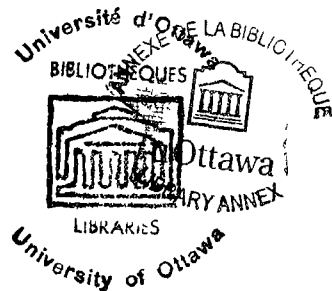


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VOCATIONAL SELF-CONCEPT IN TERMS OF
THE VOCATIONAL INTERESTS AND VALUES OF
SEMINARIANS AND MINISTERS

By William W. Dick

Thesis presented to the School of
Psychology and Education of the
University of Ottawa in partial
fulfillment of the requirements
for the Master's degree in
Psychology



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CURRICULUM STUDIORUM

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INTRODUCTION

The interests and values of people have long been observed to be important factors in influencing their vocational choices and behaviour throughout the course of their lives.

In recent years many psychologists and others engaged in the field of vocational guidance have, upon the basis of some scientific and empirical evidence, become convinced that the interests and values of a person on the one hand, and his vocational choices and behaviour on the other hand, appear to be very closely related if not identifiable with his self, as the central core of his personality.

By focusing on a single occupation, this thesis proposes to treat of and evaluate the inventoried interests and values of an experimental sample of seminarians and ministers, in terms of recently formulated vocational self-concept theory, as first expounded by Edward Bordin and further elaborated and defined by Donald Super.

The first chapter, in reviewing the literature most relevant to this field, deals with the gradual convergence of a few related theories into a crystallized theory of vocational self-concept expression and development in terms of vocational interests and value preferences. The statement of operational definitions to be used and the formulation of the general hypothesis conclude the chapter.

The second chapter outlines the experimental design in terms of four specific testable sub-hypotheses which are to shed light on the rejection or acceptance of the general hypothesis. The sample, the tools and the methods along with the appropriate statistical operations to be employed, in seeking to test the specific sub-hypotheses, are described in some detail.

The third chapter presents the experimental results according to the particular methods used and in the light of prior research findings on the tools with similar samples.

The final chapter engages the reader in a discussion of the possible meaning and significance of the results, and then proceeds to critically evaluate the theoretical construct of vocational self-concept as operationally defined in terms of vocational interests and values. Finally, conclusions reached by the research findings are summarized and two recommendations for further research are projected.

CHAPTER I

REVIEW OF THE LITERATURE

In a review of the literature, most relevant to vocational self-concept theory in terms of vocational interests and values, it is necessary to trace the emergence and gradual convergence of recently formulated theories of vocational behaviour, theories of the self or self-concept, and theories of vocational interests and values, within the scientific framework of modern psychology.

1. Toward an Integrated Theory of Vocational Behaviour.

It is of great significance that ever since Frank Parsons, in 1908, initiated the vocational guidance movement in America, psychologists engaged in this applied field have found it necessary or convenient to borrow their working theories from other fields of psychology and from the social sciences in general. Thus it is quite understandable that diverse and selective approaches as to the underlying theoretical assumptions have been pursued.

In the main, however, it appears that trait theories, drawn from differential or individual psychology have dominated the scene. The basic approach via trait or factor theory, is to measure the individual's abilities, aptitudes, interests or personality characteristics and then try to

match these with a seemingly suitable occupation. Vocational choice has by and large been considered as a one-time static decision in this context.

An outstanding example of the application of the trait theory approach is that of Strong¹ in his monumental research of the vocational interests of men and women. Based on strictly empirical and descriptive foundations, Strong has convincingly shown that men in various occupations are characterized by interest differentiating them from men in general, as well as from men in other occupations.

There is no question as to the continuing value and validity of the trait and factor method based upon the assumptions of differential psychology. More recently, however, vocational psychologists have turned their attention to other fields of psychology in an attempt to formulate a more dynamic, comprehensive and integrated theory of vocational behaviour. Super and his associates, in pointing out the need for a theory of vocational behaviour, argue:

In developing a theory of vocational psychology, the emphasis upon one frame of reference, drawn from one field of psychology (differential), has resulted in a neglect of possible contributions from other fields of psychology and other social sciences.²

1 Edward K. Strong, Jr., Vocational Interests of Men and Women, Stanford, California, Stanford University Press, 1943, xxix-746 p.

2 Donald E. Super, et al., Vocational Development: A Framework for Research, New York, Bureau of Publications, Teacher's College, Columbia University, 1957, p. 6.

Super, in endeavouring to formulate an integrated theory of vocational behaviour, has drawn heavily from the fields of developmental, social and self psychology.

Super's theoretical formulations taken from the field of ego and social psychology will be dealt with in the next section of this chapter in terms of self-concept and social role.

From the point of view of developmental psychology, Carter may be considered to be one of the first American psychologists to postulate the possibility that there is a process of vocational development, in addition to processes of physical, intellectual, emotional and social development.

In one of his articles, Carter states:

The development of vocational interests involves interaction between growth processes, some of which are educationally controlled and some of which are biologically controlled. (...) Growth in this field is a part of general maturation, of developing individuality. The best adjustment requires the assimilation of realistic value systems to be found in our culture. Such assimilation implies learning choice and development of character and personality. (...) We have before us the task of finding out which educational and maturational factors are most significant.³

³ Harold D. Carter, "The Development of Vocational Attitudes", in Journal of Consulting Psychology, Vol. 4, No. 5, September-October 1940, p. 185-186.

Ginzberg,⁴ an economist, and his associates, a group of social scientists, appear to be the first to have undertaken research in vocational development. They based their findings on extended interviews with sixty-four males, ranging in age from eleven to twenty-four, sampled cross-sectionally at two-year intervals. Their theory of occupational choice stressed that it is a process, largely irreversible and characterized by some degree of compromise in each case. In the process of decision-making they distinguished three periods: a fantasy period in childhood, a tentative period, and the final period of realistic choice in adolescence.

In his presidential address to the APA convention in 1952, Super⁵ criticized Ginzberg and his associates on several counts: for their disregard of research literature, for their inadequacies in sampling, and for some of their theoretical conclusions. He then proceeded to set out ten propositions⁶ in the nature of descriptive comprehensive elements which he felt should be included in an adequate theory of

4 E. Ginzberg, "Toward a Theory of Occupational Choice", in Personnel and Guidance Journal, Vol. 30, No. 7, April 1952, p. 491-494.

5 Donald E. Super, "A Theory of Vocational Development", in American Psychologist, Vol. 8, 1953, p. 185-190.

6 See Appendix 1.

vocational development. Super concluded by stating his view that vocational development is essentially the development of a self-concept in relation to the world of work. As a basic element in this theory, work should be viewed as a way of life. An adequate vocational and personal adjustment is most likely to result when both the nature of the work itself and the way of life that goes with it are congenial to the aptitudes, interests and values of the person in question.⁷

Those developmental psychologists who had touched on vocational development had, to this point, restricted themselves to the stages of childhood and adolescence or until an initial vocational choice had been made.

In 1957, Super⁸ elaborated and published a comprehensive theory of vocational development, which encompassed the entire life span. In terms of career patterns and life stages, Super borrowed from Buehler's⁹ five psychological life stages and translated these into vocational frames of reference. According to Buehler's classification, the Growth Stage extends from conception to about the age of fourteen. The Exploratory Stage includes the years from fifteen to

⁷ Super, "A Theory of Vocational Development", Op. Cit., p. 189.

⁸ -----, The Psychology of Careers, New York, Harper and Brothers, 1957, p. 69-160.

⁹ Charlotte Buehler, Der Menschliche Lebenslauf als Psychologisches Problem, Leipzig, Hirzel, 1933.

twenty-five. The Establishment Stage covers the period from twenty-five to forty-five. The Maintenance Stage ends at about sixty-five, concluded by the Stage of Decline after sixty-five to death. At this point it may be noted that the sample in this thesis generally covers the Establishment and Maintenance stages of life.

Super¹⁰ deals with these as vocational life stages in terms of the self-concept and modifies Bushler's classification with the sociological classification of Miller and Form.¹¹ Miller and Form's delineation of life stages is work-centered and also covers five periods. In the Preparatory Work Period the child begins to develop an orientation to the world of work through home, neighbourhood and school activities. The Initial Work Period begins at about the age of fourteen with the first part-time or summer work experience in adolescence, when the person is introduced directly to the world of work as a part-time or marginal participant. The Trial Work Period begins with entry into the labour market between ages sixteen and twenty-five and until about thirty-five when the Stable Work Period begins. This period

¹⁰ Super, The Psychology of Careers, Op. Cit., p. 72-161.

