

*This is the first of three articles in a series by Dr. Lee. The second will appear in the Summer issue and the third will be published in the Fall issue.*

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## **TOWARD A MODEL OF VOCATIONAL PERSISTENCE AMONG SEMINARIANS: PART 1**

Those working in seminary training have long suspected that the personal characteristics of dropouts differ from those who remain in or complete the training program. Knowles (1958) stated that the literature reveals a growing concern for qualitative analysis of the characteristics of religious students; and among the important areas of needed research suggested by McCarthy (1960) are studies dealing with the differences between those who remain in and those who leave seminary training.

Past research (Kennedy, 1958; Sweeney, 1964; Vaughan, 1963; etc.) has found individual variables which significantly differentiate between staying in and leaving seminary training. The statistics have not been accurate enough for individual prediction and the results of other studies using the same variables on different populations have been inconclusive enough to produce the general conclusion that the majority of those who leave the seminary do so, not because of unsuitability, but because of insufficient motivation (D'Arcy and Kennedy, 1965). To the author's knowledge there have been few investigations aimed at determining the motivations of seminary persisters and leavers.

The primary interest in the study of motivation "...is to identify and understand the effects of all the important contemporaneous influences which determine the direction of action, its vigor, and its persistence" (Atkinson, 1966, p. 2). Lewin (Atkinson, 1966)

offers the following model, among others, which, if generalized, may help to identify the contemporaneous influences of motivation among seminarians,  $B = f(PE)$ , (i.e., behavior is an interrelated function of the person and his psychological environment). The motivation of an individual in applying for and persevering in training for the priesthood is a function of the person himself (his characteristics, abilities, interests, etc.) and the environment (seminary, priesthood, and the Church) as he perceives it. If motivation is interpreted according to the concepts of Atkinson and Lewin, then those who leave the seminary prior to completion do not possess insufficient motivation, rather, their motivation may be different from those who continue in or complete the program. If those who leave have different motivation, it should then be possible to measure the differences in some manner.

The results presented here are part of an investigation to explore as exhaustively as is presently possible the motivational phenomenon of certain students who persist in the seminary as compared with students who voluntarily leave. This investigation does not serve the usual function of theory and model testing, rather, the in-depth exploration of data may provide a basis for religious vocational development and maintenance theory and indicate specific areas for future empirical research through the offering of some tentatively proposed hypotheses.

#### **PROCEDURES**

The first approach in this exploratory examination was to determine through the traditional statistical analyses whether there were any individual variables or combination of variables in a stepwise regression equation which significantly differentiated between a group of seminarians and a group of ex-seminarians or significantly predicted persisting or leaving.

The second approach was to investigate, in an exploratory manner, sub-groups or "types" of seminarians and ex-seminarians based on the tested characteristics used in this investigation. An exploratory cluster computer program was used to identify clusters of individuals within the sample of seminarians and ex-seminarians. While the clusters are formed by the computer, the formation of clusters is specified by the types and amounts of data used for each individual. Forty two test variables from the 16PF, Kuder Preference Record, Vocational, Form CH, California Test of Mental Maturity, Differential Aptitude Test, National Merit Scholarship Qualifying Test, and the Scholastic Aptitude Test were used. All 42 test variables were used simultaneously to form the clusters.

#### **POPULATION**

If the results of an exploratory analysis such as this is to be useful as a basis for theory and model building, it is imperative to examine the population in some detail as compared with other sample populations which have been studied in the past or may be

studied in the future. The sample population was from the minor seminary, Sacred Heart Seminary, Detroit, Michigan. The total sample consisted of those individuals with complete data from the three high school graduation classes of 1965, 1966, and 1967. Because of the computer programs used within the entire study, the final total experimental sample consisted of 60 seminarians and 60 ex-seminarians.

