing. The writer interprets the results as:

. . . the religious having become more
honest in his appraisal of himself, more
conscientious, and aware of being more
isolated from the world. He thinks
differently from the way the rest of the
world does, which is to be expected to
some degree. He more easily tends to
use physical illness to solve conflicts
or problems There is a sharp
rise in the refinement of his tastes. (p.70)

However, these retest scores were obtained after the training
period when the Brothers were actively engaged in their respect-
ive duties. The writer notes that in comparing his population
scores to those attained by diocesan priests, the latter were
considerably lower on the D, Pt, and Sc scales. It has already
been pointed out that diocesan priest scores were also found
lower than diocesan seminarian scores. Hakenewerth suggests
that elevation of scores is brought about during the period of
religious and seminary training, but the regime of the religious

rule and way of life tend to maintain some of the elevated scores. In general, studies have agreed that elevation of scores is partially a function of training and religious isolation, but the scores do not continuously rise the longer one remains within the religious life. It is further observed that the elevations during this time are not indicative of personality breakdown, but reflect the added stress caused by higher goals of self-perfection, compliance to a detailed rule and greater concern for others.

The Sentence Completion Method in the Assessment of Seminarians

In editing the volume Handbook of Projective Techniques, Murstein (1965) has made a valuable contribution to both the experienced examiner and graduate intern in surveying and assessing the history and present status of some of the major instruments in clinical and personality assessment. Introducing the section on the Sentence Completion Test (SCT), Murstein wryly admits he stumbled on a very unanticipated fact: "The Sentence Completion Method is a valid test, generally speaking, and probably the most valid of all the projective techniques reported in the literature." (p.777). To support this statement Murstein points to a survey by Goldberg (1965) in which the validity findings of some fifty studies with the SCT are summarized and discussed. Although when speaking of fifty studies

with the SCT, we realize that we may be speaking of nearly as many sentence completion forms, a variety of scoring methods, a variety of criteria and a heterogeneity of populations. Nonetheless, the data have been consistently impressive.

The writers also warn, however, that it is the very attractive simplicity and manageability of the test that have left it open to abuses such as lack of standardization, inadequate scoring procedure, and inappropriate uses and interpretations. Underneath this very simple technique lies a maze of theoretical and practical questions which must be resolved before the test can be used effectively. It is necessary to review some of the research on the SCT in order to better understand the nature of the instrument we are dealing with. The fundamental issue appears to be how to classify or categorize the sentence completion method. Rohde (1946) and others state quite clearly that the subject can in no way anticipate the significance of his answers and therefore the SCT is strictly a projective technique. Others (Rotter and Rafferty, 1950; Campbell, 1957) are less certain about using a projection hypothesis as a theoretical base in interpretation since they feel the subject usually gives only information that he wants to give, not that which he cannot help giving. That the subject can effectively and consciously control his responses to the SCT and that assessing the "mental set" of the testee is essential to meaningful content interpretation has been demonstrated by Meltzoff (1951). Not only did

he find that the degree of threat as expressed in the instructional set and perceived by the testee tends to produce more cautious, defensive and verbally neutral responses, but also, "other things being equal, the tone of the responses to a projective test of the sentence completion type is a direct function of the tone of the stimuli" (in Murstein, 1965, p.856).

Other important theoretical questions in the use of the SCT are related to the capacity to control content through stem structure and the effect of the personal referent of the stem. Forer (1950; 1960) has demonstrated that through the use of structured items the test constructor can direct the responses of the subject to areas which are of special interest or importance. It is this flexibility and controlled directionality that make the SCT such an attractive instrument to adapt to specific populations such as ours. Part of the rationale in devising the test used in this study was to select and structure stems toward a variety of significant dimensions in the seminarians' personality and frame of reference. Studies such as those made by Sacks (1949) have attempted to assess whether third person or first person stems are more effective in eliciting pertinent information. Although some findings favor the first person stem, the evidence is far from being definitive. The Loyola Seminarian SCT favors a combination of both types of stems.

Finally, one of the thorny issues in the standardization of

the SCT has been the variety of ways of treating the responses. Intra-individual response variability has lead some test constructors as Holsopple and Miale (1954) to favor impressionistic and non-quantitative methods of scoring. However, for research purposes, test development, data relevance and procedural replicability, some rigor and objectivity must be attempted in the scoring system. Summary scores have their limitations, but they also have many advantages. One of the best and more systematically developed scoring systems has been that of Rotter and Rafferty (1950). This seven point scale or a similar procedure has become a model for other test constructors. The scoring manual for the Loyola Seminarian SCT has borrowed much from the Rotter ISB, including the use of scoring examples. What is particularly important is that in using Rotter's approach independent researchers have consistently reported interscorer reliabilities in the nineties.

While it is known that the SCT has been a popular assessment tool in working with clerical and religious populations, the same inadequacies have been found in the lack of standardization, differences in scoring procedures, etc., as is reported in the general use of this test. Our knowledge of the potential effectiveness of this test is still further hampered by the great lack of communication among workers in this field (Rooney, 1966). Much of the psychological research with religious and seminarians has been in the form of unpublished masters theses and

doctoral dissertations or other unpublished reports. Further, since the SCT is often only a part of a battery of tests, the method and results are not reported in detail. Sometimes the only information we have about the SCT is that it was a specially devised form for that particular research purpose.

In several instances the SCT has formed part of a screening program (Vaughan, 1963; Rooney, 1966b) or it has been used to assess the influence of religion on personality patterns (Vaughan, 1956; Sandra, 1957) or it has been used as part of a descriptive or normative battery for general assessment and comparison (Dodson, 1957; Fehr, 1958; Palomo, 1966).

Using an extensive battery, Rooney (1966b) reports effective rating and prediction concerning 133 applicants to a religious community. However, a summary report gave no specific data concerning the SCT or its particular contribution to the battery. Vaughan (1963) likewise reported using a battery to screen 218 male applicants over a five year period. Unfortunately, he used two different SCT forms, first Sacks, then Rohde's. However, using a small sample of 76 persevering seminarians and 55 candidates who left, Vaughan rated responses on the Sacks SCT as follows: 0 for acceptable, 1 for mildly disturbed, 2 for severely disturbed. The SCT records were codes shuffled and scored by the author. Those who left the seminary were reported as having a mean 7.41 (SD 4.19) and those who remained had a mean of 3.34 (SD 3.24). The difference in mean

scores between these two groups was significant at the .01 level of confidence. The group that left the seminary tended to give more responses on the SCT which indicated fear of losing their souls and going to hell. Likewise, it appeared that even though they were less certain about their vocation and called into question the correctness of their choice, they still felt some obligation to enter religious life and give it a try. All in all, in certain cases (about one-fourth of the experimental group) the SCT proved to be an effective instrument as a predictor of failure.