¹¹ W.K. Form and D.C. Miller, "Occupational Career Pattern as a Sociological Instrument", in American Journal of Sociology, Vol. 54, 1949, p. 317-329.

continues to about sixty or over until the Retirement Period begins.

Again it must be pointed out that this present study generally encompasses the Trial and Stable Work Periods.

Hence a comprehensive and integrated theory of vocational behaviour while based on the structural component traits of differential psychology, should also include the dynamic, developmental contributions of genetic psychology, as well as an awareness of the possible factors introduced by social psychology and the other social sciences.

The essential impact of social psychology upon a theory of vocational behaviour can best be seen by the introduction of concepts of the self into vocational psychology.

2. The Self-Concept and Vocational Behaviour.

Perhaps the most striking statement which has alerted psychologists to a possible vital relationship between the self and vocational choice and development was that by Super:

The choice of an occupation is one of the points in life at which a young person is called upon to state rather explicitly his concept of himself, to say definitely, 'I am this or that kind of a person'. (...) In choosing a vocation, one is in effect, choosing a means of implementing a self-concept.¹²

¹² Donald K. Super, "Vocational Adjustment: Implementing a Self-Concept", in Occupations, Vol. 30, No. 2, November 1951, p. 88.

This statement appeared to be contrary to Super's own theoretical bias of viewing vocational behaviour, not as a single, static act in time at the moment of choice, but as a developmental process. Hence he went on to comment in a more dynamic vein:

Similarly, holding and adjusting to a job, is for the typical beginning worker a process of finding out, 1) whether the job permits him to play the kind of role he wants to play, 2) whether the role that the job makes him play is compatible with his self-concept (whether the unforeseen elements in it can be assimilated into the self or modified to suit the self), 3) it is a process of testing the self-concept against reality, of finding out whether he can actually live up to his cherished picture of himself.¹³

These two statements set the stage for a discussion of the role or function of the self in vocational behaviour.

Within the framework of self or ego psychology, the self-concept has been referred to in many different ways by many theorists. In a recent book on the self-concept, Wylie¹⁴ distinguished between Phenomenal or Subjective Self-Concept Theorists, and then proceeded to describe and evaluate the measuring techniques and research explorations used by both.

¹³ Super, "Vocational Adjustment: Implementing a Self-Concept", Op. Cit., p. 89.

¹⁴ Ruth C. Wylie, The Self-Concept, A Critical Survey of Pertinent Research Literature, Lincoln, Nebraska, University of Nebraska Press, 1961, xiii-370 p.

In a critical review of Wylie's book, Super¹⁵ referred to it as a scholarly yet curiously blind review of the research on the self-concept, in that she had not mentioned Bordin's work on vocational interest and the self-concept and gave no account of vocation as a focus for self-concept development and implementation.

This phenomenon pointed to the dangers of narrow specialization within a restricted field of psychology as well as to the need for clarification of terms in the interests of parsimony and communication among the related fields of psychology.

In his most recent work, Allport¹⁶ has devoted a chapter to a treatment of what he referred to as the awesome enigma for the psychology of personality, the problem of the self, in terms of its subjective or felt nature. Within the framework of phenomenological and developmental theory, he traced the sense of self as evolving from the stage of solo-centeredness of the infant, to the adolescent sense of self-hood as propiarte or central striving or goal-directed intentions. In discussing the unity of personality, Allport referred to the self-image as the cognitive core

15 Donald E. Super, "Book Reviews", in Journal of Counselling Psychology, Vol. 8, No. 4, Winter, 1961, p. 377.

16 Gordon W. Allport, "The Evolving Sense of Self", in Pattern and Growth in Personality, New York, Holt, Rinehard and Winston, 1961, p. 110-138.

within personality, and as a unifying concept along with appropriate striving.¹⁷

Super¹⁸ employed the concept of self in formulating his theory of vocational development according to the life stages of Buehler and Career Patterns of Miller and Form already referred to. He omitted Buehler's Growth Stage, beginning with the adolescent as exploration in developing a self-concept. He sought to do justice to the social functions of cultural adaptation in home, school and society, as well as to personal or hereditary behaviour potentials in the nature of muscular, neural and endocrine tendencies. Then he dealt with the transition from school to work as a process of reality testing.

The next stage was referred to as the Floundering or Trial Process. In finding one's place in the world of work, in adjusting to the way of life that a certain vocation called for, the person is attempting to implement a self-concept.

The Period of Establishment from about thirty-five to forty-five was described by Super as the time when the self-concept is modified and implemented.

17 Allport, Op. Cit., p. 383.

18 Super, The Psychology of Careers, Op. Cit., p. 80-161.

The Maintenance Stage from forty-five to sixty-five involved the preserving or being nagged by the self-concept. The final stage, the years of decline were depicted as the adjustment to a new self, demanded by declining energies on the one hand, and the change of work roles and the way of life on the other.¹⁹

Thus Super formulated a theory of vocational behaviour in terms of the dynamic development, implementation and modification of the self-concept as a unifying concept, central to the person's life in its entire scope.

In 1951, Super and his associates²⁰ began an intensive, longitudinal study of the vocational development process, known as the Career Pattern Study. They involved 142 eighth grade and 134 ninth grade boys as subjects to whom they administered some twenty-six tests in the areas of aptitudes, abilities, personality, interests and values. Periodic follow-up studies at crucial points in the developmental process until the boys are thirty-five will be made.

The final results of this study will not be completed until 1975, but they show considerable promise in shedding further light on the theory of vocational development.

19 Super, The Psychology of Careers, Op. Cit., p. 158.

20 -----, et al., "The Career Pattern Study: Collecting the Basic Data", in Vocational Development: A Framework for Research, Op. Cit., p. 97-112.

Several research reports attempting to test Super's theory of the self-concept as related to vocational choice have been reported in the literature.

Blocher and Schutz²¹ defined vocational self-concept as composed of those distinctive patterns of attitudes, ideas, feelings and desires which a person holds about himself in relation to the world of work. Operationally, they defined vocational self-concept as the score on a Descriptive Checklist using sixty-four of Cattell's trait clusters. In the experiment they asked 135 twelfth grade boys in a suburban high school to describe themselves in terms of their real selves and their ideal selves on the Descriptive Checklist. They also presented to the boys an alphabetically-arranged list of forty-five scales of the Strong Vocational Interest Blank and asked each to choose the most interesting and least interesting occupation.

One week later, they asked each boy to describe his picture of a typical member of each of the chosen occupations.

The results showed a significant correlation at the .01 level between both a) the self-description, and b) the ideal self-description of each boy and the person he described in the occupation most interesting to him. They

²¹ D.H. Blocher and R.A. Schutz, "Relationships Among Self-Descriptions, Occupational Stereotypes and Vocational Preferences", in Journal of Counselling Psychology, Vol. 8, No. 4, Winter, 1961, p. 314-317.

interpreted these findings to lend support to the theory that vocational interests are an outgrowth of attempts to develop and implement satisfying concepts of self in relation to the world of work.

A few other reported research investigations, one by Englander²² and another by Morrison²³ employed Q-sort methodology as applied to teachers. These studies set out to test Super's self-concept theory of vocational choice in the context of the teaching field and showed tentative positive results.

However, they are not too relevant to the present study, which sets out to explore vocational self-concept theory in terms of inventoried vocational interests and values as formulated by Bordin and Super.

3. Theories of the Nature and Development of Interests and Values.

In order to better understand the theoretical formulations of Bordin and Super, it is necessary to view these against the backdrop of those who have pioneered in the field

²² Meryl E. Englander, "A Psychological Analysis of Vocational Choice: Teaching", in Journal of Counselling Psychology, Vol. 7, No. 4, 1960, p. 257-264.

²³ Richard L. Morrison, "Self-Concept Implementation in Occupational Choices", in Journal of Counselling Psychology, Vol. 9, No. 3, 1962, p. 211-216.

of interest measurement, namely Fryer, Strong, Darley and Carter.

