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The Loyola Seminarian Sentence Completion Test: A Cross Validation Study

Edward J. McLaughlin
Loyola University Chicago

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THE LOYOLA SEMINARIAN SENTENCE COMPLETION TEST:
A CROSS VALIDATION STUDY

by

EDWARD J. M^CLAUGHLIN

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

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LIFE

Edward J. McLaughlin was born in Chicago, Illinois, October 1933.

He was graduated from Quigley Seminary in June of 1952. He earned a Bachelor of Arts and Licentiate of Sacred Theology degrees at St. Mary of the Lake Seminary, Mundelein, Illinois. He was ordained a Catholic priest in 1959.

He began his studies at Loyola University in September of 1964.

He has served as an associate pastor of three parishes in the Archdiocese of Chicago since 1959. For four years he served on the faculty of Quigley Seminary South in Chicago. At the present time he is a faculty member at St. Mary of the Lake Seminary, Niles Campus, Niles, Illinois.

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CHAPTER I
INTRODUCTION

The selection of candidates for the priesthood is not only a venerable tradition in the Catholic Church; it is a matter of basic concern and practical necessity. From the very beginning as St. Paul (I Tim. 3:2-7; Titus 1:5-9) testified it was the practice of the Church to be selective by investigating the human qualities of the candidates for the priesthood. In recent years this investigation of human qualities has been extended to include some psychological assessment of candidates for the priesthood. While at one time the use of such means was criticized, the legitimacy of such studies is evident in the statements of recent popes.

As the recognition of the importance of psychological assessment increases, several approaches to the study of seminarians and religious can be distinguished. 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.

The present investigation is part of the intensive research program encouraged at Loyola University for a more thorough assessment of the "religious personality". At Loyola Gorman and Kobler (1963) devised the Loyola Seminarian Sentence Completion Test especially for use with the diocesan seminarians at St. Mary of the Lake Seminary, Niles, Illinois.

They chose items which were considered maximally sensitive to this group, based on their experience as psychological consultants to this group. This test was found quite helpful when evaluated impressionistically by a psychologist. A further refinement of this instrument was added by Sheridan (1968) who devised a quantitative assessment method of the LSSCT, composed a scoring manual and assembled validity and reliability data. This present study represents a cross-validation of Sheridan's work. Cross-validation is necessary to establish the validity of any scoring system. The American Psychological Association Technical Recommendations for Psychological Test and Diagnostic Techniques state 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 recommends that the test be applied." The subjects of this study will be different seminarians from the same seminary for which the LSSCT was devised and from which Sheridan drew his subjects. They were tested at a similar time in their training and in similar testing situations as were Sheridan's subjects.

The specific hypotheses to be tested in this study are:

1. With regard to congruent validity, the total test score and each of six subtest scores significantly differentiate seminarians in need of counseling from seminarians not in need of counseling. In other words, significantly high scores on the LSSCT total test and subtests indicates need for counseling, as judged by two independent criteria.

2. With reference to interscorer reliability, LSSCTs independently scored by two graduate students in psychology yield highly significant reliability coefficients.

CHAPTER II
REVIEW OF THE LITERATURE

Research on Seminarians

It seems well accepted (McCarthy, 1966) that Moore (1936) deserves credit for first questioning the psychological maturity of applicants to the priesthood and religious life. Sward (1931) had published an earlier study that indicated seminarians, when compared to the general population, are marked by greater introversion and inferiority attitudes, but Moore's study was the first to attract real attention. He conducted a survey of religious committed to mental institutions and found that the incidence of functional disorders, as against such disorders as brain trauma due to syphilitic infection, was greater among religious than among the general population. Among both male and female religious a higher incidence of schizophrenic disorders and paranoia was found; among nuns a higher incidence of involuntional psychoses, and among male religious a higher incidence of alcoholism and manic depressive psychoses was found as compared with the population in general. From his study, Moore concluded that a disproportionate number of prepsychotic individuals are attracted to the religious life. Kelley (1956), Kelly (1961) and McAllister and Vanderveldt (1961) reported studies confirming what Moore has found.

McCarthy (1942) was the first to start a program to evaluate seminary candidates. What he was hoping to do was to define the typical personality

of the successful religious or priest. Peters (1942) attempted the same thing with nuns. These initial studies did not determine whether these traits were predictive of success in religious life, nor whether or not these traits were caused by the seminary or convent regime. Consequently, Burke (1947) did a study on minor seminarians to establish means of detecting probable seminary drop-outs as early as possible through psychological testing. He administered a battery of 12 tests and two questionnaires. Factor analysis indicated no common factor at work in these measures. Burke concluded that "None of the measures in this study and no combination of measures enable us to pick out with any adequate certainty a seminarian likely to be rated as good material for the priesthood."

A new trend in seminary studies started in 1948. Bier first used the MMPI with seminarians in this year, and Lhota published a Strong Vocational Inventory Blank (SVIB) scale to measure the interests of diocesan priests. In the twenty years since Bier published his study, the MMPI has easily become the most popular test used to investigate priests and religious (Dunn, 1965) and it has been used for a variety of purposes. Some (Bier, 1948; Skrincoosky, 1953; Jalkanen, 1955; Rice, 1958; and Fehr, 1958) have used the MMPI in an attempt to establish new norms for seminarians because they felt it was a disadvantage to seminarians to compare them directly with the general population. Skrincoosky (1958) and Rice (1958) report seminarians profiles rise if Bier's revision is used. Fehr (1958) found seminarians scores lower than college peers using the Bier form and Jalkansen (1955) found Lutheran seminarians' scales rise when this revision is used. One very important point to note here, and in all the

studies cited, is that the population studied, although all coming under the general heading of priest or religious, may be quite different. For example, Skrincoosky studied minor seminarians, Fehr studied major seminarians and newly ordained priests and Jalkanen tested Lutheran seminarians of whom almost half were married. These could hardly be considered psychologically comparable groups.

Gorman (1961) and McDonagh (1961) used the MMPI in an attempt to describe the personalities of fourth year minor seminarians (high school seniors) and fifth year minor seminarians (first year college) respectively. Both found their groups scoring higher than the general population with Pt, Mf and Sc being the high scales. Even when the groups were split so that those scoring high were separated from those scoring in the range of the general population, both groups still have the same scales as high points. The authors conclude their groups are quantitatively different but not qualitatively so. Dunn (1965) feels that these results suggest the groups tested seem to be worrisome, perfectionistic, withdrawn and perhaps, emotionally isolated. They also have interests that are typically feminine.