The subjects in this investigation appeared to be quite similar to other seminarian and ex-seminarian groups studied by other researchers (Fichter, 1961; Mateo, 1964; Foley, 1965; Lonsway, 1968). As indicated in Table I, the subjects in this study come from a middle or high income social background. Their mothers and fathers were living and their mothers play the part of housewife and "mother" rather than that of an additional breadwinner. There were an average or above average number of children in the family, of which they were the first or second born. A large percentage of them had a relative in the religious life—priest, nun, or other seminarian. While attending a Catholic parochial grade school, they were altar boys. They were influenced in their decision to enter the seminary more by religious than by their parents. Finally, as might be expected of boys at age fourteen, their early vocational preferences were varied.

## RESULTS

After ascertaining the nature and comparability of the sample with others which have been investigated, the total experimental sample was divided into the respective sub-groups of persisters and leavers. Analysis of variance and regression analysis computer programs were used to identify those of the 42 test variables which significantly discriminated between the two groups or significantly predicted persisting or leaving. Table II presents the significant results of the analysis of variance and Table III presents the significant steps of the regression equation.

There were no aptitude and achievement variables which individually differentiated between the two groups, suggesting, as D'Arcy and Kennedy, that the leavers are not unsuitable at least in their ability to accomplish the academic requirements of the seminary. Some significant differences do exist between the two groups. Those who persist are, as a group, significantly more submissive and have significantly higher musical and social interests than do those who leave. On the other hand, those who leave are, as a group, significantly higher in scientific and literary interests than are those who persist. Through the addition of the I.Q., clerical interest, mechanical reasoning, and self-esteem scores to the others mentioned above, a multiple correlation coefficient of .586 was derived in a regression equation that significantly predicts persisting in or leaving seminary training.

These data coincide quite closely with those obtained by others in studying seminary groups. McCarthy (1960) mentions that there is strong evidence to suggest that

seminarians are more submissive than ex-seminarians. D'Arcy (1962) indicates that seminarian groups are uniformly high on the Kuder social and musical scales as compared with those who leave seminary training. However, as has been found by others (Friedl, 1952; Kenny, 1959; Morse, 1962; etc.), although there are significant differences between the two groups, the accuracy of the statistics is not great enough for individual prediction because of the wide within-sample variations indicated by the standard deviations and the percent of variance left unaccounted for in the regression equation. These data do support the following hypotheses:

Seminarians who are submissive in their social relations are more likely to remain in seminary training than those who are assertive.

Those who persist in seminary training have, as a group, higher manifest social and musical interests than do those who leave.

Those who leave seminary training have, as a group, higher manifest literary and scientific interest than do those who persist.

The exploratory cluster program was used with the 42 test variables to identify within sample sub-groups of individuals as a basis for further understanding seminary persisters and leavers. The cluster analysis process gradually associates groups of individuals whose members have mutually high similarity coefficients (a correlation coefficient between pairs of individuals using all input data). The analysis of variance is then used to determine those individual variables which significantly differentiate the clusters. This computer program is limited to 99 individuals or variables to be clustered at one time because of the storage capacity of the computer. Accordingly, a random sample of 45 persisters and 45 leavers were used for the cluster analysis. The persisters and leavers were clustered together because it was reasoned that the degree of mixture of persisters and leavers in the generated clusters would identify those from the two groups who were most similar. Further, the generation of clusters which were composed entirely of leavers or entirely of persisters and clusters in which the majority were either persisters or leavers would identify specific sub-groups which might provide another way of viewing the phenomenon of remaining in or leaving seminary training. It should be remembered that...

The clusters produced by the computer represent new, rather than previously contrived constellations, and cannot be assumed to have either theoretical or practical significance.

*The clusters should be viewed chiefly as a starting point for further investigation* (Johnson, 1967, p. 1).

Tables IV, V, and VI present the mean scores of the clusters on each of the scales. The data for each cluster is presented in three different tables only as a matter of convenience and it should be remembered that the clusters were formed by using all 42 test variables simultaneously. The results from the cluster analysis will be discussed in relation to the

hypotheses which they seem to suggest. These hypotheses are tentative in nature and will require further investigation even though they are based upon the present data.

The majority of those who leave the seminary training do not differ essentially from the majority of those who persist on personality, interest, and aptitude measures.