Fryer's²⁴ volume which appeared the earliest has been referred to by Darley and Hagenah²⁵ as the unread classic in the literature on interests.

Fryer distinguished between subjective interests as measured by self-report inventories and objective interests as measured by information and free association tests. His theory was based on associative learning theory and centered around acceptance-rejection activity as pertaining to both subjective and objective interests.

These acceptances and rejections are observed in the behaviour of the individual and in his estimates of pleasure and displeasure when stimulated by an interest situation.(...) Motivation is distinguished from interests as a separate aspect of mental life and extraneous to the measurement of interests.²⁶

This statement expresses Fryer's static approach to interest theory in terms of rigid stimulus-response and associative learning theory.

Strong²⁷ in his research with the Vocational Interest Blank found his mass of empirical data so many-faceted as to

24 Douglas Fryer, The Measurement of Interests in Relation to Human Adjustment, New York, Henry Holt and Co., 1931, xxv-488 p.

25 John G. Darley and Theda Hagenah, Vocational Interest Measurement, Theory and Practice, Minneapolis, University of Minnesota Press, 1955, p. 139.

26 Fryer, Op. Cit., p. 16, 348.

27 Strong, Op. Cit., p. 19.

preclude a single theoretical formulation. His descriptive findings are based on the assumption that certain sets of preferences in terms of total scores on an inventory characterize people in various professions.

It seems fair to say that his approach is also a static one based on the assumptions of differential psychology.

Darley²⁸ appears to have been the first to have linked motivation with interests. However, he did this in a rather rigid deterministic fashion. He viewed vocational interests as the by-products of the development of personality types, and hence fixed biological traits and behaviour patterns of the mature individual.

In a more recent formulation with an associate, Hagenah, Darley revised this position somewhat as follows:

It is our major thesis now that occupational choice and measured occupational interests reflect, in the vocabulary of the world of work, the value systems, the needs and the motivations of individuals.²⁹

Carter³⁰ is acclaimed to be the first to have introduced concepts of a truly dynamic character into vocational interest theory, as well as to have pointed to the close relationship of interests to the self.

28 John G. Darley, "Preliminary Study of the Relationship between Attitudes, Adjustment, and Vocational Interests Tests", in Journal of Educational Psychology, Vol. 29, No. 6, September 1938, p. 467-473.

29 Darley and Hagenah, Op. Cit., p. 28.

30 Carter, Op. Cit., p. 185-190.

Carter distinguished between external and internal realities as limitations in the development of vocational interests of the young man or woman. He held that the external reality limitations were home environment, the needs and personalities of parents and friends, and the cultural resources available to the individual, while the internal reality limitations were those largely outside his control, namely, the individual's own native equipment, physical traits, energy, mental ability and so on.

Carter claimed that the pattern of vocational interests which gradually form become closely identified with the self and this pattern of interests is in the nature of a set of values which can find expression in one family of occupations and not in others.³¹

Bordin then appeared on the scene with an excellent article in which vocational interests were considered as dynamic phenomena.³² Basing his formulation on the previous views of Carter, he presented his theory as follows:

The vocational goals and aspirations of an individual form one of the mainsprings of his action. (...) In answering a Strong Vocational Interest Test an individual is expressing a particular view or concept of himself in terms of occupational stereotypes.³³

³¹ Carter, Op. Cit., p. 126.

³² Edward S. Bordin, "A Theory of Vocational Interests as Dynamic Phenomena", in Educational and Psychological Measurement, Vol. 3, No. 1, 1943, p. 49-66.

³³ Ibid., p. 53.

Bordin modified this theory by two corollary statements:

1. The degree of clarity of an interest type varies positively with the degree of acceptance of the occupational stereotype as self-description.
2. The degree of clarity of an interest type will vary positively with the degree of knowledge of the true occupational stereotype.³⁴

Bordin defined the degree of clarity operationally as ranging from a primary, secondary or tertiary pattern on one of the occupational keys on the Strong Vocational Interest Blank.

He held that the degree of knowledge of the true occupational stereotype was based on the assumption that the pattern of likes and dislikes of the successful men in the various standardizing groups was a true picture of the likes and dislikes of the actual occupational groups.³⁵

Thus Bordin basically assumed that in answering an interest inventory a person is affected by two variables, his self-concept and his knowledge (or ignorance) of occupational stereotypes. On this premise, a change of self-concept or a change in occupational preference would be significantly reflected by a change in inventoried interests and vice versa.

³⁴ Bordin, Op. Cit., p. 54.

³⁵ Ibid., p. 59.

In 1953, Bordin and Wilson³⁶ reported a research experiment designed to test Bordin's hypothesis. They administered the Kuder Preference Record to 256 entering college freshmen. Then they classified them according to the agreement or disagreement of their curricular choices with their measured vocational interests. At the end of the first year they retested the same students and took note of changes in their curricular choices. The results showed that those who had not changed courses showed a higher test-retest correlation than those who had made curricular course changes. The latter group contained six out of nine persons who showed significant interest changes.

The authors interpreted their findings as providing unequivocal support for the assumption that inventoried interests are dynamic phenomena reflecting changes in the individual's perceptions of himself.³⁷

Super and Crites³⁸ have severely criticized this research design and its conclusions. They pointed to the fragility of the data, and questionable nature of using the

³⁶ Edward S. Bordin and E.H. Wilson, "Change of Interest as a Function of Shift in Curricular Orientation", in Educational and Psychological Measurement, Vol. 13, No. 2, 1953, p. 297-307.

³⁷ Ibid., p. 305.

³⁸ D.E. Super and J.O. Crites, Appraising Vocational Fitness, Revised Edition, New York, Harper and Bros., 1962, p. 398.

Kuder Preference Record to test an hypothesis based on the Strong Vocational Interest Blank. They argued that the Kuder Preference Record is a much less reliable instrument than the Strong in terms of test-retest reliabilities. Also the Kuder appears to be more sensitive to the conscious attitudes of the subject, whereas the Strong appears to measure interests at a deeper, more stable level.

Super then proceeded to restructure Bordin's theory as follows:

One can theorize equally plausibly and more parsimoniously, that in answering the questions of an interest inventory an individual records a series of self-perceptions, which in turn are summated by the scoring scale in such a way as to reveal the similarity or dissimilarity of his self-concept to the self-concept which has been found characteristic of persons in the occupation being scored.³⁹

In its essence, this statement expresses the specific operational definition of vocational self-concept used in the present study. Tyler⁴⁰ has made a pertinent comment about such a formulation when she said that in an interest score, the individual will express the concept he has of himself in whatever stereotypes the particular method of interest measurement makes available to him.

39 Super and Crites, Op. Cit., p. 407-408.

40 Leona E. Tyler, "Relationships of Interests to Abilities and Reputation among First-Grade Children", in Educational and Psychological Measurement, Vol. 11, No. 2, 1951, p. 263.

Super's definition rather presumptuously implies that the total self-concept of the person is reflected on a given occupational scoring scale.

Wrenn,⁴¹ in discussing the theory of self-concept in the counselling situation, referred to the possibility of a person having many differing self-concepts. Viewed atomistically, one might conceive of a person having a different self-concept for every situation in which he finds himself.

In this study, Super's operational definition is modified or limited to refer to a person's vocational self-concept, i.e., to his evaluation of himself in relation to the world of work, and not to his total self-concept, or total evaluation of himself.

4. General Hypothesis and Summary.

This study defines vocational self-concept as finding expression or being reflected in a person's vocational interests and values as measured by the Strong Vocational Interest Blank and the Allport-Vernon-Lindzey Study of Values.

In keeping with the new elements of self and development in recent vocational psychology, this thesis proposes to test the two-pronged general hypothesis in null form:

⁴¹ Gilbert C. Wrenn, "The Self-Concept in Counseling", in Journal of Counselling Psychology, Vol. 5, No. 2, 1958, p. 104.

a) that the vocational self-concepts of seminarians preparing for the ministry do not show a consistent similarity to the vocational self-concepts of a successful criterion group of ministers;

b) that the vocational self-concepts of the sample of seminarians and ministers when measured both cross-sectionally and longitudinally do not reflect a development in terms of vocational behaviour.

In a review of the literature, this chapter has dealt with recent emerging theories of vocational behaviour, of the self-concept and of the development of vocational interests, in order to trace their convergence towards a theoretical formulation of vocational self-concept theory in the context of which the general hypothesis of this thesis has been postulated.