The following two studies were with female religious groups. Although it is apparent these studies are not comparable to the present research, their methodology and general findings are of interest. In a study reported by Vaughan (1956), he used the Sack's SCT to compare personality differences between active and contemplative religious women. In this case, the SCT did not differentiate the groups. Sandra (1957) using the SCT within a battery studied religion as related to selected personality indices. The subjects of this study were five groups of 150 women each; three groups were religious women at different stages of training, a fourth group consisted of Catholic college women and a fifth group was composed of Protestant college women. In an ACPA Newsletter summary (1957), Mother Sandra reported that the SCT used in this study was devised precisely for this investigation. The SCT subscales were concerned with the

evaluation of self, attitudes toward authority and feelings of self-confidence. The writer noted that the two older religious groups secured more deviant scores than the younger candidates on the MMPI and SCT variables. She interpreted these less favorable scores as indicating more intense striving towards perfection which is encouraged when one dedicates one's life to God.

Moreover, the habit of self-reflection and self-criticism with a readiness to acknowledge and even magnify personal limitations is unquestionably reflected in responses to the MMPI and SCT, which are instruments calling for considerable amounts of introspection and self-evaluation. (1957b p.2)

Her findings support nicely the studies mentioned before (Murray 1957); McDonagh, 1961; Hakenewerth, 1966) that religious training (male or female) does tend to elevate scores on certain instruments. It is also interesting to note Sandra's highest (most deviant) scores are reported among novices where training is quite intense, especially in the areas of self-criticism and self-perfection. Again, a general conclusion of this study was that a certain type of person who shows more introversive and perfectionistic tendencies is the one likely to enter religious life.

Very sparse information was available on Dodson's (1957) and Fehr's (1958) study of the religious personality using the SCT as part of a battery of tests. Neither the form or procedure with the SCT is certain. Dodson's study was conducted with Protestant seminarians and his findings were that this group

appeared more guilt ridden, showed more discomfort with sexual and hostile feelings, and appeared more intropunitive in handling hostility and aggression than controls. Fehr reported that, in general, contrary to previous research, in his study the lay group obtained the more deviant scores. Using the Sacks SCT, Palomo (1966) also reported that in terms of adjustment areas measured by this test the seminary group was superior to a matched high school group in all categories but one. Thus in the categories measuring family relationships, the seminarian expressed much less negative feelings toward parents and a closer sense of identity with other family members. However, in interpreting the significance of these findings, it must be remembered a) the seminarians are away from home, considerably removed from the typical family tensions which the average teenager feels keenly b) a good number of stems, especially those related to the father figure, are somewhat negatively loaded and favor a "maladjusted" response. The seminarians also scored more favorably in categories measuring attitudes towards authority, goals and heterosexual relationships. In the last category, however, a good deal of repression and denial was obvious in the responses. Although the profile of both groups was below the level of mild maladjustment in all categories, there were trends toward conflict in the categories expressing fears, attitudes toward father, and feelings of guilt. The breaking down of both seminarians and high school students into high and low maladjust-

ment subgroups indicate there was more intra-group variability than inter-group variability. This supports to some extent the assumption first made by Bier that the adjustment we are trying to measure in our psychological tests cuts through vocational lines. In general, a unanimous criticism of the Sack's SCT is that there are not enough items (only four) per category to feel confident about the tests validity and reliability. The apparent discrepancies between MMPI findings and SCT results i.e. in most instances seminarians appearing more maladjusted than controls on the MMPI and the contrary occurring on the SCT, will have to be further investigated by a) clearly defining the traits measured by a given SCT b) assessing what level of the personality is being tapped by the sentence completion method. This latter issue appears to be one of the most promising areas of information in contemporary research.

CHAPTER III

EXPERIMENTAL PROCEDURE

SUBJECTS

The subjects participating in this experiment were volunteers from six small religious communities. At the time of testing, all participants were enrolled at one of two Catholic, co-educational colleges in the midwest. In this respect, the group is not a typical sample of the enclosed major seminary population. However, if current trends continue, this type of educational setting for religious seminarians will become quite common. Within this arrangement, the seminarian frequently does not wear any distinguishing garb while on campus and has ample opportunity to mix with the lay student population. The majority of seminarians participating in this study were from midwestern states, although there were a few representatives from both the east and west coasts. Within the six communities, five separate religious orders were represented. There was considerable similarity among the religious orders in that they are of the active missionary type communities with members engaged in a variety of contemporary apostolates. Each community was contacted individually and the testing program was arranged to the convenience of the majority of the students.

The entire research project was explained to each group as

an effort to improve psychological instruments for the benefit of the individuals and the student counsellors. The students were assured that anonymity would be preserved and the results of this project would not enter their personal records. While volunteers from all four years of college were requested to take the Loyola Seminarian Sentence Completion Test (LSSCT), only first year students were asked to take both the MMPI and LSSCT. A total of 112 seminarians took the LSSCT and of these, 52 were in the first year group. Two first year SCT's were dropped from the study because they failed to complete the MMPI. Consequently, 50 first year students comprised the cross validation group. The first year students were selected as the cross-validation group since they were the closest in age to the normative group. The age of the first year seminarians ranged from 16-20 with a mean age of 18.3. Although Sheridan compiled his data from tests which had been administered near the end of high school, it is to be noted that these test results were used in the counselling program throughout the college career. A number of the first year seminarians in this study had previously taken the MMPI at some point in their training, as a part of either the screening program or the counselling program. They were requested to repeat the test for this research project. The age range of the second, third, and fourth year college students was from 19 to 28 with a mean age of 20.9.

Because of attendance at university classes and a lack of

local assembly rooms, it was necessary to allow the students to take the test forms and booklets to their private rooms and return the items within a specified time. The students were requested not to discuss the tests or test items with one another until it was certain that all students had completed and returned the forms. In general, cooperation of the six communities was quite spontaneous and ranged from fifty to one-hundred percent of the student body. The major reason given for non-participation in the project was pressing class assignments. Due to changes within the various training programs of a number of the orders, about one-third of the first year students had not taken the religious novitiate nor professed the religious vows of poverty, chastity and obedience. Students were requested to participate regardless of this differentiation, although this and other pertinent information was collected on a brief questionnaire. The test instructions for both the LSSCT and MMPI were printed on the forms and booklets, but in the general explanation of the project, the examiner verbally encouraged the seminarians to respond spontaneously and frankly, especially on the LSSCT.

INSTRUMENTS

(1) MMPI: The Minnesota Multiphasic Personality Inventory (MMPI) is one of the most widely used instruments in the screening and assessment of clerical and religious personnel. The 566

items supposedly reveal some of the major personality characteristics that affect personal and social adjustment. The nine original scales were named on the basis of the normative clinical groups, but research has been so vast and extensive with the MMPI that it has frequently been employed with normal populations. The latest edition of the Mental Measurements Yearbook lists a total 1,394 research articles on this instrument.