An examination of the largest cluster generated by the computer (cluster 1) indicates that it is comprised of 30 persisters and 24 leavers. The combination of almost equal numbers of both groups within the largest cluster generated suggests that there are no major differences between the majority of those who persist and the majority of those who leave, at least on the objective measures used in this investigation. This coincides with the results of the analysis of variance between the two groups of persisters and leavers in which the standard deviations were found to be wide enough to indicate that there was a great deal of over-laping between the groups on the various measures. Distinct sub-groups do exist as indicated in the tables. These smaller sub-groups are interpreted as representing the extremes within the sample population which were responsible for the significant differentiation found in the analysis of variance. Past research attempting to differentiate between seminarians and ex-seminarians has obtained similar results. Although Bier (1956), Gorman, (1961), and McDonagh (1961), among others, have been able to obtain significant differentiation with personality measures and Lhota, (1948), Joseph, (1959), and Maffia, (1964) have been able develop interest scales that differentiate between groups of seminarians as compared with ex-seminarians and lay groups, the statistics have not been accurate enough for individual prediction. Such findings as these also suggest that the majority of individuals within the samples are quite similar, even though there are individuals who deveiate far enough from the means to produce statistically significant differentiation between the groups.

Those seminarians who exhibit subjective personality and interest profiles are more likely to remain in seminary training.

Those seminarians who exhibit objective personality and interest profiles are more likely to leave seminary training.

The more subjectively oriented individual is more open to his feelings and emotions, preferring to operate on an affective rather than an intellectual level. He is characterized by adjectives such as warm, open, soft, and empathetic. His 16PF profile is sociable, submissive, sensitive, trusting, artless, strong social conscience (super ego), group dependent, and he has a tendency to be anxious and tense. His interest profile centers in the social, musical, literary, and artistic areas. This individual's general orientation is, therefore, toward people rather than things. These profiles characterize the persisters in cluster 1 and 5.

The more objectively oriented individual prefers to operate on an intellectual rather than an affective level. He is characterized by adjectives such as hard, stern, competitive, and achieving. His 16PF profile is aloof, assertive, and independent, realistic, suspicious, shrewd, self-sufficient, and he meets anxieties in a well-ordered and controlled manner. His interest profile centers in the mechanical, computational, scientific, and clerical areas. This individual's general orientation is, therefore, toward things rather than people. These profiles characterize the leavers especially in clusters 2 and 4 and to a certain extent those in cluster 3.

The more creative the seminarian's personality and interest profile the more likely he will leave the seminary training.

The one cluster of persisters (no. 5) obtained a creativity score of 7.0 which is one and a half standard deviations above the mean of 5.5 and is indicative of creative personalities as measured by the eleven scales of the 16PF which comprise this scale. In contrast, two of the clusters which contain a majority of leavers both obtain creativity scores of 7.0. It is difficult to relate the creativity research to seminarians because the research indicates that, while there is some commonality in personality characteristics among creative individuals, there are also wide differences between occupations and professions. Therefore, while creative mathematicians, architects, researchers, etc. exhibit some common characteristics, there are between group variations. Creative seminarians cannot be directly compared to any other profession, but those characteristics which seem to be common to all professions are relevant to this discussion.

A summary description of the common characteristics of creative individuals as they are revealed on the 16PF reads as follows:

The creative person is aloof, tending to be critical and suspicious in his thinking. He has at least average intelligence and is introspective and sensitive. He is also imaginative and disposed toward experimentation in problem solving.

He is dominant, assertive, and independent in his behavior. He is self-sufficient, self-confident, and self-assured, and relates to others in an unaffected, spontaneous, friendly manner.

The description of the creative individual from the 16PF scales indicates that there is a precarious balance between the objective and subjective traits and interests within the individual. The creative person is dominant, self-confident, and independent but also relates to others in an unaffected, spontaneous, and friendly manner. He is aloof and introspective but is also sensitive. The creative seminarians in this study have interest profiles which further suggest this precarious balance between the subjective and objective aspects of their personalities. They exhibit strong patterns of interest in the

subjective areas—social, literary, musical, or artistic—as well as strong interest patterns in the objective areas—mechanical, computational, scientific, or clerical. Cluster 2 which has a majority of leavers obtained a creativity score of 7.0 and has strong interests peaks on the social, literary, and scientific scales. Cluster 4 also obtained a high creativity score and has strong interest peaks on the social, artistic, computational, scientific, and clerical scales.