CHAPTER II

EXPERIMENTAL DESIGN

This chapter outlines the experimental design and procedures adopted in endeavouring to test the general hypothesis proposed at the close of the preceding chapter.

The occupational sample is described in some detail. Then the tools and the particular methods to be used in this experiment are set forth. Finally, the specific testable sub-hypotheses, designed to provide tentative support to the theory in question, are projected and the statistical operations to be employed are described.

1. The Sample of the Experiment.

Theoretically, a sample of persons preparing for or engaged in any or in a variety of occupations and with a diverse range of vocational interests could have been selected in seeking to analyze and test the hypothetical formulations presented in the first chapter.

It was reasoned that by selecting a fairly homogeneous sample of persons definitely preparing for a specific vocational field and comparing these with a criterion group of persons already engaged in this vocation, possibly the most clear-cut and stable patterns of vocational self-concept expression and development could be demonstrated.

To meet these requirements for a fairly homogeneous occupational sample, a group of seminarians and a criterion group of ministers belonging to a minority church group were selected to serve as the experimental sample.

Table I shows the number and mean ages of the total sample of seminarians and ministers. The seminarians were full-time male students of the Associated Mennonite Biblical Seminaries located in Indiana. These are the only academically accredited seminaries of the two major Mennonite denominations in North America. The entrance prerequisite is an Arts degree and the three year course offered leads to a Bachelor of Divinity degree.

The sample from Seminary A refers to the total enrolment of full-time male students at Mennonite Biblical Seminary during the 1962-63 academic year. The sample from Seminary B refers to about one-third of the student body at the associated Goshen College Biblical Seminary. Unfortunately, it was not possible to enlist the voluntary cooperation of the remaining two-thirds of the students at this seminary. Obviously this cannot be considered as being a representative sample and, hence, extra caution will be taken in the interpretation of the results of this sub-group. For this reason also, no graduates of this seminary were selected to serve in the criterion group of ministers.

Table I.-
Mean Ages and Standard Deviations of the Sample of
Seminarists and Ministers.

Group	N:104	Age	
		Mean	S.D.
Seminarists	59		
Seminary A	38	28.7	6.84
Seniors	8	33.5	3.60
Middlemen	10	28.1	2.78
Juniors	20	27.1	4.72
Seminary B	21	30.2	4.67
Seniors	9	31.6	3.98
Middlemen	5	30.4	3.82
Juniors	7	28.5	5.80
Ministers	45		
Criterion Gp. A	25	32.2	3.55
Criterion Gp. B	20	46.5	9.74

A number of specific considerations governed the selection of the criterion group of ministers and it was found necessary to divide the sample into two sub-groups.

Criterion Group A was comprised of about one-half of the graduates of Seminary A during the past twelve years of the eighteen years of the seminary's existence. They were randomly selected from an alphabetically-arranged listing of graduates of this institution.

It was reasoned that in this criterion sub-group, the possible effects of seminary experience upon vocational self-concept might best be reflected. Another consideration for their selection was the fact that one of the tools used in this study, namely, the Strong Vocational Interest Blank had been administered to them at the time when they had initially enrolled in this seminary. This made possible a longitudinal study of vocational self-concept as measured by this tool.

Criterion Group B was selected to represent a general cross-section sampling of ministers engaged in the pastoral ministry of the church group supporting Seminary A, though not themselves necessarily graduates or former students of this seminary. The age spread for this group ranged from twenty-seven to seventy years with an equal number of six in each of the three predominant age decades for this occupational group, namely, between thirty and sixty years.

2. The Tools of the Experiment.

The main tool used in this study was the Strong Vocational Interest Blank for Men, (Revised) Form M,¹ this being in keeping with the operational definition of vocational self-concept based specifically on this tool, as formulated by Super and Grites and as already presented in the first chapter.

The Strong Vocational Interest Blank² was originally constructed by Edward K. Strong Jr., in 1925, and since that time has undergone continuing research, revision and extension. The current revised form consists of four hundred items grouped into eight parts. In the first five parts, the subject indicates his preference in terms of "Like", "Indifferent", or "Dislike" with respect to the following categories: occupations, school subjects, amusements, a miscellaneous number of activities and peculiarities of people. The last three parts require the subject to rank given occupational activities in order of preference, to compare his interests in differing kinds of work and to rate his present abilities and personality characteristics. Strong refers to

¹ Edward K. Strong, Jr., Strong Vocational Interest Manual, Palo Alto, California, Consulting Psychologists Press, Inc., 1959, p. 1-40.

² Hereafter referred to as SVIB.

these four hundred items as a sample of the sum total of all interests (experiences) that bear upon an occupational career.³

The SVIB is generally scored with a specially prepared key or scale for each occupation. To date some fifty-two occupational and eight non-occupational keys have been constructed. The keys have been developed on the basis of the empirical findings that the responses of the specific occupational criterion groups can be differentiated from those of "men-in-general".

Each item is assigned a scoring weight ranging from plus four to minus four, depending upon the degree to which it differentiates the sample of members of the particular occupational group from a sample of "men-in-general". The responses of a new subject to the four hundred items of the SVIB may then be algebraically summed and compared with the scores made by men in each occupation for which a scoring key exists. The raw numerical scores are converted into sigma "z" scores.

The reliability of this tool has been more than adequately established, in view of the mass of research reported on its use. In the SVIB Manual, Strong⁴ has reported an

³ Edward K. Strong, Jr., Vocational Interests of Men and Women, Stanford, California, Stanford University Press, 1943, p. 21

⁴ -----, SVIB Manual, Op. Cit., p. 20.

average coefficient of reliability of .877 on thirty-six revised scales, based on the records of 285 Stanford seniors and using the "odd-versus-even" technique,

Test-retest correlations in other studies by Strong⁵ indicate a high degree of permanence of interest over a period of years. For college seniors a correlation of .84 over a period of five years and a correlation of .75 over a period of twenty years were found. Over shorter periods of two weeks or one month, test-retest correlation on the SVIB scales range between .80 and .95.

In the present experiment, a small-scale reliability study was conducted by the method of test-retest correlation. The SVIB records of thirty-six persons in the sample tested at the time that they enrolled in seminary were available. These were correlated with their respective individual scores obtained on the three most relevant scales during the present re-administration of the SVIB. The results are shown in Table II.

These results when treated in terms of reliability are not too impressive, especially as seen on the minister scale. However, as will be discussed later, it may be better not to consider these correlations in terms of the reliability of the tool, but rather as indicative of the development or change of interests over a period of years.

5 Strong. SVIB Manual, Op. Cit., p. 20.

Table II.-

Test-Retest Reliability on Three Scales of the SVIB for a Group of Seminarians and Ministers.

Group	N	Year Intervals	<u>SVIB</u> Scales	Pearson r
Seminarians	17	2-3	Minister	.70
			Social Worker	.76
			Social Sci. Teacher	.87
Ministers	19	4-14	Minister	.35
			Social Worker	.75
			Social Sci. Teacher	.54

The predictive validity of the SVIB has been well established by its author in a number of reported longitudinal studies.⁶ For example, an eighteen-year follow-up study of 663 Stanford university graduates revealed that seventy-eight per cent of men with an A rating on a certain occupational scale entered that occupation. It was shown that two-thirds of the SVIB profiles had a good agreement with the actual occupations that the respective persons entered.

The Allport-Vernon-Lindzey Study of Values⁷ was used in this experiment as a supplementary tool to the SVIB. Allport and Vernon developed this inventory in 1931 and revised it in 1951 with the co-authorship of Lindzey.

In contrast to the SVIB, which is founded on empirically derived, inductive principles, the Allport-Vernon-Lindzey Study of Values⁸ is based on deductive principles derived from an already existing typological theory of personality proposed by Eduard Spranger.⁹

6 Strong, SVIB Manual, Op. Cit., p. 21.

7 Gordon W. Allport, Philip E. Vernon and Gardner Lindzey, Study of Values Manual, Third Edition, Houghton Mifflin Co., Boston, 1960, p. 1-19.