The Validity Scales:

- 1) The Question (?) or Cannot Say score reflects the number of unanswered items. A high number of unanswered items would render any conclusion drawn from the other scales questionable. The scale can be ignored in the present study as all first year MMPI's showed a sufficient number of answered questions.
- 2) The Lie (L) score measures the degree to which the subject may be attempting to place himself in the most acceptable light. It is frequently referred to as a scale measuring defensiveness or faking good.
- 3) The F Scale is quite different from the L scale in that it measures validity or internal consistency. There are three possible sources of high F scores: a) the subject is trying to look bad, or b) he might have been very careless, or c) he might actually be severely maladjusted.
- 4) The K Scale is a correction factor which modifies certain scales in order to sharpen their discriminatory power within the borderline abnormal score range.

The Clinical Scales:

- 1) The Hypochondriosis (Hs) Scale picks up abnormal concern over bodily functions. Usually this concern is related to psychosomatic illness and faulty insight concerning adult problems.
- 2) The Depression (D) Scale was derived from persons who manifested the clinical signs of a depressed state. High scores can likewise indicate a pessimistic outlook on life and the future.
- 3) The Hysteria (Hy) Scale is closely allied to the Hs scale, but it is often indicative of greater elaboration of the physical symptoms. Often physical illness or repression becomes a principal defense mechanism.
- 4) The Psychopathic Deviate (Pd) Scale is an index of social conformity and similarity. A disregard for social mores often expresses itself in a form of opposition to authority or an excessive assertion of independence.
- 5) The Masculinity-femininity (Mf) Scale is generally regarded as an interest index rather than an accurate measure of sexual adjustment. This is particularly true within a college population. It appears the original population used to construct this scale was too small and it did not reflect a typical pattern of male sexual inversion nor did it make allowances for such important differences such as education.
- 6) The Paranoia (Pa) Scale identifies high scores on items



which were considered indicative of suspiciousness, oversensitivity and delusions of persecution with or without expansive egotism.

7) The Psychasthenia (Pt) Scale reflects similarity to people who are troubled by phobias or compulsive behavior. It is also likely to indicate the presence of excessive worry, difficulties in concentration, guilt feelings and excessive vacillation in making decisions.

8) The Schizophrenia (Sc) Scale is a measure related to the degree to which the person thinks and reacts like others about him. Unusual thought patterns and tendencies to withdraw from the world are also frequently reflected in this scale.

9) The Mania (Ma) Scale attempted to identify an abnormally high activity level or the superficial unproductive enthusiasm which often characterized the poorly adjusted.

10) The Social Introversion (Si) Scale was not one of the original clinical scales, but it has been widely used in recent research with the MMPI. The scale is meant to measure tendencies towards ease and readiness to make social contacts and assume social responsibilities.

The standard group form booklets were used in the test administration and the answer forms were scored by hand by the examiner. In this project, the MMPI is being used clinically as a validating criteria for "need of psychotherapy". On the suggestion and experience of Dr. Kobler, the criterion for "need

of psychotherapy", (better phrased as need for further psychological investigation) in a religious seminarian population is a MMPI mean score of at least 58 and three or more clinical scales (not including Mf) above 70.

(2) The LOYOLA SEMINARIAN SENTENCE COMPLETION TEST

The LSSCT is composed of 100 semi-structured stems, 84 of which have some personal reference (I, my, me). The stems, as well as the accompanying printed instructions, appear in Appendix I. The stems were in large part assembled by Dr. Frank J. Kobler of Loyola University, Chicago. Some of the stems are found in already existing sentence completion tests such as Sacks (1950). Other stems are original and all stems are hopefully sufficiently structured to elicit responses in one of six predetermined categories. These categories, i.e. attitude towards self, the priesthood, family relationships, women, others and important issues (motivation), have proven to be of considerable significance by those counselling seminarians. These 100 stems were administered for the past four years as part of a battery of tests to graduating high school diocesan seminarians and the results transferred to the student counselors at St. Mary's Seminary, Niles, Illinois. As a doctoral dissertation for Loyola, Mr. Edward Sheridan is assembling these data as a normative group for this particular SCT and for the formulation of a standard scoring manual.

The scoring system is very closely related to that of

Rotter (1950) except that a seven point scale is used rather than a six point scale. Number four represents the midpoint or "neutral" response; number one represents the extreme favorable, or well-adjusted response; number seven represents the most unfavorable or maladjusted response. The Overall total sum score of the 100 stems represents a total adjustment score, similar again to the total score of the Rotter test. The total score can be broken down into six subtest scores, representing the above-mentioned categories. In the attitude toward self score there are 33 stems; in the attitude toward the priesthood score, 16 stems; the family relationships score, 14 stems; the attitude toward women score, 7 stems; the attitude toward others score, 14 stems; and 16 stems in the important issue score.

Briefly, Mr. Sheridan used the following procedures to relate stems and categories and assemble the scoring manual and examples. Two clinical Ph.D. psychologists working together assigned each stem to the category it best measured. As mentioned earlier, although the SCT is often considered a projective technique, there is no such thing as a completely unstructured stem (Forer, 1950, 1960). Each stem was carefully examined as to the content of the responses most typically elicited. The scoring norms and samples represent agreement by at least three out of four experienced Ph.D. clinical psychologists. Mr. Sheridan sent the same protocols to these four psychologists who scored them independently. All of the psychologists have done

extensive work with the SCT and were acquainted with the nature of this particular type of population. However, it should be noted that none of the psychologists were clerics or former seminarians; nor were all Catholic. Only when at least three out of the four agreed upon a single score for a given response was that response entered in the manual as a normative example. The manual and norms from the accumulated data will appear in Mr. Sheridan's dissertation.

It should be noted that since this test is tailor-made for a seminarian population, it could not be used with a lay population without radically changing many of the stems and consequently making a completely different SCT. Even using the LSSCT with religious seminarians required the modification of three stems. The modifications were as follows:

70. (original) When I go to Niles seminary,
I will miss
(modified) When I leave this seminary,
I will miss

83. (original) What I look forward to most
at Niles seminary
(modified) What I look forward to most
in theology

100. (original) Being a secular priest in Chicago
(modified) Being a religious priest

A face sheet on the LSSCT asked useful information such as the time entered the seminary, whether the religious novitiate and vows had been taken, etc. A facsimile of this face sheet also appears in the appendix.

All tests were coded and scored by the examiner using Mr. Sheridan's manual. Some minor difficulties in scoring were discussed and worked out with Mr. Sheridan. He has assumed responsibility for reporting interscorer reliability data which he has found to be quite high so that one trained scorer can be justified in this study. The examiner also used the technique of scoring several stems at a time (5-10) which reduced possible "halo-effect" on any one protocol. As in the Rotter test, an extra point is scored for excessive length of response. A correction factor is applied to scores for an omitted response.

The formula for the total score is :
$$(\text{score}) \frac{100}{100 - \text{omissions}}$$

This formula is also used for the sub-test scores except that the number of items in a given category (thirty-three, sixteen, etc.) is used wherever 100 appears in the formula.