The more creative seminarian may not always be to the liking of the authorities or teachers. This will be due to his independence in thought or behavior in situations in which non-conformity may seriously disrupt the general order of the seminary system. In struggling to reconcile the strong opposites in his nature and striving to achieve creative solutions to difficult problems, he will express views and behave in a manner which is contrary to what is usually expected of the “normal” seminarian.

### SUMMARY

We have examined the concept of motivation as it might apply to the seminarian and his persistence in seminary training. The general conclusion that those who leave the seminary have insufficient motivation appears to be unsatisfactory both as a final product of former research and as a basis for future investigation. In the present article we have examined quite exhaustively the personal characteristics of a group of seminarians and ex-seminarians through the use of some of the more traditional statistical techniques and an exploratory process which has allowed us to examine the group in some detail. Most of the data and hypotheses generated from these two approaches are neither startling nor new but do provide significant normative data as a basis for seminary development and the establishment of general seminary admission policies. On the other hand, the further investigation of creativity among seminarians would appear to hold some promise. To this point this research and that of many others has concentrated on the seminarian's personality, aptitude, and interest or his biographical and demographical characteristics as separate entities. It remains to examine in some detail his “psychological environment” and its interface and interaction with his personal characteristics.

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TABLE I

**Total Numbers and Percentages of Persisters, Leavers and the Entire Sample Possessing Individual Biographic and Demographic Variables**

Variables	Persisters		Leavers		Total	
	N	%	N	%	N	%
Father Living	59	99	60	100	119	99
Mother Living	60	100	58	97	118	98
Altar Boy in grade school	56	92	55	91	111	92
Attended parochial grade school	58	97	59	99	117	98
<b>Father's Occupational Level</b>						
Unskilled, semi-skilled	6	10	11	18	17	15
Skilled, Mang., Sales	39	65	37	62	76	62
Professional & Self-emp.	15	25	12	20	27	23
<b>Mother's Occupational Level</b>						
Unskilled, semi-skilled, housewife	56	94	56	94	112	94
Skilled, Mang., Sales	2	03	3	05	5	04
Professional & Self-emp.	2	03	1	01	3	02
<b>Father's Educational Level</b>						
Less than high school	15	25	10	18	25	21
High school graduate	23	38	22	36	55	37
College and/or Graduate	22	37	28	46	50	42
<b>Mother's Educational Level</b>						
Less than high school	12	20	8	18	20	15
High school graduate	38	68	42	70	80	70
College and/or graduate	10	12	10	12	20	15
<b>Number of Children in family</b>						
one	6	10	7	11	13	08
two	23	38	27	45	50	42
Three or more	31	52	26	44	57	50
<b>Ordinal Position in family</b>						
First born	34	57	30	50	54	54
Second born	12	20	17	28	29	24
Third born or below	14	23	13	22	27	22
<b>Relative in the religious life</b>						
Priest or Nun	12	20	17	28	29	24
other seminarian	7	12	5	08	12	10
<b>Most influential in helping to make decision to enter seminary</b>						
Religious/priest or nun	34	57	33	56	67	55

Parents	8	13	12	18	20	15
Other	18	30	16	27	46	30
Early Vocational Preferences						
Helping	31	52	25	42	56	47
Non-helping	23	38	25	42	48	40
None	6	10	10	16	16	13

**TABLE II**

**Significant Analysis of Variance Results**

Variables	Persisters		Leavers		t Test
	Mean	S.D.	Mean	S.D.	
Dominance vs. Submission	4.4	2.2	5.6	2.1	2.83**
Scientific Interest	34	28.5	47.5	31.3	2.47*
Literary Interest	60.6	31.6	72.3	26.1	2.21*
Musical Interest	53.4	26.4	42.4	26.1	2.31*
Social Interest	88.5	15.9	74.9	27.8	3.28**