Several studies have been conducted to assess the effects of training in religious life. The best known of these studies was conducted by Murray (1957) who wanted to determine the effect of the extended period of training for the priesthood on personality test scores. He compared 100 male college students, 100 minor seminarians, 100 major seminarians and 100 priests ordained between two and ten years. Between minor seminarians and college students four scales showed differences significant at the .01 level, the minor seminarians scoring higher on D, Mf, Pt and Sc. Between major seminarians and college students, seven scales showed differences significant

at the .01 level and one difference significant at the .05 level. The major seminarians' scores were higher on all scales except Ma, where the college students had the higher score. There was no significant difference on Pd. Finally, between priests and college students there were differences significant at the .01 level on only three scales, Hs, D and Ma. The priests were higher on the first two but lower on the third.

Murray interprets the differences between minor seminarians and college students as indicating that the personality of those attracted to the religious life may in large part be responsible for the deviant scores obtained by religious on personality tests. The increased differences between major seminarians and college students were seen by Murray as showing that the effects of priesthood training on personality is manifest on the MMPI. The fact that there were only three significant differences between the priests and college students compared with nine significant differences between the theologians and college students suggests to Murray that seminary atmosphere as well as training contributed to the increased deviancy in the major seminarians. In general, Murray found that an individual in the early stages of seminary life is more poorly psychologically adjusted (according to MMPI norms) than are college students and the seminarian's maladjustment increases with his time in the seminary. However, once an individual is ordained, his adjustment begins to increase.

Sandra (1957) did a study similar to Murray's. She gave the Bier MMPI to five groups: 150 Junior Professed in 17 active religious institutes primarily devoted to teaching, 150 novices in the same religious institutes, 150 candidates to the religious life, 150 Catholic students attending Catholic colleges for women, and 150 Protestant students attending Protestant schools

for women.

The test results showed a great similarity in the profile configuration for the five groups tested. Pd and Sc were the highest scales for all groups; while Pa and Pt were virtually tied for third place. The scores of candidates for the religious life were significantly higher than those of college students on the following scales: D, Hy, Pt, Pa and Sc. The most noticeable differences in personality structure were found between those who were attracted to the religious life (the candidates) and college students.

Sandra interprets her results as showing that perfectionistic and introversive traits are common to all the groups tested, but that they seem to be present to a greater extent in candidates to the religious life and in religious women than in lay groups. She attributed the more deviant tendencies found among religious first to the personality make-up of those attracted to the religious life, and secondly to religious teaching.

A recent study of the effects of religious life as measured by the MMPI was completed by Hakenewerth (1966). 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 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 on the first testing. Hakenewerth 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. Furthermore, Murthaugh (1965) found that diocesan priest scores were 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.

Two other studies emphasizing the influence of the situational effect of religious life have been carried out by Vaughan (1956) and Mastěj (1954). Both studies used cross sectional samples as Murray and Sandra did. Vaughan found that women in active religious groups tended to become less deviant with increasing time in religion; while those in contemplative orders tended to have more deviant scores as time in religion increased. Mastěj found that religious women tended to become more deviant in their test results in direct proportion to the amount of time spent in the religious life.

Some important controls are missing from the Mastěj, Vaughan, Sandra and Murray studies and they appear to be pertinent. Due to the drop-out rate in any religious community, it is not necessarily reasonable to compare perseverers with candidates and compare differences as if they represented changes. For example, if no one in Vaughan's groups of perseverers changed at all, he could have gotten his results if the psychologically maladjusted candidates left the active community of nuns and the psychologically well-adjusted left the contemplative community. These researchers are presuming drop-outs are random and this has not been established.

Probably the largest number of studies on seminarians concerned with the idea of predicting perseverers and drop-outs have involved the MMPI. McCarthy (1960), in an address on the scientific status of screening for religious vocations emphasized the need for more work on the effectiveness of prediction with different psychological tests used to evaluate seminary candidates.

Godfrey (1955) attempted to determine whether the MMPI could predict perseverance in the Brotherhood. However, his design was inadequate in that his criterion only included Brothers persevering from one to five years (some were still novices). He found both groups were very similar obtaining peak scores of Mf, Pt and Sc. There were significant differences, however, between the groups on the Pd and Ma scales with the drop-outs scoring higher. Although the differences were significant at the .01 level, the difference between the mean scale scores were only five T-score points. On a practical level, this is not too useful in predicting non-perseverers.

Wauck (1956) used the MMPI with three other tests and the faculty rating scale (McCarthy, 1942). The MMPI alone, or in combination with other tests, was not effective in predicting perseverance. One test Wauck used here was the Group Rorschach which appeared to be the most effective of the tests used but it too was unsatisfactory. In terms of testing, this was a very sophisticated investigation but a lot of the test significance was probably lost by using the faculty rating scale as a criterion.

Hispanicus (1962) attempted to predict perseverance on the basis of MMPI scores but his study had the same sampling error as that of Godfrey. Of fifty seminarians tested, forty remained from one to six years while ten left. The leave group scored significantly higher on Pd, Pt and Sc at the .01, .03 .05 levels respectively. The author felt this was evidence that the better adjusted individuals persevered. As an added measure of prediction, he compared the percentage of those in the stay group with the percentage of those in the leave group who obtained from one to five T-scores of 70 or over. Because forty per-cent of those who left ($n=4$) had three or more T-scores of

70 or over, while only 7.5 per-cent (n=3) of the stay group had as many as 70 or over scores. Hispanicus suggested that if a seminarian has three or more T-scores of 70 or over, he is likely to leave. Practically speaking, this study does not give sufficient data to warrant using the suggested criterion.

Weisgerber (1962) studied data from 211 seminarians who were close enough to ordination so that one would say there was little chance if any of leaving. He compared 141 who were in the seminary with 70 who had left. After a thorough statistical analysis of the data, he concluded the MMPI was near useless in predicting perseverance. Kobler (1964) feels the MMPI is an excellent screening instrument, especially when used with other tests but he warns it should only be evaluated by a trained clinical psychologist. He points out that research on the MMPI's ability to predict perseverance is not encouraging but he adds that he feels a seminary screening program should be directed toward detecting individuals who are psychiatrically ill or potentially so and that this is not the same as vocational assessment. To point out that the MMPI is not likely to be sensitive to vocational aptitude, he reports scores from 1152 religious and 5000 college students and says, "When the MMPI profiles of religious were compared with 5000 college men, the differences were seen to be negligible or nonexistent."

A very noteworthy attempt to establish the predictive validity of the MMPI was that of Murtaugh (1956) who did a longitudinal study of 90 diocesan priests ordained during the years 1953-55, who retook the MMPI in 1964. He also compared the results of these priests with the 56 others of the same ordination groups who did not respond to his request for participation in this study, as well as 55 seminarians who dropped out before ordination. No comparison between the drop-outs and the perseverers at any length of

perseverance was statistically significant. These data along with that of Kobler seems to indicate the type of data one gleans from the MMPI are not suitable for predicting vocational success.