8 Hereafter referred to as AVL.

9 Eduard Spranger, Types of Men, translated from the fifth German edition of Lebenformen, Halle, Niemeyer Verlag, 1929.

The method of response of the two tools is distinctly different. The SVIB requires the subject to express his preferences while the AVL calls for an ordering by merit of paired comparisons in the first thirty items and that of multiple choice in the remaining fifteen items, making 120 alternatives in all.

Super and Crites¹⁰ suggest that the non-vocational nature of the AVL items makes it less subject to choice on the basis of vocational stereotypes in contrast to the Kuder Preference Record or the SVIB. They hypothesize that the AVL might well be used as a cross-check on the Kuder Preference Record or SVIB when it is suspected that the scores on either of the latter are distorted by a clear-cut but inappropriate self-concept. It is with this in mind that the AVL was used as a complement to the SVIB in this study.

The six ideal types of dominant interests or evaluative attitudes that are claimed to be measured by the AVL may be summarized as follows, based on the authors'¹¹ description of each:

¹⁰ Donald E. Super and John O. Crites, Appraising Vocational Fitness, Revised Edition, New York, Harper and Bros., 1962, p. 499.

¹¹ Allport, Vernon and Lindzey, Op. Cit., p. 3.

Theoretical: characterized by a dominant interest in the discovery of truth, but with an empirical, critical, rational approach.

Economic: emphasizing useful and practical values, and conforming closely to the prevailing stereotype of the 'average American business man'.

Aesthetic: placing the highest value on form and harmony, judging and enjoying each unique experience from the standpoint of its grace, symmetry, or fitness.

Social: originally defined as love of people in general, but in the revised form it is limited to cover only altruism and philanthropy.

Political: primarily interested in personal power, influence and renown, not necessarily limited to the field of politics.

Religious: essentially a mystical approach to life, concerned with the unity of all experience, and seeking to comprehend the cosmos as a whole.

As to the reliability of the AVL, the authors¹² report a split-half mean coefficient of .90. Test-retest reliability was determined on two populations and was found to render a mean coefficient of .89 for a one-month interval and .88 for a two-month interval.

The validity of the AVL is presented in terms of relating value patterns to known or expected norms of sub-groups within the general population. These are illustrated by representative norms showing occupational differences.¹³ Ministers and seminarians have been found to show a logically expected preference for religious and social values.

¹² Allport, Vernon and Lindzey, Op. Cit., p. 10.

¹³ Ibid., p. 14-15.

A third tool used in this study may be referred to as an Index of Vocational Preferences. This was included to test whether or not there might be a discernible difference between a seminarian's specific self-expressed vocational self-concept within the field of church-related vocations and his vocational self-concept as measured by the SVIB or AVL.

The Index of Vocational Preferences was contained in one section of a personal data sheet on which other items of general information such as age, year in seminary, father's occupation, et cetera were solicited. This index was worded as follows:

Please indicate below your present vocational interests or preferences after you leave seminary:
(Kindly number in order of preference.)

- a) Pastoral Ministry
- b) Missionary Work (Foreign or Home)
- c) Teaching (at the college, secondary or other level)
- d) Conference administration or editorial work
- e) Other Vocation (please state) _____

The inclusion of this tool was prompted by several reported studies exploring the relationship between claimed or expressed and measured or inventoried interests. The most relevant of these reported research explorations to the present study appears to be the one carried out by Hagenah.¹⁴

¹⁴ Theda Hagenah, A Normative Study of the Revised SVIB, unpublished doctoral dissertation, University of Minnesota, 1953, quoted by John G. Darley, Vocational Interest Measurement: Theory and Practice, Minneapolis, University of Minnesota Press, 1955, p. 64-68.

In her analysis based on 854 cases, two experienced judges assigned the claimed choices of her cases to one of the seven families of occupations as measured by the SVIB. For the same cases, other judges evaluated the presence of primary interests on the basis of the results of the SVIB. While a statistically significant relationship was found to exist between claimed and measured interests, the contingency coefficients ranged from .10 to .38 and were considered to be too low to predict claimed from measured choices or vice versa.

The Index of Vocational Preferences was used in this experiment in the sense of claimed interests within a specifically defined occupational field, namely church-related vocations.

3. The Methods Used in the Experiment.

Having presented a general description of the sample and tools to be used in the experiment, an elaboration of the specific methods adopted now ensues.

The personal data sheet which included the Index of Vocational Preferences, the SVIB for Men (Revised) Form M, and the AVL Study of Values were administered in the given order to the seminarians in group sessions. The sessions were scheduled during regular classroom periods after which a recess followed, thus allowing each person ample time to complete the inventories.

The same forms of the SVIE and AVL and a similar personal data sheet not including the Index of Vocational Preferences were mailed to the selected criterion group of ministers. An introductory letter giving standard instructions on the completion of the tools was also enclosed. An almost perfect response to the first mailing prevented the necessity of subsequent selection and mailings to other possible candidates for the criterion group.

In the analysis of the data, the specific methods adopted were guided by the four projected specific sub-hypotheses which are presented at the end of this chapter. These methods include the cross-sectional approach in research, the longitudinal approach, the inter-test approach in which the AVL was employed as a cross-check on the SVIE and finally the approach involving a comparison between claimed vocational self-concept and measured vocational self-concept.

In making cross-sectional comparisons between the sub-groups of seminarians and the minister criterion group(s), two distinctly different methods were used in the analysis of the SVIE data.

On the one hand, an item analysis on the basis of actual frequencies of preferences on the four hundred items of the SVIE was conducted. On the other hand, the standard scores on the most relevant SVIE scales based on Strong's weighted scoring system were also used.

In the SVIB item analysis the response frequencies of "Like", "Indifferent" and "Dislike" for each item were tabulated for each sub-group.

In order to arrive at one score of response frequencies for each item, the number of "Indifferent" responses were equally divided in half and each half was added to the "Like" and "Dislike" responses. In the cases of odd numbers of "Indifferent" responses, the odd numbers remaining after division were alternately added to the "Like" and "Dislike" responses.

Thus a summated "Like" frequency score on each of the SVIB items was obtained for each sub-group of seminarians, permitting a comparison with the summated "Like" frequency score of the criterion group.

In order to be able to make use of the statistical tables prepared for the comparison of binomial samples,¹⁵ the seminarians and ministers were divided into and limited to sub-samples of twenty persons or less. In view of having very small numbers in the various classes of seminarians, the middlers and seniors of Seminary A were combined and all the classes represented in the sample of Seminary B were combined into one.

¹⁵ Donald Mainland, et al., Statistical Tables for Use with Binomial Samples, New York, Department of Medical Statistics, University College of Medicine, 1956, p. 1-46.

In comparing the groups of seminarians with the minister criterion groups on the SVIE by the usual method devised by Strong, the Minister occupational scale and the Group V, known as the Social Welfare scale were used.

The standardizing criterion group which comprised Strong's sample in constructing the Minister scale are described as follows:

Minister: Includes 112 Presbyterian ministers and 85 Methodist ministers; the remaining 48 cases are divided among the denominations. More than three-fifths are from the Pacific Coast; the remaining two-fifths represent equally the rest of the country. Average age: 42.6 years; education: 18.2 grade.¹⁶

The Group V or Social Welfare scale was developed by Strong on essentially the same principles as the individual occupational scales. The data of these occupational scales that correlated to the extent of .70 with one another, were grouped together and averaged to constitute the group criterion.¹⁷ Besides the Minister scale the other Group V scales are Y.M.C.A. physical director, Personnel Manager, Public Administrator, Vocational Counselor, School Superintendent, Social Worker and Social Science Teacher.

In the analysis of the AVL Study of Values, the obtained raw scores were not used, as these are relative and

¹⁶ Strong, SVIE Manual, Op. Cit., p. 26.

¹⁷ Ibid., p. 170.

interdependent scores. Hence the rank order method was used in portraying the preferences for the six values reflected by the AVL. In the few cases where individuals had tied ranks, these were arbitrarily ranked in chance or random fashion.

The longitudinal analysis of the data involved the individual comparison of SVIB scores on the Minister scale for those persons in the sample whose SVIB records registered at the time of their enrolment in seminary as well as their present SVIB records were available. They were classed into two groups, one comprising middler and senior seminarians and the other being comprized of graduates of the seminary over the past twelve years.