(3) RATINGS

In order to reproduce the original study with the Niles group, it was necessary to obtain a rating on each subject by two observers familiar with the individual students. In the case of the Niles group, it was convenient and fortunate that Mr. Sheridan was able to obtain these joint (agreed upon by both observers) ratings from two psychologists on the seminary staff. In the present study, the rating was also dichotomous, i.e. the student at the present time was judged to be not in need or in need of psychotherapy. Since six separate communities were

involved in the present study, it was necessary to have two raters for each group. These raters were not trained as psychologists yet they were in positions of responsibility and in close contact with the seminarians. In most cases, it was the student moderator (prefect) and his assistant. Each rater had been in daily contact with the students in his community for a period of at least three months. Some raters had been associated with the students for as much as three years. To assist the raters in the idea and scope of this project, a checklist of 16 common indicators of need of psychotherapy was given and explained to each set of raters. The examiner would present a name of a participating first year student to the raters and by reviewing the list of indicators and discussing outstanding characteristics of the subject, agreement was reached regarding present need of psychotherapy. In this phase of the project, the examiner is particularly indebted to all participating raters as they were most courteous and thoughtful in their efforts. They gave liberally of their time and did not take their judgments lightly. The detailed explanation of the rating as well as the checklist of maladjustment indicators is given in Appendix II.

CHAPTER IV

RESULTS AND DISCUSSION

In reporting the results of the 50 first year students, it is necessary to treat them as a single group and not break them down into six separate communities. In the comparison in Table 1 with other religious and clerical groups on the MMPI, it is evident that this group has unusually elevated scores.

Table 1

MMPI Central Tendencies for Five
Groups of Male Religious and Diocesan Seminarians

Group	N	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Mean
A	135	53	53	55	55	58	56	59	58	53	56
B	188	51	49	52	53	56	52	55	57	52	53
C	208	52	55	57	63	68	54	56	61	57	58
D	80	55	56	59	58	67	57	64	64	56	60
E	50	55	58	60	59	67	58	67	66	59	61

A. McDonagh (1961) Secular. Minor Diocesan Seminary. Mean age 19.

B. Gorman (1961) Secular. Minor Diocesan Seminary. Mean age 18.

- C. Weisgerber (1964) Order Applicants. High School Graduates.
- D. Hakenewerth (1966) Order. Religious Brothers. Mean age 28.
- E. Present study. Order. Mean age 18.

However, listing the peak scales in descending order, it is also clear that this group profile follows the typical seminarian and religious pattern as reported in the review of the literature. The unusually large standard deviations indicate a wide spread of scores in this group.

Table 2
MMPI Scales for Entire Group

SCALE	MEAN	STANDARD DEVIATION
Mf	66.94	13.24
Pt	66.52	14.04
Sc	65.84	12.55
Hy	59.78	9.63
Ma	59.02	11.56
Pd	58.92	11.14
D	57.52	12.94
Pa	57.52	10.08
Hs	54.66	9.9
Si	51.18	10.51

Figure I (following page) presents a graphic representation not only of the typical religious-clerical MMPI profile, but also demonstrates vividly in this case how extreme deviant scores raise the entire group mean. For such a small N, it was obvious quite a number of individuals in the upper third had highly deviant scores as measured by the MMPI. It was thought that one important possible source of variance in scores might come from the differentiation of the population between those who had made religious novitiate and professed the religious vows and those who had not. This hypothesis was tested by separating the non-novitiate, non-professed scores on the MMPI and comparing their means with the remaining professed group. The mean of all MMPI scores for both the professed and non-professed groups was nearly identical on all clinical scales or varied by non-significant differences. It was evident that there was as much variability and proportion of extreme scores in the non-professed group as in the professed group. Hakenewerth attributes the higher scores in his group to two factors: a) age and b) the routine and regimentation of religious life. He feels the elevated scores seen in diocesan seminarians drops after ordination because the nature of the active ministry allows greater liberty for individual adjustment. A number of hypotheses might be suggested for the elevated scores in this group. For instance, selection procedures have been changing over the past few years and some observers feel the smaller

MMPI

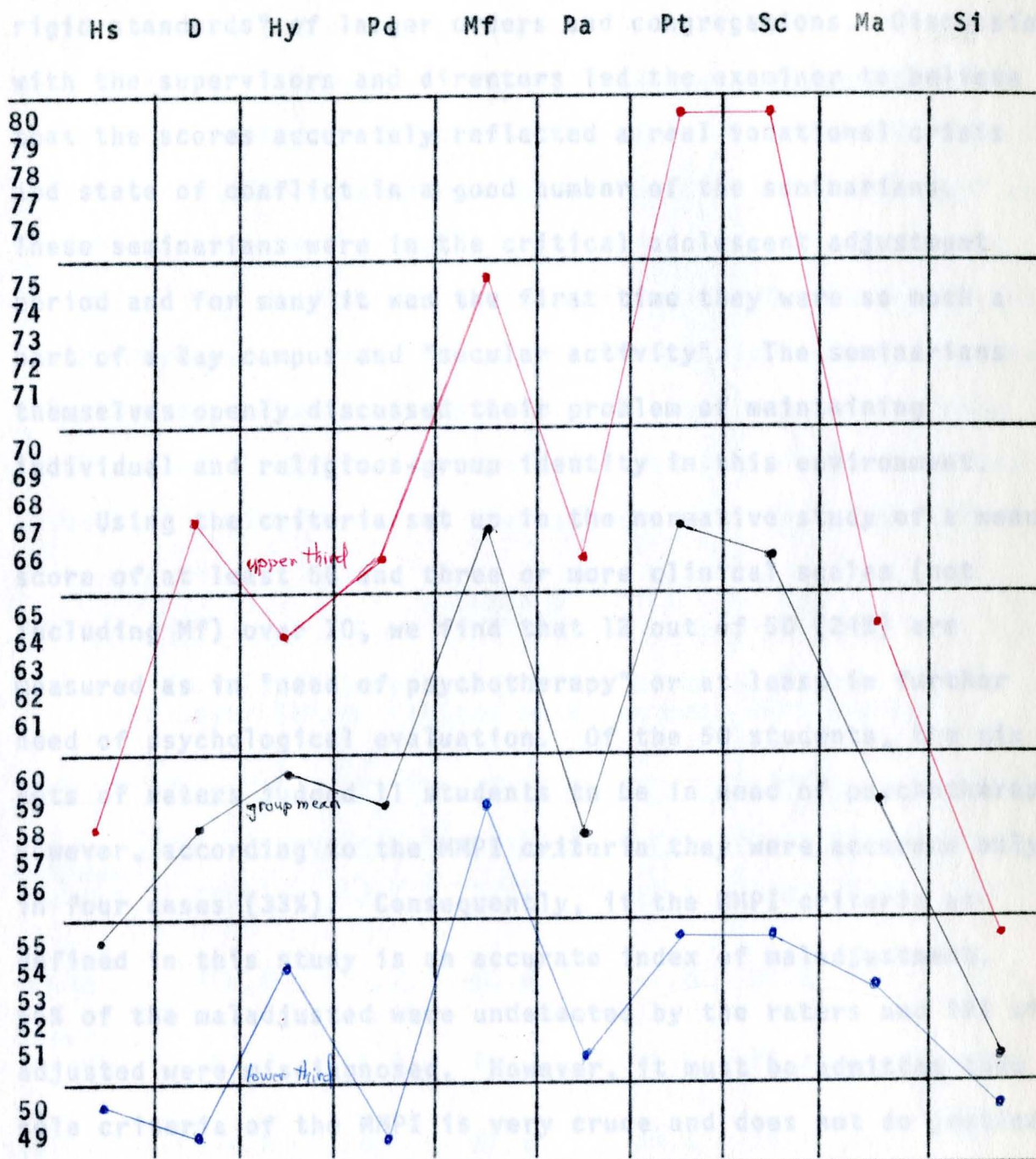


FIGURE I

MMPI Profile for entire group and profiles for upper third and lower third of group