Arnold (1962) feels projective tests, especially the TAT, can be used to obtain positive information on a seminarian's motivation which would indicate whether or not he is potential asset to his community. Information of this sort is certainly very desirable. She states that projective tests are best for this because they do not attempt to understand the individual simply on the basis of whether or not the person chooses to report his habitual attitudes and actions. Arnold has developed her own scoring system called the Story Sequence Analysis (SSA) and it attempts to measure an individual's strengths rather than his weaknesses. Quinn (1961) used this system to investigate the attitudes of Religious Brothers in an attempt to predict their promise for religious life. He tested forty-five Brothers well along in their course of studies so as to be well known to their superiors and peers. He had each Brother take a twenty card TAT and he compared SSA scores with rankings of both superiors and peers. Peer ratings and SSA scores correlated $+0.61$ while Superior's ratings and SSA correlated $+0.59$. However, the rating of superiors correlated only $+0.65$ with the rating of the peers. Quinn points out that the rating system may have been too difficult and that the SSA actually is much more promising than these figures indicate. He substantiates this claim by giving examples of specific protocols.

Gardner (1964) examined ninety minor seminarians in an attempt "to determine whether or not the MMPI ratings of adjustment and maladjustment would be supported by projective test results," namely, the Rorschach. Since the MMPI has been criticized because it is suspected of being

influenced by social and vocational variables, Gardner reasoned that a projective test would largely escape these influences. Therefore if the Rorschach would support MMPI results, the latter could be taken at face value and the Rorschach could effectively be added to the test battery used to screen candidates for psychopathology.

In his study, Gardner compared MMPI scores of seminarians with their Rorschach Prognostic Rating Scale Score (RPRS-Klopfer, 1951) and he found there were only thirteen cases out of ninety in which the blind ratings were at variance with the MMPI results. He felt these results indicated that not only does the RPRS perform exceptionally well as an actuarial instrument, but also that MMPI results in the seminary population can probably be accepted at face value in all but a very few cases. This study, along with Quinn's, indicates the possibility of successfully quantifying data from projective tests and using this data to evaluate seminary candidates.

The Sentence Completion Method and its use 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 procedures, 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, 1967) 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 Maltzoff (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 response 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. 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. Stricker and Dawson (1966) found first and third person stems were equally effective in eliciting dependency, anxiety and hostility responses. The LSSCT 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 Holsapple 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.

Only Rohde (1938) and Rotter and Rafferty (1950) have established empirical scoring systems. Rohde, whose test was created for high school students, scores her sixty-five stem test for variables taken from

Murray's (1938) personality theory of needs and press. She reports inter-scorer reliability at .95 and test - retest reliability (eight months between tests) at .80 for girls and .76 for boys (after correction for attenuation). She feels inter-scorer reliability is the important reliability to establish. She says it is not the goal of the SCT to get consistent responses to stems. Rather, the test attempts to elicit as much different and dynamic material as possible by varying the loading of stems. She reports validity coefficients of .78 for girls and .82 for boys. These were established by comparing sub-test scores with ratings of teachers on these variables. There is no over-all test score - only scores for thirty-three Murray variables. Although the scoring method is sophisticated and the validity and reliability coefficients excellent, Rohde has been heavily criticized (Rotter, 1951; Zimmer, 1956 and Goldberg, 1965) for being personally involved in the rating of the criterion measure as well as the scoring of the test responses. The possibility of bias confounding the data is unfortunate.

The Rotter and Rafferty Incomplete Sentence Blank was designed to screen college students in need of counseling. The scoring system was derived by taking sample responses from records of individuals known to be grossly disturbed and of persons considered quite normal. There are separate manuals published for males and females. Interscorer reliability, with advanced clinical psychology graduate students as scorers, is reported as .96 for female records and .91 for male records. Further Churchill and Crandale (1955) report interscorer reliability of .94 and .95 using two seniors majoring in psychology and a graduate with a B.A. in psychology as scorers. These results would seem to show the effectiveness and clarity of the ISB manual.

The ISB produces only a total score. The authors suggest a score of 135 as a good cut-off point to determine which college students are in need of counseling. They point out that this is not a magic number and may have to be adjusted for different college populations. This cut-off was able, however, to identify 78 per-cent of the adjusted individuals and 59 per-cent of the maladjusted.

The scoring manual for the LSSCT has borrowed much from the Rotter ISB, including the use of scoring examples.

Sentence Completion Tests have been used sparingly in seminary studies and they have, at times, been interpreted only qualitatively through clinical judgment rather than by any quantitative means. Harrower (1964) used the Miala-Holsopple Sentence Completion with 135 Unitarian-Universalist seminary students. She used clinical impressions from this test along with the Rorschach, TAT, DAP, Zondi and the verbal portion of the Wechsler-Bellevue to predict success in the ministry. A seven year follow-up indicated she was correct in picking out the "unsuccessful ministers" as determined by a rating scale judged by two laymen and two denominational officials. There was no significant correlation between her judgment and those rated successful, basically successful or questionable.

Whitlock (1959) used clinical judgment of a SCT and two scales of the California Psychological Inventory to measure passivity in 25 male candidates for the ministry. Those in the group judged to be passive tended to be unrealistic in their vocational goal as measured by the Strong Vocational Interest Blank.

In several instances the SCT has formed part of a screening program (Vaughan, 1963; Rooney, 1966) 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 (1966) 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 coded, 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 as has been stated 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 SCT as well as on MMPI 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. (1957, p. 2)

Her findings support nicely the studies mentioned previously (Murray 1957; McDonagh, 1961; Hakenewerth, 1966) that found religious training (male or female) does tend to elevate scores on certain instruments.

The only completion test for seminarians, with an empirical scoring system was used by Fehr (1958). He both created stems and selected them from other tests, submitting 150 of this pool to four judges who were asked to

choose the stems that would best differentiate seminarians at the college level from secular students. He then equally divided the sixty best items into six categories: family, self, stress, fear, authority and sociability.

Administering the test to 45 seminarians and 45 college students, Fehr found both groups with positive scores on the family and authority scales, neutral scores on the self and sociability scales, and one negative score on the fear scale. On the stress scale, a significant difference indicated that the college students scored positively while the seminarians obtained a neutral score.

The author reports an interscorer reliability of .92. Since he was attempting to investigate whether the personalities of seminarians differ from those of lay students, Fehr reported only that college students have a more positive approach to stress and are more willing to deal with it. It would be very interesting, however, to know what a neutral attitude toward self and sociability indicated but Fehr did not discuss this issue. Since Fehr did no more than report similarities and differences between scores of the two groups, more specific evaluations of personality patterns were lost.