In the inter-test method of analysis of the data, the sample was divided into two groups, those receiving a high (A) score on the SVIB Minister scale and those receiving a low (B- and C) score on the same scale. These two groups were then compared for possible differences in value patterns on the AVL.

In the analysis involving the comparison between claimed vocational self-concept and measured vocational self-concept, the seminarians were divided into two groups on the basis of their stated preferences on the Index of Vocational Preferences.

The one group was comprised of those indicating a clear-cut first preference for the pastoral ministry. The other group was made up of those not indicating a first preference for the pastoral ministry, i.e., those whose claimed first, second or third preferences were for other, even though related vocations.

The methods of analysis outlined above have anticipated the specific testable sub-hypotheses which are now projected along with the respective statistical methods employed.

4. The Specific Sub-hypotheses of the Experiment.

In attempting to test the general hypothesis formulated at the end of the first chapter, four specific sub-hypotheses were proposed. These are now elaborated upon in the context of the required statistical techniques adopted for the respective tools and particular methods used in the experiment.

a) Sub-hypothesis 1.- There are no significant differences in the vocational self-concepts as measured by the Strong Vocational Interest Blank and the AVL Study of Values, between a criterion group of ministers when compared with i) a group of junior seminarians, ii) a combined group of middler and senior seminarians, and iii) a combined group of seminarians from an associated seminary.

In this cross-sectional approach of testing for significant differences between the respective samples, two diverse statistical methods were used for the SVIB and another appropriate technique for the AVL.

For the SVIB item analysis, checking for significant differences on each of the items between sub-groups, was done on the basis of the Mainland¹⁸ statistical tables as worked out to indicate minimum contrasts for both equal and unequal samples according to the particular requirements.

In view of the fact that the general hypothesis requires a demonstration of consistent similarity and not of differences, a special tabulation of the percentage of item similarities between the respective sub-groups was undertaken.

To test this sub-hypothesis by the use of the SVIB Minister and Group V Social Welfare scales, means and standard deviations of the standard scores were calculated for the sub-groups and then Fisher's t test for significant differences was applied.

With regard to the comparison of the groups on the basis of their AVL ranked value preferences, 2 x 4, 2 x 3 or 2 x 2 cell contingency tables for each of the six values were constructed as appropriate in each case and the chi-square technique was applied in testing for differences.

¹⁸ Mainland, Op. Cit., p. 1, 22.

Yate's correction formula was applied throughout the statistical analysis wherever a cell in any of the contingency tables contained a frequency of less than ten in number.

b) Sub-hypothesis 2.- There are no significant changes over a period of time in the vocational self-concepts of i) a group of middler and senior seminarians, and ii) a group of seminary graduates as measured longitudinally by the SVIB Minister, Social Worker and Social Science Teacher scales.

The testing of this hypothesis pertaining to a longitudinal analysis of vocational interests within individuals, involved the calculation of the standard error of differences for the two sets of scores obtained for each of the two groups on each of the given SVIB scales. Then the "z" ratios were found in order to show the significance of differences in vocational interests over a period of years.

e) Sub-hypothesis 3.- There are no significant differences for the vocational self-concepts as reflected in the ranked value patterns of the AVL between those persons in the total sample who scored high (45 and over) on the Minister scale of the SVIB and those persons who scored low (35 and under) on the same scale.

In this inter-test organization of the data, the respective AVL ranked value patterns for the high and low groups on the SVIB Minister scale, were compared for differences by setting up 2 x 3 or 2 x 2 contingency tables for

each of the six AVL values and then applying the usual chi-square formula to test for differences.

d) Sub-hypothesis 4.- There are no significant differences for the vocational self-concepts as measured by the SVIB and AVL, between a group of seminarians who claim a first preference for the pastoral ministry and a group of seminarians who do not claim a first preference for the pastoral ministry, as indicated by the Index of Vocational Preferences.

This sub-hypothesis proposed to test for differences between claimed or expressed vocational self-concept and measured or inventoried vocational self-concept.

For the comparison of group scores on the SVIB Minister and Group V Social Welfare scales, Fisher's t test was applied after the means and standard deviations had been calculated.

As to the AVL rank order patterns obtained for each group, the statistical computations for differences were again accomplished by setting up 2 x 3 or 2 x 2 cell contingency tables and then applying the chi-square technique. By this means the variance as to ranked distribution of AVL choices was demonstrated.

5. Summary.

In this chapter, the sample, the tools and the methods employed in the analysis and organization of the data have been outlined, in order to demonstrate the experimental design of the experiment. These procedures then issued in the statement of the four specific sub-hypotheses, together with the particular statistical operations necessary to test the respective sub-hypotheses.

Thus the foundation has been laid for the presentation and discussion of the experimental results which follow in the next two chapters.

CHAPTER III

PRESENTATION OF RESULTS

This chapter gives a detailed and tabulated report of the results obtained in testing the four sub-hypotheses according to the methods proposed in the preceding chapter. The results, as calculated on the basis of the specific measuring instruments, are further seen in the light of the external criteria and findings established by prior research with these tools.

1. Results of the Cross-Sectional Method.

In this section the statistical results obtained in comparing the sub-groups of seminarians with the criterion groups of ministers will be presented.

a) Results of the SVIB Item Analysis.- Three sub-groups of seminarians were compared separately with the two criterion groups of ministers, in the basis of summated "Like" response frequencies on the four hundred items of the SVIB. The method used to determine significance of differences of items between the compared groups has been described in detail in the previous chapter on page thirty-five. The number of items on which a statistically significant difference between the compared groups was found are shown in Table III.

Table III.-

Differences Between Seminarian Sub-Groups and Criterion Groups on the Four Hundred SVIB Items.

Comparison of Groups	N	No. of Items Different	
		.01 level	.05 level
Criterion Group A	20		
& Junior Seminarrians	20	0	3
& Mid.-Sen. Seminarrians	18	2	10
& Seminary B Seminarrians	20	0	1
Criterion Group B	20		
& Junior Seminarrians	20	0	4
& Mid.-Sen. Seminarrians	18	2	2
& Seminary B Seminarrians	20	0	1
Criterion Group A	20		
& Criterion Group B	20	0	0

According to the given results, the middler and senior seminarian sub-group differed significantly from the criterion groups on several more items than did the other seminarian sub-groups. On the whole, however, the number of SVIB items differentiating the groups was relatively very small.

The fact that the numbers of persons in the sub-samples were small, with an N of twenty or less, might partly explain the fact that no more significant differences on items were found. Hence the null hypothesis could be tentatively accepted, suggesting the probability of a high degree of similarity between seminarians and their ministerial counterparts.

In the process of checking for differences between groups in the course of the item analysis, the writer was impressed by the common occurrence of an identical number of summated "Like" response frequencies or a discrepancy of one or two as existing between the compared groups. Since the first part of the general hypothesis calls for a testing for similarities and not for differences, and since to date no statistical methods to test for similarities have been devised, a summation of identical or nearly identical "Like" response frequencies was carried out. The results of this attempt to demonstrate similarity among groups are shown in Table IV.

Table IV.-

Similarity of Summated "Like" Response Frequencies Between
Seminarian Sub-Groups and Criterion Groups
on the Four Hundred SVIB Items.

Comparison of Groups	N:20	Percentage of Item Similarities	
		0-2 Limits of Discrepancy	0-3 Limits of Discrepancy
Criterion Group A			
& Junior Seminarists		67.5	82.0
& Seminary B Seminarists		75.7	89.25
Criterion Group B			
& Junior Seminarists		66.0	82.25
& Seminary B Seminarists		74.75	87.50
Criterion Group A			
& Criterion Group B		76.75	89.25

The percentage of SVIB item similarities were calculated using two criteria, namely zero to two limits of discrepancy between groups on each item, and zero to three limits of discrepancy. The middler-senior seminarian sub-group could not be included in this comparison because the number in this group was not equal to that in the other sub-groups.

These results might be tentatively considered as providing positive evidence of the high degree of similarity existing between seminarians and ministers on the basis of their responses to SVIB items.

b) Results of the SVIB Minister and Group V Social Welfare Scales.- The results of a cross-sectional comparison of the seminarian sub-groups with the minister criterion groups on the SVIB Minister and Group V scales are shown in Tables V and VI.