\* t = 1.96 is significant at the .05 level

\*\* t = 2.58 is significant at the .01 level

**TABLE III**

**Significant steps of the Multiple Regression Analysis Predicting Persisting in or Leaving Seminary Training**

Steps	Variable Entering	MR	R <sup>2</sup>	F Level
1.	Social Interest	.289	.084	10.79**
2.	Scale E-16PF Dominance	.371	.138	7.41**
3.	Musical Interest	.424	.179	5.89*
4.	Literary Interest	.476	.227	6.98**
5.	Clerical Interest	.506	.257	4.61*
6.	CTMM – I.Q.	.535	.287	4.69*
7.	Scale Q3-16PF Self-Esteem	.556	.309	3.62
8.	DAT Mechanical Reasoning	.586	.343	5.84*

MR = Multiple Correlation

R<sup>2</sup> = Percent of Variance

\*F = 3.9 is significant at the .05 level

\*\*F = 6.8 is significant at the .01 level

**TABLE IV**  
**Significant Mean Sten Scores for Clusters on the 16PF**

Variables	Clusters					F Ratio
	1	2	3	4	5	
A Sociability vs. aloofness	6.7	4.0	6.4	3.5	6.3	6.70**
H Venturesomeness vs. Withdrawn	5.2	3.6	5.2	3.5	4.5	2.68*
I Sensitivity vs. Realism	6.5	6.2	4.3	5.4	7.8	4.60**
L Suspiciousness vs. Trust	3.9	5.5	6.2	5.1	5.9	3.69**
Q1 Radicalism vs. Conservatism	5.7	6.6	4.9	4.5	3.1	3.57**
M Imaginativeness vs. Practicality	6.3	5.4	4.2	6.2	7.0	4.27**
Creativity	6.0	7.0	5.0	7.0	7.0	

Cluster	Persisters	Leavers	Total
1	30	24	54
2	1	7	8
3	5	5	10
4	2	5	7
5	5		5

\*F = 2.48 sig. at the .05 level  
 \*\*F = 3.56 sig. at the .01 level

**TABLE V**  
**Significant Mean Percentile Scores for Clusters on the Kuder**

Variables	Clusters					F Ratio
	1	2	3	4	5	
0 Outdoor	24	62	23	56	29	9.07**
1 Mechanical	19	36	44	59	12	10.13**
2 Computational	47	25	72	84	31	4.81**
3 Scientific	34	65	22	78	15	8.72**
4 Persuasive	58	21	59	10	29	6.84**
5 Artistic	41	40	32	56	81	2.57*
6 Literary	76	76	57	24	61	6.25**
7 Musical	49	36	61	23	73	4.35**
8 Social	85	94	65	74	89	2.97*
9 Clerical	51	23	81	57	70	5.87**

Cluster	Persisters	Leavers	Total
1	30	24	54
2	1	7	8
3	5	5	10
4	2	5	7
5	5		5

\*F = 2.48 sig. at the .05 level  
 \*\*F = 3.56 sig. at the .01 level

TABLE VI

Significant Mean Percentile Scores for Clusters on Aptitude and Achievement Tests

	Clusters					F Ratio
	1	2	3	4	5	
<b>NMSQT</b>						
Math	81	55	80	87	48	10.59**
Social Studies Reading	81	81	56	75	72	6.37**
Natural Science Reading	79	76	49	83	64	6.11**
English Usage	87	85	70	74	89	5.71**
Composite	85	79	70	80	76	5.32**
<b>DAT</b>						
Verbal	80	79	60	75	82	3.07*
Abstract Reasoning	75	81	60	88	57	3.02*
Mechanical Reasoning	57	52	24	76	33	7.08**
Space Relations	65	50	39	77	70	3.81**
SAT-Verbal	559	547	445	493	542	3.70**
SAT-Math	540	483	485	542	456	2.55*

Cluster	Persisters	Leavers	Total
1	30	24	54
2	1	7	8
3	5	5	10
4	2	5	7
5	5		5

\*F = 2.48 significant at the .05 level  
 \*\*F = 3.56 significant at the .01 level