Dodson (1957) studied 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.

Using the Sack's 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 teen-ager 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 toward 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 maladjustment 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 cut 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.

A validation study on male religious aspiring to the priesthood, using the manual created by Sheridan, was conducted by Heinrich (1967). He drew his sample of fifty from first year college students of six religious

communities. The same criterion of need for counseling as used by Sheridan was used by Heinrich with one change. Sheridan used priest psychologists familiar with each student to determine experimental and control groups. Heinrich did not have such individuals available so he used prefects who knew the seminarians well. He gave them a check list of behaviors indicating a need for psychotherapy to help them make their decisions. Heinrich used 400 as a total test cut-off score and this accurately defined 75 per-cent of the "in need of counseling" group and only mis-diagnosed eight per-cent of the adjusted group. However, if Heinrich had used 390 as Sheridan did for the cut-off score, he would have accurately defined 100 per-cent of the group in need of counseling and still only misdetected eight per-cent of the adjusted group.

Heinrich also did a cross-sectional study of religious in the four years of college. He found the means for the total test and each subtest to be quite stable through the four years. This is an interesting contrast to Murray (1958) who found the means of the MMPI scales rise every year a religious spends in the seminary. Murray interpreted his results to mean that the seminary life directly contributes to the increasing anxiety and maladjustment of the seminary students. Heinrich's results may indicate that the LSSCT measures variables that can be effectively handled within the seminary.

Heinrich also reported a correlation of .88 between mean MMPI scores and the LSSCT total test score. He further found that mean MMPI scores correlated .85 with Attitude toward Family, .80 with Attitude toward Self, .69 with Attitude toward Priesthood, .62 with Attitude toward Important Issues, .50 with Attitude toward Others, and .21 with Attitude toward Women.

The high correlation between MMPI scores and Attitude toward Family deserves more investigation with this particular population since the seminarians tested by Heinrich had been living away from home only one month.

Sheridan (1968) used seminarians from the Archdiocese of Chicago for his validation study of the LSSCT. He proposed an objective, scoring system for the LSSCT. According to his scoring procedure the test yields numerical scores for six subtests and a total test score. Sheridan's results indicated generally non-significant relationships between attitude categories and the criterion of persevering in the seminary or not. This is in keeping with the findings already cited that have attempted to find a relationship between the results of psychological tests and the criterion of leaving or remaining in the seminary.

Sheridan employed two measures of reliability, interscorer and test - retest reliability. For interscorer reliability, the protocols of 30 seminarians were independently scored by two first-year graduate students in psychology. They were given the manual without verbal instructions to explicitly test the clarity of the manual. The Pearson product moment correlation for interscorer consistency was .91, significant at the .01 level.

Test - retest reliability was carried out by re-examining 30 subjects two months after they first took the test. Again, the Pearson product moment correlation was employed, yielding a significant relationship, .84, at the .01 level.

To measure congruent validity, which he defined as the ability of the LSSCT to detect seminarians in need of psychological help, Sheridan first established independent criteria for seminarians "in need of psychological help" and those "not in need of psychological help." Two criteria were

jointly utilized, scores on the MMPI and psychologists' judgments as to "need of psychological help." The LSSCT and the MMPI were given to 500 seminarians. The names of all subjects who had scored above 70, thus indicating maladjustment, on at least three MMPI scales (excluding Mf) were randomly mixed with the names of all subjects who did not score above 65 on any scale. A list of these names were presented to two priest psychologists who were personally acquainted with all subjects.

These two psychologists independently placed a yes next to the name of any student they felt was in need of counseling and a no next to any student they felt was definitely not in need of counseling. Any individual who scored above 70 on at least three MMPI scales and who was judged by both priest psychologists to be in need of counseling was a candidate for the "in need of psychological help" validation group. On the other hand, the "not in need of psychological help" validation group consisted of subjects who did not score above 65 on the MMPI scale and who received no votes from both priest psychologists. A total of 60 subjects comprised the validation groups, 30 judged "in need of psychological help" and 30 "not in need of psychological help".

Having established these groups, the relationship between scores on the LSSCT and membership in either criterion group was analyzed by the biserial correlational technique. The significant positive correlations indicate that high scores on the LSSCT are related to high MMPI performance and psychologists' judgments regarding need for counseling. On the other hand, low LSSCT scores coincide with MMPI performances within normal limits and psychologists' judgments not to be in need of counseling.

To further evaluate the individual contributions of subtests to the

total test score, and the relationships among the subtests, intertest correlations were computed. In general, his findings were that correlations among the subtests were moderate and the correlations of each subtest to the total test score are substantial with the exception of the attitude to women subtest.

Finally, Sheridan determined cut-off scores for the total test score and for each of the subtests and showed that the scores of seminarians in need of counseling and seminarians not in need of counseling fall into essentially different areas. He concluded that any score on or above the following cut-off scores should be investigated as a possible indication of maladjustment:

<u>Self</u>	<u>Priesthood</u>	<u>Family</u>	<u>Women</u>	<u>Others</u>	<u>Important Issues</u>	<u>Total</u>
140	60	60	30	50	60	390

Studies of This Seminary Population

The subjects of the present study are seminarians from the seminary system of the Archdiocese of Chicago. For the past nine years, a battery of psychological tests have been administered to the seminarians in this system during their last year in high school and prior to their entrance into the college division of the seminary. The tests included in the battery, in addition to the LSSCT, were the Kuder Preference Schedule, Minnesota Multiphasic Personality Inventory (MMPI), and the Edwards Personal Preference Schedule (EPPS). The Kuder measures vocational interests while the MMPI and EPPS are personality tests of intrapsychic strengths and weaknesses. It is not surprising, then, that the seminarians of the Archdiocese of Chicago have been the subjects of various studies.

Gorman (1961) and McDonagh (1961), as cited previously, both found that the MMPI profiles of groups they worked with indicated a well-adjusted personality. Gorman found, however, that the group he studied, one year older than McDonagh's group, while it had a similar profile to McDonagh's group, scored higher in every scale. These differences were significant (at the .05 level) in Hs, D, Hy and Pt. Gorman felt that age was a possible major determining factor in the score differences. Nevertheless, since all scores approximated the college men, both concluded that the seminary population was a well-adjusted group according to their MMPI findings.

As a result of their Kuder findings both writers concluded that the seminarians were very high in social service and literary interests and also in computational interests. Both found a low persuasive score quite provocative.