religious communities have not yet been able to accept "the more rigid standards" of larger orders and congregations. Discussions with the supervisors and directors led the examiner to believe that the scores accurately reflected a real vocational crisis and state of conflict in a good number of the seminarians. These seminarians were in the critical adolescent adjustment period and for many it was the first time they were so much a part of a lay campus and "secular activity". The seminarians themselves openly discussed their problem of maintaining individual and religious-group identity in this environment.

Using the criteria set up in the normative study of a mean score of at least 58 and three or more clinical scales (not including Mf) over 70, we find that 12 out of 50 (24%) are measured as in "need of psychotherapy" or at least in further need of psychological evaluation. Of the 50 students, the six sets of raters judged 11 students to be in need of psychotherapy. However, according to the MMPI criteria they were accurate only in four cases (33%). Consequently, if the MMPI criteria as defined in this study is an accurate index of maladjustment, 66% of the maladjusted were undetected by the raters and 18% of adjusted were misdiagnosed. However, it must be admitted this sole criteria of the MMPI is very crude and does not do justice to the accuracy of the evaluations made by the raters. For instance, a number of those seen by the raters as in need of psychotherapy have mean MMPI scores over 60 with one or two

elevated scales. This type of profile would probably suggest further investigation to the psychologist as well.

However, since we are dealing with psychological tests and possible cut-off scores, we must see if the LSSCT is any better in detecting maladjustment or "need of psychotherapy" as measured on the MMPI criteria. As in reporting the MMPI mean scores, we can compare the group mean scores with the upper and lower third mean scores (the upper and lower third's having been selected on the basis of the mean MMPI score, not on the mean LSSCT scores). The intra-group differences again demonstrates an unusually wide spread of scores for a relatively small N.

Table 3

Mean LSSCT Scores for Entire Group and Upper
and Lower Thirds (thirds based on mean MMPI scores)

	Total	Score	Self	Priesthood	Family	Women	Others	Issues
Maximum Neutral	(400)	(132)	(64)	(56)	(28)	(56)	(64)	
Entire Group	375.6	135.7	60.6	47.6	24.5	48.2	60.1	
Upper Third	403.9	145.5	64.0	54.0	25.2	51.3	63.6	
Lower Third	354.2	128.8	55.6	43.1	23.7	46.0	57.0	

The "maximum neutral" score represents the highest possible

score within a given area if all items were answered with a well-adjusted or neutral response (i.e. rated as four). It is interesting to note that it is only on the stems referring to the self-concept or attitudes towards self that the group mean and upper third group mean exceed the maximum neutral score. The upper third total score also slightly exceeds the maximum neutral total score, but it is evident that the self-concept will be the most productive area of investigation with this religious seminarian population.

When it comes to comparing LSSCT scores with the maladjustment criteria of the MMPI, Table 4 shows significant improvement over the raters' predictions. Without setting up any artificial cut-off point, but merely selecting 400 as a maximum limit for the well-adjusted or neutral (defensive) responses, we find the LSSCT has accurately defined 75 percent of the cases in need of psychotherapy and "mis-diagnosed" only 8 percent of the defensive and/or "well-adjusted" group. (Table 4) page 46.

Table 4

Number of Cases Scoring Above and Below
400 On the LSSCT Compared to the MMPI Criteria

Misses	
Over 400 pts on LSSCT Less than 3 MMPI Scales over 50	400 Points or less on LSSCT More than 3 MMPI Scales over 70
<u>4</u>	<u>3</u>
HITS	
Over 400 pts on LSSCT 3 or more scales above 70	400 Points or less on LSSCT Less than 3 MMPI Scales over 70
<u>9</u>	<u>34</u>

Another interesting finding in this group which seems to indicate that the LSSCT is sensitive to disturbance as measured on the MMPI, is that every student who obtained 401 or more points on the LSSCT also had at least one clinical scale elevated above 70. Possible reasons why three students with more than three MMPI scales over 70 failed to score over 400 on the LSSCT will be discussed later. Evidently, since the rater evaluations were not too accurate using the MMPI criteria, we find the same low correlation between the raters judgements and the LSSCT scores. Only three of the eleven designated by the raters as in need of psychotherapy had scores of 400 or more points on the

LSSCT. Here again, a forced dichotomous rating reflects unfavorably on the judges. It was felt a rating by the judges on a continuous point scale might have shown a more promising correlation with the other criteria.

To determine more precisely how closely the adjustment index on the LSSCT correlates with the mean MMPI scores, a correlation coefficient (Pearson r) was obtained between the two tests. Coefficients were determined not only for the total LSSCT and the mean MMPI score, but also for each of the six sub-test scores and the mean MMPI score.

Table 5

Correlation Coefficients for Mean MMPI Score,
Total LSSCT Score and Six Sub-test Scores

Total LSSCT Score	Self	Priesthood	Family	Women	Others	Issues
.88	.80	.69	.85	.21	.50	.62

With this population in which we can assume a certain amount of spontaneity and honesty (the test was voluntary), it appears the LSSCT is a reasonably valid and accurate instrument in assessing the type of maladjustment which is also picked up in extreme scores on the MMPI. The very high correlations between the mean

MMPI and the self and family attitudes suggest these are critical areas in the investigation of the religious personality. It is difficult to compare these findings with previous studies since only sparse information on the SCT used is available. The high correlation between the mean MMPI and the family relationship score does not seem to agree with Palomo's (1966) conclusion that the seminarian appears well-adjusted in family relationships. The high correlation between the mean MMPI and the self-concept score is probably not reflecting greater introspective tendencies (Sandra, 1957), but in this case appears to indicate an actual strong self-identity conflict.

In regard to the three subjects who attained more than 3 critical scales on the MMPI and less than 400 pts. on the LSSCT, it appears that they failed to reach the cut-off point by only a few points.

The answer to the problem of any number of score discrepancies on such instruments as the MMPI and SCT may well be related to a) the "level of consciousness" tapped by the respective instrument b) the awareness or insight the subject has with respect to his own problems c) the willingness or communicability of the subject regarding his personal life.