The only statistically significant differences in these findings were between the middler-senior seminarian sub-group and criterion group A, on the mean standard scores of both the Minister and Group V scales. The middler-senior seminarian group and criterion group B also show a tendency towards being different on these same scales.

These results appear to be in keeping with those obtained by the SVIB item analysis method, in that the middler-seminarian sub-group manifested a tendency toward being significantly different from the other groups.

Table V.-

Mean Differences Between the Seminarian Sub-Groups and the Minister Criterion Groups on the SVIE Minister Scale.

Comparison of Groups	N	SVIE Minister Scale		
		Mean Score (Standard)	S.D.	t ratio
A. Criterion Group A	25	47.64	10.59	
& Junior Seminarrians	20	43.15	11.90	1.11
& Mid.-Sen.Seminarrians	18	38.11	10.46	2.58 ^a
& Sem. B. Seminarrians	21	43.19	9.20	1.47
B. Criterion Group B	20	45.60	10.76	
& Junior Seminarrians	20	43.15	11.90	.73
& Mid.-Sen.Seminarrians	18	38.11	10.46	1.83
& Sem. B Seminarrians	21	43.19	9.20	.43
C. Criterion Group A	25	47.64	10.59	
& Criterion Group B	20	45.60	10.76	.687

^a P = .02.

Table VI.-

Mean Differences Between the Seminarian Sub-Groups and the Minister Criterion Groups on SVIB Group V Social Welfare Scale.

Comparison of Groups	N	SVIB Group V Scale		
		Mean Score (Standard)	S.D.	t ratio
A. Criterion Group A	25	54.96	9.01	
& Junior Seminarrians	20	51.0	9.22	1.057
& Mid.-Sen. Seminarrians	18	47.94	6.49	2.808 ^a
& Sen. B. Seminarrians	21	52.09	6.37	1.083
B. Criterion Group B	20	52.40	9.61	
& Junior Seminarrians	20	51.0	9.22	.56
& Mid.-Sen. Seminarrians	18	47.94	6.49	1.628
& Sen. B. Seminarrians	21	52.09	9.01	.073
C. Criterion Group A	25	54.96	9.01	
& Criterion Group B	20	52.40	9.61	.895

^a P = .01.

c) Results of the Comparison of Groups on the AVL.--
The seminarian sub-groups were also compared cross-sectionally with the criterion groups on the basis of their ranked preferences on the six values of the AVL.

The ranked preferences on the six AVL values for all the sub-groups of the sample are presented in Appendix 2 in Tables XIX to XXIV.

The two minister criterion groups were first subjected to the chi-square test for comparison on their respective ranked AVL value preferences. The results are shown in Table VII. The only significant difference was found to be on the AVL Economic scale, with criterion group A manifesting a decidedly lower rank preference for this value than criterion group B.

In view of this sole apparent discrepancy on the AVL between these two groups, it was decided to combine them into one minister criterion group and then compare this group with the seminarian sub-groups by means of the chi-square test.

The results of the chi-square comparisons for ranked preferences on the AVL values between the minister criterion group and the seminarian sub-groups are shown in Table VIII. In the ranked distribution of value preferences, the junior seminarians differed from the criterion group on the Social and Theoretical values. The middler-senior seminarians did

Table VII.-
Chi-Square Differences of Ranked Preferences on
Six AVL Values Between Minister Criterion
Groups A^a and B.^b

Value	χ^2
Religious	.145
Social	.025
Theoretical	.168
Economic	5.218 ^c
Aesthetic	.0007
Political	.541

a N:25.

b N:20.

c P = .05, df = 1.

Table VIII.-

Chi-Square Differences of Ranked Preferences on Six AVL Values
Between Minister Criterion Group and Junior Seminarisns,
Middler-Senior Seminarisns and Seminary B Seminarisns.

Value	Minister Criterion Group N:45		
	& Jun.Sem. N:20	& Mid.-Sen.Sem. N:18	& Sem. B Sem. N:21
Religious	.827	.2127	.443
Social	9.215 ^a	.0927	.316
Theoretical	7.610 ^b	.799	.155
Economic	2.121	3.228	5.946 ^c
Aesthetic	.046	.0067	.536
Political	1.847	1.226	1.261

a P = .01, 1df.

b P = .05, 2df.

c P = .02, 1df.

not differ significantly from the criterion group, although on the Economic value there was a tendency for these seminarians to rank this value higher than their minister counterparts. A similar though statistically significant difference was found on the same value between the Seminary B sample of seminarians and the ministers.

Thus the results of the SVIB and AVL analysis, by means of the cross-sectional method in comparing the seminarians and ministers have been set forth.

2. The Results of the Longitudinal Method.

For the past twelve years or so, the SVIB was administered to the seminarians of Seminary A as a routine part of their orientation at the time of their initial enrolment at the seminary. This made it possible to engage in a longitudinal study of SVIB interests for those whose original records were available, by comparing their SVIB scores on relevant occupational scales with their respective scores obtained during the re-administration of the SVIB at the time of the present research.

In the minister criterion group, thirty former graduates of Seminary A were involved in the present study. However, the original SVIB Minister scale scores for only nineteen of these were available from the files.

Since the original SVIB records had not been scored on the Group V Social Welfare scale, it was not possible to make a comparison on that scale. However, for thirteen of the ministers, scores on a number of other SVIB occupational scales were available. In order to ascertain the effect of time and experience on other than only the Minister scale, two other scales, logically considered to be closest to the Minister scale, were arbitrarily chosen for longitudinal comparison. These were the SVIB Social Worker and Social Science Teacher scales.

The standard scores and differences on these three SVIB scales for the ministers involved in both administrations of this inventory are presented in Table XXV, Appendix 2. Likewise, the standard scores and differences for the middler and senior seminarians on the Minister, Social Worker and Social Science Teacher SVIB are given in Table XXVI, Appendix 2.

Table IX shows the obtained "z" ratios for the mean differences in standard scores on the SVIB Minister scale for both seminarians and ministers. The mean increase of the Minister scale for the seminarians after a two to three year interval reached statistical significance at the .01 level, while for the group of ministers retested after an interval ranging from four to twelve years an overall increase was shown on the same scale, significant at the .05 level of confidence.

Table IX.-

Mean Differences in Test-Retest Standard Scores on SVIB
Minister Scale for Seminarians and Ministers.

Group	N	Year Intervals	SVIB Minister Scale		
			Mean Diff.	S.D. M	"z" ratio of Mean Diff.
Seminarians	17	2-3	4.53	6.67	4.09 ^a
Ministers	19	4-12	5.58	10.10	2.35 ^b

a P = .01.

b P = .05.

Similar "z" ratio comparisons of mean differences on the SVIB Social Worker and Social Science Teacher scales were calculated. The results are shown in Table X.

The seminarian group manifested a very slight mean decrease on the Social Worker and Social Science Teacher scales. However, the thirteen ministers reflected a mean increase on these scales, significant at the .05 level.

These results provide tentative support to the expected increase or development of vocational self-concept as defined operationally in terms of SVIB scale scores.

3. Results of the Inter-Test Method.

The object of the inter-test method was to test whether or not different AVL value patterns between a high scoring and a low scoring group on the SVIB Minister scale would be discernible. Those persons of the total sample who scored in the A (45 and over) category on the Minister scale comprised the high scoring group, while the low scoring group was made up of those who scored in the C category (35 and under). The frequencies of ranked preferences for these two groups are shown in Tables XVII and XVIII, Appendix 2.

Table X.-
 Mean Differences in Test-Retest Standard Scores on SVIB Social
 Worker and Social Science Teacher Scales for a
 Sample of Seminarists^a and Ministers.^b

<u>SVIB</u> Scale	Seminarists			Ministers		
	Mean Diff.	S.D. M	"z" ratio of Mean Diff.	Mean Diff.	S.D. M	"z" ratio of Mean Diff.
Social Worker	-.048	8.33	-.031	4.62	6.39	2.46 ^c
Social Sci. Teacher	-.03	4.74	-.025	5.62	7.39	2.16 ^c

a N:17, 2-3 year intervals.

b N:13, 4-12 year intervals.

c P = .05.

Table XI shows the results of comparing these groups on the six AVL values. Significant chi-square differences appeared for the Social, Theoretical and the Economic value preferences between these two groups, with a tendency toward significance as to the Political value preference. The high scoring group on the SVIB Minister scale demonstrated a correspondingly higher preference for the AVL Social value and a lower preference for the AVL Theoretical, Economic and Political values, than did the low scoring group on this scale.