Rakowski (1965) studied three classes of these seminarians with the EPPS. Comparing seminarians with the normative college group, he found the seminarians scored significantly higher than their college counterparts in affiliation, achievement, succorance, nurturance and aggression; they scored lower in order, autonomy, intraception, dominance and especially heterosexuality. He distinguished the seminarian from the college student as having a somewhat greater desire to schieve, being quicker to criticize, become angry and aggressive. He has a greater sense of accepting blame and feeling guilty in wrong doing. He is quicker to seek help and encouragement from others when in need, but also he has a greater desire to be loyal and to do things for friends. Perhaps, most characteristically, he is quicker to help all people, more readily kind and sympathetic to others. Rakowski found a high

heterosexuality score indicated the college student; a high affiliation-nurturance score indicated the seminarian.

Healy (1968) studied 778 of these seminarians on the MMPI, EPPS, and Kuder. The subjects were divided into those who completed two years of seminary college (445 Completions), those who withdrew of their own accord (282 Voluntary Withdrawals), and those who failed to meet certain academic or social requirements (51 Involuntary Withdrawals). The greatest number of significant differences was found between the Completions and Voluntary Withdrawals. The latter showed trends to be somewhat more open to their disturbed feelings and to be more self-assertive, active and independent; they also showed a greater need for a variety of experience and greater heterosexual strivings. The Completions tended to be more passive-dependent and more in need of structure in their lives. They are more interested in "helping people" while the Voluntary Withdrawals tend more to solving mechanical or scientific problems.

The next largest number of significant differences was found between the Completions and the Involuntary Withdrawals. The differences were similar to those between the Completions and Voluntary Withdrawals, but with a tendency toward a greater contrast. The least number of significant differences was found between the two Withdrawal groups. These were found more like each other than either one is like the group of Completions.

CHAPTER III

EXPERIMENTAL PROCEDURE

SUBJECTS

The population of male subjects in the present study was taken from two diocesan minor seminaries in Chicago, Illinois. The subjects took the LSSCT during their twelfth grade of school.

DESCRIPTION OF TEST AND SCORING SYSTEM

The Loyola Seminarian Sentence Completion Test (LSSCT) is a projective technique designed to elicit, in the seminarian's own words, the attitude he has in six important areas; namely, his attitude toward Self, Priesthood, Family, Women, Others and Important Issues. 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 A. These stems were selected on an a posteriori or face validity basis by Gorman and Kobler (1963) who had extensive experience in dealing with the psychological problems of the seminary students for whom the test was created. 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 the six pre-determined categories. Originally, the test was only evaluated impressionistically by a psychologist who was working with a given seminarian. This meant that the test was not used unless the seminarian was deemed in need of counseling. Then his sentence completion test was used to gain further information about the individual. If an individual was not deemed in need of

psychological help, his test just became part of his record. It was not until Sheridan's work that an attempt was made to establish an objective scoring system.

The scoring system developed by Sheridan 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 scoring system was established by Sheridan in the following manner. From a pool of 500 LSSCT's (all administered to seminarians in the last semester of Grade Twelve), 60 protocols were randomly selected and submitted to four judges. Each judge held a doctoral degree in Clinical Psychology, and was either doing research with sentence completion tests or had done so in the recent past.

Working independently of one another, each judge rated each sentence on a seven-point, bipolar, psychological adjustment scale. Any sentence completion that at least three of the four judges rated identically was entered in the manual as an example of that adjustment rating for that stem. For instance, all the judges agreed that the following example should be scored 2,

4. Strangers . . . are usually nice people.

Thus, the scoring manual devised by Sheridan contains empirically determined scoring samples for each stem, as well as general principles for scoring.

The LSSCT, then, provides a total adjustment score, based on the ratings received by the 100 sentence completions. Besides the total score, the LSSCT yields six subtest scores or attitude categories, namely, Self, Priesthood, Family, Women, Other People, and Important Issues. To establish

these six subtests, the following procedure was employed. Two judges, each with diplomas in Clinical Psychology and not involved in any other phase of the manual construction, worked together in assigning each of the 100 stems to the subtest or attitude category it best measured. Neither judge reported disagreement in assigning the stems to appropriate categories. Brief descriptions of each category are presented below.

Attitude toward Self (33 stems)

This subtest measures the feeling and regard an individual has for himself. The stems are constructed to elicit information pertaining to the individual's feelings about his past and present life as well as his expectations for the future. Specific instances, e.g., the person's regard for his ability to meet new situations, are also tapped here. The subject's self concept is further measured in terms of how he handles his anger, sexual life, and how adequate he perceives his own abilities to be.

Attitude toward Priesthood (16 stems)

This subtest measures the individual's attitude toward his current seminary experiences and toward the priesthood in general. It also taps critical interest areas like theological studies and prayer.

Attitude toward Family (14 stems)

This subtest measures a subject's attitude toward each parent and sibling, and toward the family as a whole. It also examines feelings about leaving home and about parental expectations.

Attitude toward Women (7 stems)

The subject's attitudes toward women, toward marriage, and toward the fact of experiences with women being limited, are measured. Further, feelings which occur in the presence of women, and attitudes toward involvement with women are also included.

Attitude toward Others (14 stems)

This category measures an individual's attitude toward a variety of persons outside his family, such as friends, fellow students, strangers, or an audience. The focus is on the quality and degree of interaction between the subject and these various other people.

Attitude toward Important Issues (16 stems)

This subtest measures an individual's attitude to important life situations which he must confront. Included are attitudes toward authority, personal ambition, sports participation, independence with regard to money and use of time, and resolution of significant conflicts.

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: (score) $\frac{100}{100 \text{ omissions}}$. This formula is also used for the subtest scores except that the number of items in a given category (33, 16, etc.) is used wherever 100 appears in the formula.

Administration

The 100 stems are presented to the seminarian on pages that allow for one line completions, although the individual may cram words between the lines. The following instructions appear at the beginning of the test:

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.

If students ask for further clarification of the instructions, the examiner reinforces that any completion that has meaning for the student is fine.

If students ask how much time is allowed, the examiner tells them the test has no time limit, but most individuals complete the test in less than sixty minutes.

TEST RELIABILITY

To determine interscorer reliability the sixty protocols involved in this study were presented to two graduate students in psychology. Neither

student knew, nor had any contact with, the other scorer. Upon being presented the Sheridan manual for scoring, the scorers were given no verbal instructions. Each scorer was presented with a manual and thirty protocols. All tests were coded and scored by the graduate students using Sheridan's manual. When he completed scoring the first set of thirty tests, he was given the second set of thirty to score. Thus, each scorer completed the sixty protocols.

TEST VALIDITY

This study was concerned with congruent validity. Congruent validity was defined as the ability of the LSSCT to detect seminarians in need of psychological help. To measure such validity, independent criteria for seminarians "in need of psychological help" and those "not in need of psychological help" were first established.