There are several important differences in looking at elevated scores on the MMPI and the LSSCT. Quantified scores only assist in obtaining objective or semi-objective recording procedures for the sake of comparison. Mean scores or T scores

on the MMPI tell us about a "type" of person or a probable pattern of problems and defense mechanism. In the LSSCT scores, it appears possible not only to arrive at a reliable index of adjustment, but also have the problem areas spelled out in the subject's own words rather than defined on a clinical normative basis. If, for instance, a maladjusted protocol appears on a seminarian's MMPI test record, we can frequently anticipate elevated Pt and Sc scales. This may give us some general information or ideas that the subject has unusual thought patterns, is in a state of conflict and has some obsessive-compulsive tendencies. A corresponding poor adjustment score on the LSSCT will probably indicate problems in the identity crisis (self-concept) and in the area of family relationships (scores contributing most to maladjustment). But in the latter case, we are not left with a mere comparative adjustment score, but can refer to the content of the subjects own responses for his individual expression of the problem. This is an advantage of the LSSCT which the test users at Niles have recognized and praised, but up to this point have not been able to share with other counsellors working in similar settings.

The LSSCT was also administered to 60 second, third, and fourth year seminarians of the same religious groups. Table 6 reports the scores of the younger and older groups. (Table 6 p50)

Table 6

Mean LSSCT Scores for Younger and
Older Seminarians of Same Religious Communities

		Total	Score	Self	Priesthood	Family	Women	Others	Issues
Maximum									
Neutral		(400)	(132)	(64)	(56)	(28)	(56)	(64)	
Younger M		375.66	135.74	60.60	47.64	24.52	48.16	60.10	
Group									
(N=50)	SD	26.50	15.94	6.98	9.58	4.13	6.71	6.29	
Older M		376.47	133.32	60.73	48.07	25.78	48.68	59.73	
Group									
(N=60)	SD	28.30	3.28	8.16	7.92	3.40	6.68	7.04	

There were no significant differences in the total scores or subtest scores of the older and younger groups. The closeness of mean scores and similarity of variability suggest that at this phase of development the self-concept and problem of family relationships remain key issues in determining satisfactory adjustment.

The particular contribution of the LSSCT may indeed be one of clinical assessment, but not so much in terms of a screening instrument as was the frequent use of the MMPI, but as a source and starting point for therapy and goals for better and more mature adjustment within the clerical-religious way of life. It is only after scoring a large number of these protocols that one becomes aware of the insights that can be achieved through the

individual thought expressed in the response. Hopefully, the LSSCT or a refined similar version will be further studied and explored as a valuable instrument in the assessment of the clerical and religious personality.

CHAPTER V

SUMMARY AND CONCLUSIONS

The present study attempted to cross-validate the Loyola Seminarian Sentence Completion Test on a group of 50 first year college, religious seminarians. The participants were volunteers from six separate religious communities. The normative data for the LSSCT was assembled over a four year period at St. Mary's Diocesan Seminary, Niles, Illinois. These data, the formulation of a scoring manual and essential information regarding inter-scorer reliability is reported in the doctoral dissertation of Mr. Edward Sheridan of Loyola. The present study was limited to first year college seminarians as they were the closest in age to the normative group. In replicating the original study, the first year seminarians were given the LSSCT, the MMPI and each participant was rated by two priest supervisors whether he presently appeared in need of psychotherapy.

Although this group scored somewhat high on the MMPI as compared to earlier reported studies, the profile peaks and variability followed a pattern typical of the seminarian population. From previous research with the MMPI on this type of population, a cut-off point was arbitrarily set as a mean MMPI score of at least 58 and three or more scales over 70. This would, for the present study, identify maladjustment or "need of psychotherapy".

The LSSCT consisted of 100 stems. The scoring technique was designed after Rotter's (1950) method using the manual with norms and examples compiled by Mr. Sheridan. Each response was scored on a seven point scale. Number four represented a mid-point or neutral response with numbers one through three representing degrees of favorable or adjusted responses and numbers five through seven, degrees of unfavorable or poorly-adjusted responses. The total test score (maximum 700 points) represents an over-all adjustment index. The total score is further analyzed into six subtest scores which reflect attitudes towards self, the priesthood, family relationship, women, others (friends co-workers, etc.) and important issues (motivation towards tasks and goals). Without selecting an arbitrary cut-off point for this particular group, it was found that 400 points on the LSSCT (the maximum score for well-adjusted and neutral responses) was an effective point of comparison.

1. Agreement was rather low between the raters' judgments and the MMPI criteria and the raters' judgments and high scorers on the LSSCT. The raters judged only 33 percent of the cases in need of psychotherapy accurately as measured on the MMPI criteria. Only 27 percent of those they judged in need of psychotherapy had scores above 400 points on the LSSCT.

2. The LSSCT accurately identified 75 percent of the cases in need of psychotherapy as measured on the MMPI and "mis-diagnosed" only eight percent of the well-adjusted group. All

subjects scoring more than 400 points on the LSSCT had at least one clinical MMPI scale above 70.

3. Correlation coefficients were determined between the LSSCT and mean MMPI scores. The total LSSCT score correlated .88 with the mean MMPI and the subtests measuring attitudes towards family relationship and the self-concept correlated .85 and .80 respectively with the mean MMPI score.

4. It appears the LSSCT is a valid measure of maladjustment with a religious seminarian population. The LSSCT not only produces a quantified score for comparative purposes, but the total test score is sub-divided in six categories critical for counseling and therapy. The LSSCT has the additional advantage of content analysis, i.e. further expression of the subject's problems in his own words.

5. The comparison of the first year group scores (N=50) did not reveal any significant differences with total and sub-test scores of second, third and fourth year seminarians (N=60). The same problematic areas of adjustment appeared in the older group as in the younger group.

Hopefully, further research will be conducted with this instrument so that results can be communicated and the effectiveness and advantages in this procedure will profit the diagnostician, the counsellor and the seminarians.

REFERENCES

- Bier, W.C. A comparative study of a seminary group and four other groups on the MMPI. Ph.D. Catholic Univer., 1948. Also in Stud. Psychol. and Psychiat. 1948, 7, 3.
- Bier, W. C. Psychological tests in the screening of candidates in the minor seminary. N. C. E. A. Bull., 1954, 51, 128-135.
- Bier, W. C. Psychological evaluation of religious candidates. N. C. E. A. Bull. 1959, 56, 341-345.
- Burke, H. R. Personality traits of successful minor seminarians. Washington, D.C.: Catholic Univer., 1947.
- Burke, H. R. Tests and measurements in the minor seminarians. Catholic. Educ. Rev., 1955, 53, 455-466.
- Buros, O. K. The sixth mental measurements yearbook. N.J.: Gryphon Press, 1965.
- Campbell, D. T. A typology of tests, projective and otherwise. J. consult. Psychol., 1957, 21, 207-210.
- Coville, W. J. Psychologists and the assessment of candidates for religious life, Part II. ACPA Newsletter Supplement, 1962, 60.
- Coville, W. J. Basic issues in the development and administration of a psychological assessment program for the religious life. Paper presented at Amer. Cathol. Psychol. Ass. Assessment Workshop. N. Y.: 1966.
- Dodson, F. J. Personality factors in the choice of the Protestant ministry as a vocation. Unpub. Ph.D., Univer. of S. Calif., 1957.
- Dunn, R. Personality patterns among religious personnel: a review. Cathol. Psychol. Rec., 1965, 3, 2, 125-137.
- Edwards, A. L. Statistical analysis. N.Y.: Rinehart & Co., 1958.
- Fehr, R.C. An inventory and projective personality study of a religious and lay group. Unpubl. Ph.D., Fordham Univer., 1958.
- Forer, B. R. A structured sentence completion test. J. proj. Tech., 1950, 14, 15-29.