Two criteria were jointly utilized, scores on the MMPI and counselors' judgments as to "need of psychological help". These are the same criteria employed by Sheridan. In the two years since Sheridan had selected his subjects, 559 seminarians had taken the LSSCT as part of a battery of psychological tests. Group H took the tests in 1967; Group K in 1968. There were 288 subjects in Group H and 271 subjects in Group K. They had also been given the MMPI.

The names of all subjects who had scored above 70, thus indicating maladjustment, on at least three MMPI scales (excluding Mf) and the names of all subjects who did not score above 65, that is, within normal limits, on any scale were listed alphabetically. From Group H there were 25 in the first group and 48 in the second; from Group K there were 45 in the first group and

47 in the second. An alphabetical list including those in both categories of Group H was presented to two priest-counselors who were personally acquainted with all the subjects. Similarly, an alphabetical list of those in both categories from Group K was presented to two priest-counselors who were acquainted with all the subjects in this group. All four of the priests involved in this study have Master's degrees, either in psychology or in guidance and counseling. Moreover, they have worked extensively with the young men involved.

Each of the two priest-counselors for each group independently placed a yes next to any student on the list he judged was in need of counseling and a no next to any subject he felt was not in need of counseling. Any individual who scored above 70 on at least three MMPI scales (excepting Mf) and who was judged by both priest-counselors to be in need of counseling was a candidate for the "in need of psychological help" validation group. On the other hand, the "not in need of psychological help" validation group consisted of subjects who did not score above 65 on any MMPI scale and who received no votes by both counselors. From Group H there were 14 subjects who scored above 70 on at least three MMPI scales (except Mf) and who were judged in need of counseling by both priest-counselors; in Group K there were 16. Thus, there were 30 subjects in the "in need of psychological help" group. From both groups there were 52 seminarians (29 from Group H and 23 from Group K) who fulfilled both criteria for the "not in need of psychological help" group. From this group of 52, thirty were randomly selected to comprise the validation group.

CHAPTER LV

RESULTS

Data of the current study were analyzed with appropriate correlational techniques. The results are presented in terms of the two hypotheses concerning congruent validity and interscorer reliability. Finally, the inter-subtest relationships are examined.

Congruent Validity

Congruent validity was examined in terms of the relationships between subjects' subtest and total scores on the LSSCT and the combined criteria of MMPI performances and counselors' judgment as to the need for counseling.

Table 1

Means and Standard Deviations of LSSCT Subtest and Total Scores, 30 Subjects Not in Need of Counseling and 30 Subjects in Need of Counseling

	<u>Not in Need of Counseling</u>		<u>In Need of Counseling</u>	
	Mean	SD	Mean	SD
Self	125.72	11.20	147.20	14.02
Priesthood	58.73	8.31	64.80	8.96
Family	46.91	8.90	58.82	8.35
Women	23.23	3.57	27.00	3.49
Others	46.19	5.11	51.85	8.31
Imp. Issues	56.38	6.15	64.88	5.85
Total Test	357.25	29.71	414.67	33.46

Table 1 presents the means and standard deviations for the performance of the two criterion groups on the LSSCT. A brief inspection of Table 1 indicates higher means for the subjects judged to be in need of counseling than for subjects not in need of counseling. In general, the somewhat higher standard deviations for the group in need of counseling suggests some greater variability of performance for that group. The relationship between scores on the LSSCT and the membership in either criterion group was analyzed by the biserial correlational technique. Table 2 presents the biserial

Table 2

Biserial Correlations of LSSCT Subtests and Total Scores with Need for Counseling

TEST	rBIS
Self	.81**
Priesthood	.42**
Family	.78**
Women	.60**
Others	.49**
Important Issues	.73**
Total Test Score	.83**

** Significant at .01 level

coefficients for the six subtests and total test score for the LSSCT with need of counseling and Table 3 presents these same coefficients with no need for counseling. The significant positive correlations indicate that high scores on the LSSCT are related to high MMPI performance and psychologists'

Table 3

Biserial Correlations of LSSCT Subtests and
Total Scores with No Need for Counseling

TEST	rBIS
Self	.81**
Priesthood	.42**
Family	.71**
Women	.60**
Others	.49**
Important Issues	.73**
Total Test Score	.85**

** Significant at .01 level

judgments regarding need for counseling. On the other hand, low LSSCT scores coincide with MMPI performance within normal limits and psychologists' judgments not to be in need of counseling.

Figure 1 shows a scattergram representing the relationship between total score and membership in either criterion group. Inspection of the range of performance suggests that the placement of a cut-off score at 380 would be a more appropriate lower limit for detection of seminarians in need of counseling than Sheridans' cut-off of 390. According to Figure 1, such a cut-off score would correctly identify 28 of the 30 seminarians in need of counseling. It would have identified also five false positives, namely, the five individuals in the "not in need of counseling group" who scored above 380. If the cut-off score of 400 used by Heinrich was used here, only one

Total Score LSSCT	Not in Need of Counseling		In Need of Counseling	
	Frequency	Cumulative per cent	Frequency	Cumulative per cent
440			7	100
430-439	1	100	1	77
420-429			2	73
410-419			6	67
400-409			3	47
390-399	4	97	3	37
380-389			6	27
370-379	4	83		
360-369	6	70	1	7
350-359	5	50		
340-349	3	33	1	3
330-339	2	23		
320-329	1	17		
310-319	2	13		
300-309	1	7		
290-299	1	3		
	N = 30		N = 30	

Fig. 1. Scattergram of total test score and membership in need of counseling group and not in need of counseling group

false positive would be identified. However, this cut-off score would only detect 19 of the 30 in need of counseling.

Figure 2 presents the scattergram which depicts the correlation between the Attitude toward Self subtest and the criteria. Examination of Figure 2 indicates a cut-off score of 140 detected 19 of the 30, or 63% of those in the "in need of counseling group" while only two of the "not in need of counseling group" were falsely detected.

The scattergram of performance on the Attitude toward Priesthood subtest is shown in Figure 3. Placement of a cut-off at a score of 60 correctly identifies 20 of the 30 students in need of counseling, while mis-detecting 13 of the 30 not need of counseling.

Figure 4 indicates the spread of scores on the Attitude toward Family. Sheridan used a cut-off score of 60 on the Attitude toward Family subtest and detected 40% of those in need of counseling. A cut-off score of 60 here detects only 11 of the 30 in need of counseling and points out two false positives. Using a cut-off score of 50 on the Attitude toward Family subtest, 27 of the 30 in need of counseling were detected, but 11 false positives are mis-detected. A study of Figure 4 will reveal that 63% of both groups scored within the 45-59 range.

The Attitude toward Women subtest scores are presented in Figure 5. While Table 1 shows only a 3.67 difference in the mean scores between the two criteria groups on this test and Sheridan was not able to determine a feasible cut-off score on this subtest, Figure 5 indicates that a cut-off score of 25 picks out 22 of the 30 students in need of counseling and falsely detects 7 of those not in need. However, because the range of scores in this subtest is so limited, the feasibility of using a cut-off is still to be questioned.

Attitude toward Self LSSCT	Not in Need of Counseling		In Need of Counseling	
	Frequency	Cumulative per cent	Frequency	Cumulative per cent
180-			1	100
175-179			1	97
170-174				
165-169			2	93
160-164			2	87
155-159			2	80
150-154	1	100	3	73
145-149			6	63
140-144	1	97	2	43
<hr/>				
135-139	3	93	4	37
130-134	8	83	6	23
125-129	4	57		
120-124	4	43	1	3
115-119	5	30		
110-114	1	13		
105-109	2	10		
100-104	1	3		
N = 30			N = 30	

Fig. 2. Scattergram of attitude toward self score and membership in need of counseling group and not in need of counseling group

Attitude toward Priesthood LSSCT	Not in Need of Counseling		In Need of Counseling	
	Frequency	Cumulative per cent	Frequency	Cumulative per cent
80-	1	100	1	100
75-79	1	97	5	97
70-74	2	93	2	80
65-69	1	87	4	73
60-64	8	83	8	60
55-59	8	57	7	33
50-54	6	30	3	10
45-49	2	10		
40-44	1	3		
N = 30		N = 30		

Fig. 3. Scattergram of attitude toward priesthood score and membership in need for counseling group and not in need of counseling group

Figure 6 presents the scores of both criteria groups on the Attitude toward Others subtest. A cut-off score of 50 correctly identifies 60% of those in need of counseling and point out 9 false positives or 30% of those not in need of counseling.

Attitude toward Family ISSCT	Not in Need of Counseling		In Need of Counseling	
	Frequency	Cumulative per cent	Frequency	Cumulative per cent
70-			3	100
65-69	1	100	2	90
60-64	1	97	6	83
55-59	4	93	8	63
50-54	5	80	8	37
45-49	10	63	3	10
40-44	4	30		
35-39	2	17		
30-34	1	10		
25-29	1	7		
	N = 30		N = 30	

Fig. 4. Scattergram of attitude toward family score and membership in need of counseling group and not in need of counseling group

Attitude toward Women LSSCT	Not in Need of Counseling		In Need of Counseling	
	Frequency	Cumulative per cent	Frequency	Cumulative per cent
35-39				
30-34	1	100	7	100
25-29	6	97	15	77
20-24	18	77	7	27
15-19	5	17	1	3

Fig. 5. Scattergram of attitude toward women score and membership in the need for counseling group and not in need of counseling group

The scores on the Attitude toward Important Issues subtests are represented in Figure 7. If a cut-off score of 60 is used, 27 out of 30 students in need of counseling are detected and only 7 of 30 not in need of counseling are mis-detected.

Attitude toward Others LSSCT	Not in Need of Counseling		In Need of Counseling	
	Frequency	Cumulative per cent	Frequency	Cumulative per cent
70-74			1	100
65-69			2	97
60-64			1	90
55-59			4	87
50-54	9	100	10	73
45-49	10	70	8	40
40-44	9	37	2	13
35-39	1	7	2	7
30-34	1	3		
N = 30			N = 30	

Fig. 6. Scattergram of attitude toward others score and membership in need for counseling group and not in need of counseling group

In Figure 8, the individual performances of the subjects in need of counseling are more closely examined for each of these subjects, the frequency of scores above the cut-off points for the subtest and total scores are presented.

Attitude toward Important Issues ISSCT	Not in Need of Counseling		In Need of Counseling	
	Frequency	Cumulative per cent	Frequency	Cumulative per cent
80-84			1	100
75-79			1	97
70-74			1	93
65-69	3	100	10	90
60-64	4	90	14	57
55-59	12	77	2	10
50-54	8	37	1	3
45-49	3	10		

Fig. 7. Scattergram of attitude toward important issues score and membership in need of counseling group and not in need of counseling group

Subject	Total	Self	Priesthood	Family	Women	Others	Imp. Issues	Above Cut-off
Cut-off	380	140	60	60	25	50	60	
1.	X	X	X	X	X	X	X	7
2.	X				X	X	X	4
3.	X	X	X	X	X	X	X	7
4.	X		X		X		X	4
5.	X	X		X		X	X	5
6.	X	X		X	X	X	X	6
7.	X	X			X		X	4
8.	X	X	X	X		X	X	6
9.	X	X	X		X	X	X	6
10.					X	X		2
11.	X	X	X		X	X	X	6
12.	X		X		X	X	X	5
13.	X	X	X		X		X	5
14.	X	X	X		X	X	X	6
15.	X	X				X	X	4
16.	X	X	X	X		X	X	6
17.	X	X			X		X	4
18.	X	X	X			X		4
19.	X		X				X	3
20.	X	X	X	X	X	X	X	7
21.	X		X		X		X	4
22.					X			1
23.	X			X	X		X	4
24.	X			X	X		X	4
25.	X	X	X		X	X	X	6
26.	X		X		X		X	4
27.	X		X				X	3
28.	X	X	X			X	X	5
29.	X	X	X	X	X	X	X	7
30.	X	X	X	X	X	X	X	7
Total	28	19	20	11	22	19	27	

Fig. 8. Frequency of scoring above cut-off points on subtests and total LSSCT for 30 seminarians judged in need of counseling

In general, the first hypothesis predicted that the LSSCT total and subtest scores would significantly differentiate those seminarians, judged by two criteria measures, in need of counseling from seminarians judged not in need of counseling. The significant biserial correlations, presented in Tables 2 and 3 and depicted in Figures 1 thru 8, indicate support for this hypothesis for the six subtests and total test scores. Seminarians judged in need of counseling, both by three elevated MMPI scales and psychologists' ratings, scored significantly higher on the LSSCT than seminarians judged, by the same criteria, not in need of counseling.

Reliability Measure -- The second hypothesis concerned interscorer reliability for the LSSCT. For this interscorer reliability, each of the 60 protocols involved in this study was independently scored by two graduate students in psychology. The Pearson product moment correlation for interscorer consistency of .91, significant at .01 level, indicated support for the second hypothesis in this study.

LSSCT Intercorrelations -- To evaluate the individual contributions of subtests to the total test score and the relationships among the subtests, interest correlations were computed. Table 4 presents these correlations.