- Forer, B. R. Sentence completion. In A.C. Carr (Ed.), The prediction of overt behavior through the use of projective techniques. Springfield, Ill.: C.C. Thomas, 1960, pp. 6-17.
- Gardner, La M.M. The screening value of Rorschach scales designed to assess ego-structure and ego-functioning. Unpub. Ph.D., Chicago: Loyola Univer., 1964.
- * Godfrey, R. J. Predictive value of the MMPI with candidates for the religious brotherhood. Unpubl. M.A., Marquette Univer., 1955
- Goldberg, P.A. A review of sentence completion methods in personality assessment. J. proj. Tech., 1965, 29, 12-45. Also in Murstein, B. I. (Ed.) Handbook of projective techniques. N.Y.: Basic Books, 1965, pp. 778-821.
- * Gorman, J. R. Adjustment and interests of fourth year minor seminarians studying for the diocesan priesthood. Unpubl. M. A., Chicago: Loyola Univer., 1961.
- * Hakenewerth, Q. The effect of religious life on the MMPI scores of religious brothers: a longitudinal study. Unpubl. M. A. Chicago: Loyola Univer. Press, 1964.
- * Herr, V. V. Selecting seminarians. In Screening candidates for the priesthood and religious life. Chicago: Loyola Univer. Press, 1964.
- Holsopple, J.Q., Miale, Florence, R. Sentence completion: a projective method for the study of personality. Springfield, Ill: C. C. Thomas, 1954.
- Kelly, Sr. M. The incidence of hospitalized mental illness among religious sisters in the United States. Amer. J. Psychiat., 1958, 115, 72-76.
- Kelly, Sr. M. Depression in the psychoses of members of religious communities of women. Amer.J. Psychiat., 1961, 118, 423-425.
- Kenneally, W.J. Psychiatric tests for seminarians. N. C. E. A. Bull., 1954, 51, 89-95.
- Kimber, J. Interests and personality traits of Bible Institute students. J.soc. Psychol., 1947, 26, 225-233.
- * Kobler, F. J. Screening candidates for religious life. J. Relig. Hlth., 1964, 3, 161-170.

- Markert, D. S. Opinions about the priesthood in Catholic high school boys and minor seminarians. Unpubl. Ph.D., Chicago: Loyola Univer., 1963.
- X McAllister, R. J. and Vanderveldt, A. Factors in mental illness among hospitalized clergy. J. Nerv. and Ment. Disorders, 1961, 132, 80-87.
- X McCarthy, T. N. Personality traits in seminarians. Stud. Psychol. & Psychiat. Cathol. Univer., 1942, 5, 4.
- X McCarthy, T. N. and Dondero, E. A. Predictor variables and criteria of success in religious life. Cathol. Psychol. Rec., 1963, 1, 71-80.
- X McDonaugh, A. J. A study of adjustment and interest of first year college seminarians for the diocesan priesthood. Unpubl. M.A. Chicago: Loyola Univer., 1961.
- Meltzoff, J. The effect of mental set and item structure on response to a projective test. J. abnorm. soc. Psychol., 1951, 46, 177-189. Also in Murstein, B. I. (Ed.) Handbook of projective techniques. N.Y.: Basic Books, 1965, pp. 836-857.
- X Menges, R. J. and Dittes, J. E. Psychological studies of clergymen: abstracts of research. N. Y.: T. Nelson & Sons, 1965.
- X Moore, T. V. Insanity in priests and religious. Amer. Eccl. Rev., 1936, 95, 485-498 and 601-613.
- Muldoon, J. A. The role of the psychologist as consultant to religious communities. Cathol. Psychol. Rec., 1965, 3, 1, 39-50.
- X Murray, J. B. Training for the priesthood and personality interest test-manifestation. Unpubl. Ph.D., Fordham Univer., 1957.
- Murstein, B. I. Handbook of projective techniques. New York: Basic Books, Inc., 1965.
- X Murtaugh, J. J. A longitudinal study investigating the predictability of MMPI and the Kuder for Diocesan seminarians. Unpubl M. A. Chicago: Loyola Univer., 1965.
- X Peters, Sr. R. A study of the intercorrelations of personality traits among a group of novices in religious communities. Stud. Psychol. & Psychiat., 1942, 5, 7.

X Palomo, F. A study of the relative personality adjustment of minor seminarians versus regular catholic high school seniors in fifteen categories using the Sacks Sentence Completion Test. Unpubl. M. A., Chicago: Loyola Univer., 1966.

X Rice, P. An MMPI study of religious seminarians. Unpubl. M. A., Chicago: Loyola Univer., 1958.

Rohde, Armanda R. Explorations in personality by the sentence completion method. J. appl. Psychol., 1946, 30, 169-181.

X Rooney, J. J. Needed research on the psychological assessment of religious. Paper presented at Amer. Cathol. Psychol. Assn. Assessment Workshop. N. Y.: 1966a.

Rooney, J. J. Psychological assessment in a community of teaching sisters. Cathol. Psychol. Rec., 1966b, 4, 1.

Rotter, J. B., Rafferty, Janet E. Manual: the Rotter incomplete sentence blank. New York: Psychol. Corp., 1950.

Sacks, J. M. The relative effect on projective responses of stimuli referring to the subject and of stimuli referring to other persons. J. consult. Psychol., 1949, 13, 12-20. Also in Murstein, B. I. (Ed.) Handbook of projective techniques. N. Y.: Basic Books, 1965, pp. 823-834.

Sacks, J. M. Levy, S. Sentence completion test, in Abt, L. E. and Bellack, L. (eds.) Projective psychology. New York: Knopf, 1950.

Sandra, Sr. E. Degree of adherence to the Catholic religion as related to selected personality indices. Unpubl. Ph.D. Fordham Univer., 1957.

Sandra Sr. E. Influence of religion on personality patterns. ACPA Newsletter Supplement, 1957, 29.

Sheridan, E. Loyola seminarian sentence completion test. Unpubl. Ph. D., Chicago: Loyola Univer., 1967.

Stotsky, B. A., Weinberg, H. The prediction of the psychiatric patient's work adjustment. J. counsel. Psychol., 1956, 3, 3-7. Also in Murstein, B. I. (ed.) Handbook of projective techniques. N. Y.: Basic Books, 1965, Pp. 899-906.

Sundberg, N. D. The practice of psychological testing in clinical services in the United States. Amer. Psychologist, 1961, 16, 79-83.

- x Sweeney, R. H. Testing seminarians with the MMPI and Kuder: a report of ten years of testing. Unpubl. M. A., Chicago: Loyola Univer., 1964.
- x Vaughan, R. P. A study of personality differences between contemplative and active religious women. Unpubl. Ph.D., Fordham Univer., 1956.
- x Vaughan, R. P. A psychological assessment program for candidates to the religious life: validation study. Cathol. Psychol. Rec., 1963, 1, 65-70.
- x Wauck, L. An investigation into the use of psychological tests as an aid in the selection of candidates for the diocesan priesthood. Unpubl. Ph. D., Chicago: Loyola Univer., 1956.
- x Weisgerber, C. A. Survey of a psychological screening program in a clerical order. In Herr, V. (Ed.) Screening candidates for the priesthood and religious life. Chicago: Loyola Univer. Press, 1964.

APPENDIX I

Name: _____ (face sheet) Code number _____

Date: _____

Age: _____ Birthplace: _____

Name of your religious community: _____

Have you completed the religious novitiate? _____

At what point did you enter the seminary? (list year and level, i.e., H.S. or College). _____

Present year of study (circle one)	High School	1	2	3	4
	College	1	2	3	4
	Theology	1	2	3	4

List family members and ages

Father _____

Mother _____

Have you used, or do you intend to use, the student counseling services? _____

N.B. Please use your code number (indicated top right this page) for the Sentence Completion test or any other test taken for the examiner.

Code number _____

Date: _____

Please finish off the following "incomplete sentences" with any conclusion you wish. Since the aim of this exercise is to help you attain some added understanding of yourself, try to express notions that have real meaning for you.

1. When the odds are against me
2. I could be happy if
3. It seems to me that priests
4. Strangers
5. When I think of women
6. The fellows I like least
7. Living away from home
8. At times I worry
9. I take pride in
10. Being away from girls
11. I wonder if I have the ability to
12. Some people in authority
13. I feel uneasy with people who
14. My conscience
15. When I see that others are doing better than I
16. I wish I could decide
17. I become sad
18. Performing in public
19. when I am alone
20. The thought of getting married

21. My vocation
22. What I dread most about the seminary
23. When it comes to spending money
24. It makes me self-conscious
25. I know it is silly, but I feel nervous whenever
26. Of all the things about myself, I wish I could improve
27. At times I have felt ashamed
28. My fellow students
29. If I did not go to the seminary
30. I can't make up my mind
31. Compared with others, I
32. Sometimes I am suspicious of
33. My father hardly ever
34. My (brother) (sister) and I
35. When I am about to face a new situation
36. When I was a child, my family
37. When I feel sexual impulses
38. I wish that priests
39. My parents think that I
40. If someone gets in my way
41. When I am not around, my friends
42. My mother and I
43. The thought of so much praying
44. My secret ambition

45. The fellows I tend to hang around with
46. If my parents had only
47. The turning point in my life
48. My father and I
49. At night I
50. What I have to do now is
51. I wonder whether the seminary regulations
52. When I am with priests
53. My health
54. It makes me mad
55. I most like
56. The people I find it hardest to get to know
57. When I meet a girl
58. I like working with people who
59. I am apt to get discouraged when
60. My feelings about married life
61. I was never happier than
62. I resent
63. People who work with me usually
64. Most of my friends don't know that it makes me nervous
65. I suspect that my greatest weakness
66. The girl I
67. I wish
68. Getting to know a priest
69. Any trouble I have with studies

70. When I leave this seminary, I will miss
71. When I have trouble with someone
72. People whom I consider my superiors
73. Deciding on my vocation
74. What I think will be my biggest problem
75. Nothing is harder to stop than
76. I wonder whether seminary studies
77. I feel particularly guilty about
78. I wonder if a priest
79. Because of my parents
80. I wonder if the spiritual life
81. The seminarian's attitude towards girls
82. My family
83. What I look forward to most in theology
84. I wonder if one of my motives
85. If my father would only
86. I think that sports
87. When I sense that the person in charge is coming
88. Compared with most families, mine
89. I get tense whenever
90. I wonder if I am weaker than many others in
91. What I want out of life
92. I hesitate
93. Compared with my mother, my dad

- 94. Things I have done
- 95. The greatest difficulty facing a priest
- 96. I feel closest to
- 97. Children
- 98. I think of myself as
- 99. I suffer most from
- 100. Being a religious priest

APPENDIX II

CONFIDENTIAL

Rater's Name: _____ Position: _____

Religious order or Congregation: _____

Length of acquaintanceship with first year students: _____

You are requested to rate each first year college seminarian who participated in this research on the following question
"whether I believe this seminarian is in need of psychotherapy (professional student counseling) at this time" [Y] . . . or, "I do not believe this student is in need of psychotherapy at this time" [N].

The following is simply a checklist of behavioral items which may assist in this judgement. This judgement will be held confidential and does not represent an opinion about a student's probable perseverance in the religious life. Any one of the following indicators would suggest possible need of counseling or psychotherapy. If two or more indicators are present, it would seem safe to assume the person is in need of some help. (N.B. This list is not exhaustive. There may be other reasons which might suggest the need of professional counseling.)

1. Bizzare or eccentric behavior which distinguishes this seminarian from the rest of the group.
2. Presence of squinting, stammering, stuttering.
3. History of nervous breakdowns.
4. Persistent fears, nightmares, obsessions.
5. Frequent behavior problems. e.g. truancy, disobedience, negativism.
6. Difficulty with hostility towards peers or superiors; temper tantrums, etc.
7. Excessive withdrawal; poor social contact.
8. Extreme passivity; lengthy daydreams; little emotional reactivity; excessive sleeping.

9. Hyperactivity; overtalkative; frequent mood swings.
10. Somatic disorders: frequent migraines, ulcers, over-eating, etc.
11. Instability in undertakings. (or lack of perseverance in undertakings).
12. Sex problems: habitual masturbation; overconcern with sex topics, homo-erotic tendencies.
13. Admitted strong feelings of apprehension, isolation, guilt or anxiety.
14. Extreme egotism.
15. Extreme emotional or ideational rigidity, inflexibility.
16. Admitted strong feelings of inferiority, inadequacy, lack of self-confidence.

Please list student's name (or code number if known) and circle "Y" if you believe he is in need of psychotherapy; "N" if not in need of professional counseling or psychotherapy.

- | | | | |
|---|---|-----|-------|
| Y | N | 1. | _____ |
| Y | N | 2. | _____ |
| Y | N | 3. | _____ |
| Y | N | 4. | _____ |
| Y | N | 5. | _____ |
| Y | N | 6. | _____ |
| Y | N | 7. | _____ |
| Y | N | 8. | _____ |
| Y | N | 9. | _____ |
| Y | N | 10. | _____ |
| Y | N | 11. | _____ |
| Y | N | 12. | _____ |

APPROVAL SHEET

The thesis submitted by Lawrence J. Heinrich has been read and approved by the director of the thesis. Furthermore, the final copies have been examined by the director 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 and form.

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

6 June 1967
Date

LeRoy A. Wavelle
Signature of Adviser