Table 4

Intercorrelations of LSSCT Subtest and Total Scores

	Priesthood	Family	Women	Others	Important Issues	Total
Self	.43	.60	.50	.68	.64	.91
Priesthood		.19	.58	.50	.60	.67
Family			.30	.43	.38	.69
Women				.46	.42	.64
Others					.55	.80
Important Issues						.76

CHAPTER V

SUMMARY AND CONCLUSIONS

The present study was an attempt to cross validate the Loyola Seminarian Sentence Completion Test on a group of 60 seminarians from the seminary system of the Archdiocese of Chicago. The normative data, the formulation of a scoring manual and essential information regarding interscorer reliability is reported in Sheridan's (1968) doctoral dissertation. Two hypotheses were proposed in the present study: one concerned congruent validity and the second dealt with interscorer reliability. Within the limits of this study both hypotheses were accepted.

Sheridan's study found that those in need of counseling are determined by two criteria, one objective and the other the judgment of psychologists, could be detected by the LSSCT objectively scored. He found a highly significant relationship (.88) between the total score on the LSSCT and the need for counseling criterion. This correlation was more substantial than any reported in the literature on sentence completion tests using similar criteria for adolescent and young adult populations. One of the purposes of the present study was to investigate if such high correlations were a rare occurrence or if, indeed, Sheridan's results were able to be found with a different group of seminarians. The highly significant correlations found in this study between the criteria groups and the total test score on the LSSCT lend support to the findings and conclusions of Sheridan. The rigorous procedures for establishing criteria, the length of the LSSCT as well as the clarity of Sheridan's scoring instructions would seem to be important factors in yielding the significant

correlations found in this study.

Inspection of the results as shown in Tables 2 and 3 reveals that not only are the correlations between the total test score and the criteria significant but also the correlations between the subtests scores and the criteria. There is quite a divergence between the subtests correlations and the criteria in this study and in Sheridan's study. The longest of the subtests, the Attitude toward Self subtest which contains 33 items, is the lone exception and yielded almost identical correlations in this study and in Sheridan's study. The most obvious reason for such divergence seems to be that the limited number of items in the subtests tend to make them less reliable and, hence, less valid. The value of the subtests, in the opinion of the present author, is not to detect those in need of counseling but rather to point out to a counselor those particular areas in which a seminarian might be experiencing some conflict.

Sheridan attempted to establish cut-off points on the total test score and each subtest score to distinguish those in need of counseling from those not in need. With reference to the total test score, a cut-off score was visualized as being effective in two ways. First, it may alert a psychologist to the need for further, more intensive personality testing of the individual subject. Secondly, scoring above a cut-off point should lead to a more careful investigation of the LSSCT subtest categories for information regarding specific areas of conflict to be made use of in counseling the subject.

In terms of the individual subtest cut-off scores, again they would provide a brief profile of problem areas and the relationship of such problem areas for a particular individual. Additionally, such cut-off points are potentially useful research tools for investigating similarities or

differences in the patterning of subtest performances for subjects in need of counseling or for various samples of seminary populations.

In general the cut-off scores which Sheridan proposed were found useful in this study. In two instances, the total test score and the Attitude toward Women subtest, a cut-off score other than that proposed by Sheridan was found to fit better the sample used in the present study. By dropping the total test cut-off score from 390 to 380 it was found that 93% of the in need of counseling group could be detected while misdetecting 17%. Sheridan used 390; Heinrich used 400 and the present study found 380 as the most useful cut-off score. All of these are of necessity only tentatively proposed and, of necessity, too, many future cross validation studies will need to be undertaken before any more definitive cut-off score can be justifiably established. However, it seems that a cut-off score in the range of 380 - 400 is found most appropriate for a seminary population.

In the present study, the Attitude toward Women subtest was a more sensitive indicator of need for counseling and correlated more significantly with the total test score than it did in Sheridan's study. Moreover, in this study a cut-off score was able to be determined that detected 73% of those in need of counseling. However, the limited range of scores on this subtest would tend to make any cut-off score on this subtest of questionable value. Future study may determine the feasibility of a cut-off score but increasing the number of items in this subtest would seem to be the best future procedure.

A cut-off score of 60 was used by Sheridan in the Attitude toward Family subtest. In his study 12 of the 30 in need of counseling were detected by the use of this score and only 2 false positives were indicated. This same score of 60 yielded 11 of the 30 in need of counseling in this study and misdetecting

2 of the well adjusted group. However, the fact that 63% of each group score within the 45 - 59 range seems to indicate that some conflict with their families is not indicative of maladjustment but that excessive conflict in this area is useful for determining the need of help.

In his study, Sheridan not only found highly significant correlations concerning congruent validity but also reported a .91 correlation supporting interscorer reliability. The efficiency of his objective scoring system and manual supported by this significant correlation had to be validated by other studies. The present study lends further support because the same correlation coefficient of .91 was found in this study for interscorer reliability. The two graduate students who acted as scorers were not experienced in working with the sentence completion tests. The highly significant correlation indicates the usefulness and clarity of the scoring system and manual. The usefulness of the manual could be further accentuated and the proficiency of the scorers increased by further practice and by demanding more of a mutual orientation of the scorers. One area of future research might be the effect of practice and some common training on the interscorer reliability.

The quantitative scoring system for the LSSCT developed by Sheridan has been cross validated in this study. The sentence completion method is recognized as having definite values. It is easily administered to large groups. The subject expresses himself in his own words. The vagueness as to the purpose of the test allows an individual to express feelings suggestive of conflict without categorically saying he has the problem. While maintaining these values, the validation of the quantitative scoring system adds an important note of objectivity and makes it possible for the same valuable instrument to be used to detect quantitatively those in need of counseling.

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APPENDIX

The Loyola Seminarian Sentence Completion Test

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. Sometime 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 in life

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 feeling 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 go to Niles 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 toward girls
82. My family
83. What I look forward to most at Niles seminary
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. What I want out of life
91. I wonder if I am weaker than many others in
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 Secular Priest in Chicago

Abstract

An objective scoring system for the Loyola Seminarian Sentence Completion Test has been devised by Sheridan. This study attempted to cross-evaluate his findings. Of 559 subjects who had taken the LSSCT 30 were placed in a need for counseling group and 30 in a not in need of counseling group. The criteria for the in need group were both scoring over 70 on three MMPI scales and the judgment of two priest-counselors that the subject belonged in the in need of counseling group. The criteria for those in the not in need group were not scoring over 65 on any MMPI scale and the judgment of two priest-counselors that the subject did not need counseling. The LSSCT of these 60 subjects were scored independently by two graduate students in psychology according to the manual devised by Sheridan. The total test score and the six subtest scores and on the LSSCT were found to significantly differentiate seminarians in need of counseling from those not in need of counseling. Moreover, an interscorer reliability coefficient of .91 indicated highly significant interscorer consistence.

APPROVAL SHEET

The thesis submitted by Edward J. McLaughlin has been read and approved by a member 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.

7 Jan 69

date

Robert A. Waack

Signature of Advisor