4. Results of the Claimed vs. Measured Vocational Self-Concept Method.

The total sample of seminarians was involved in this aspect of the research. The seminarians were divided into two groups on the basis of their responses to the Index of Vocational Preferences. Thirty-five seminarians indicated a first preference for the pastoral ministry and thus comprised the first group. According to seminary experience, twelve were seniors, seven were middlers and sixteen were juniors. The other group was made up of those expressing a vocational preference other than that of the pastoral ministry. Of this group of twenty-two, ten expressed first preference for teaching, nine for missionary work, and three for church conference administration. According to seminary experience, four were seniors, eight were middlers and ten were junior seminarians.

Table XI.-

Chi-Square Differences of Rank Distribution for the Six Values of the AVL Between the High Scoring Group^a and Low Scoring Group^b of Seminarians and Ministers on the BVLB Minister Scale.

Value	χ^2	df
Religious	1.024	1
Social	4.037 ^c	1
Theoretical	6.727 ^c	2
Economic	4.736 ^c	1
Aesthetic	.371	2
Political	4.088	2

a N:85.

b N:23

c P = .05.

The significance of mean differences on the SVIB Minister and Social Welfare Group V scales were calculated by means of the t test. The results are shown in Table XII and indicate a high degree of statistical difference between these two groups according to their scores on these SVIB scales.

These two groups were also compared on the basis of their respective AVL value patterns. The frequencies of ranked preferences on the six AVL values are presented in Tables XXIX and XXX, Appendix 2. The results of the chi-square differences between the groups are shown in Table XIII. The group expressing first preference for the pastoral ministry reflected a statistically significant (at .05 level) lower preference for the Theoretical AVL value than the group expressing other vocational first preferences. On the other AVL values no significant patterns to differentiate the two groups were found.

A further logical step was now taken by comparing these two groups with the minister criterion group in the same manner by means of the SVIB and the AVL. The results of this comparison on the basis of mean standard scores on the SVIB Minister scale are shown in Table XIV. The obtained "t" ratio between the criterion group and the group of seminarians expressing a first preference for the pastoral ministry suggests the probability of a high degree of

Table XII.-

Mean Differences on SVIB Minister and Group V Social Welfare Scales between the Group^a of Seminarians Expressing First Preference for the Pastoral Ministry and the Group^b Not Expressing Such First Preference.

<u>SVIB</u> Scale	<u>First Pref. Gr.</u>		<u>Not</u> <u>First Pref. Gr.</u>		Mean Diff.	t ratio
	Mean Score (Standard)	S.D.	Mean Score (Standard)	S.D.		
Minister	46.34	7.82	35.05	10.20	11.25	4.64 ^c
Group V Social Welfare	55.29	7.01	43.59	6.36	11.70	6.16 ^c

a N:35.

b N:22.

c P = .05.

Table XIII.-

Chi-Square Differences of Rank Distribution for the Six Values of the AVL between the Group^a of Seminarians Expressing First Preference for the Pastoral Ministry and the Group^b Not Expressing Such First Preference.

Value	χ^2	df
Religious	.921	1
Social	1.153	1
Theoretical	6.356 ^c	2
Economic	.925	1
Aesthetic	.200	1
Political	.849	1

a N:35.

b N:22.

c P = .05.

Table XIV.-

Differences in Standard Scores on the SVIB Minister Scale Between the Minister Criterion Group and Two Groups of Seminarians, One Expressing First Preference for the Pastoral Ministry and the Other Not Expressing Such Preference.

Comparison of Groups	N	SVIB Minister Scale		Mean Diff.	t ratio
		Mean	S.D.		
Minister Criterion Group	45	46.73	10.87		
& First Pref. Group	35	46.34	7.82	.39	.172
& <u>Not</u> First Pref. Group	22	35.05	10.20	11.68	4.14 ^a

^a P = .001.

resemblance existing between the two. In contrast to this the "t" ratio obtained in comparing the criterion group with those not expressing first preference for the pastoral ministry indicates a difference in standard scores on the Minister scale, significant at the .001 level of confidence.

These two groups were compared then also with the ministers on the basis of their respective AVL value patterns. The results are presented in Tables XV and XVI.

The only statistically significant difference between the group expressing first preference for the pastoral ministry and the minister criterion, was found in the varied distribution of choices on the AVL Political value. The former group manifested a generally higher preference for AVL Political value than did the criterion group.

In the case of the comparison of the seminarians not expressing first preference for the pastoral ministry with the criterion group, a difference significant at the .01 level was found on the AVL Economic value. A tendency toward significant deviation was indicated on the Theoretical and Political value patterns between the two groups. On each of these three values, the seminarians ranked these higher than did the ministers.

The Group V Social Welfare scale was not involved in this comparison because the mean score on this scale for the seminarian group not expressing first preference for the pastoral ministry was very near A category (43.59), actually in the B category, which is still considered to be a primary interest pattern on any one of the SVIB scales.

Table XV.-

Chi-Square Differences of Rank Distribution of Preferences
for the Six Values of the AVL between the Group of
Seminarians^a Expressing First Preference
for the Pastoral Ministry and the
Minister Criterion Group.^b

Value	χ^2	df
Religious	.025	1
Social	.011	1
Theoretical	.119	2
Economic	.763	1
Aesthetic	.163	2
Political	9.133 ^c	2

a N:35.

b N:45.

c P = .05.

Table XVI.-

Chi-Square Differences of Rank Distribution of Preferences
for the Six Values of the AVL between the Group of
Seminarists^a Not Expressing First Preference
for the Pastoral Ministry and the
Minister Criterion Group.^b

Value	χ^2	df
Religious	.277	1
Social	.451	1
Theoretical	5.246	2
Economic	8.034 ^c	1
Aesthetic	.043	2
Political	4.429	2

a N:22.

b N:45

c P = .01.

5. The Results Seen in the General Framework of Prior Research on the SVIB and AVL with Comparable Samples.

As a final step in the presentation of the results, the general findings of this study on the measuring instruments of the SVIB and AVL are set forth within the context of prior research with these particular tools as used with comparable occupational samples. This may serve to shed some light on the question as to whether or not these measures on the SVIB and the AVL have been or may be used to express vocational self-concept in an appropriate or valid manner.

With regard to the SVIB Minister and Group V Social Welfare scales, the standard scores obtained by the ministers and seminarians of this sample were compared with the scores of Strong's minister criterion sample, the external criterion of which the SVIB Minister scale was constructed. By way of contrast a representative sample of Catholic clergy used in a study by Lucas¹ was also included in the comparison. Besides the means and standard deviations of SVIB standard scores on the Minister scale for the samples, the percentages of persons scoring in the A and B categories were calculated.

¹ Joseph R. Lucas, An Evaluation of Strong's Minister Scale Applied to the Roman Catholic Clergy, unpublished Master's thesis, presented to the School of Psychology and Education of the University of Ottawa, Ontario, 1946, vii-84 p.

Table XVII shows this comparison of the sub-groups of this sample with Strong's ministers and Lucas'² Catholic clergy.

In another study by Lhota,³ a larger sample of 252 Catholic priests, "successfully" engaged in parish work in all representative areas of the United States, were tested on the SVIB Minister scale. Thirty-one per cent of Lhota's⁴ sample of priests rated in the A category, as compared with 24.6 per cent in Lucas' sample. However, in both instances it was concluded that the SVIB Minister scale did not tap a characteristic pattern of vocational interest for Catholic priests, thus necessitating the construction of a special Catholic Priest scale on the SVIB.

In the case of the Mennonite Minister criterion group of the present study, it appears that it scored quite closely to Strong's criterion group. Hence it may be argued that the SVIB Minister scale does register a characteristic vocational interest pattern for this sample, and appropriately expresses vocational self-concept in operational terms.

² Lucas, Op. Cit., p. 50.

³ Brian G. Lhota, Vocational Interests of Catholic Priests, Washington, Catholic University of America Press, 1948, quoted by Paul F. D'Arcy, "Review of Research on the Vocational Interests of Priests, Brothers and Sisters", in Magda Arnold, et al., Screening Candidates for the Priesthood and Religious Life, Chicago, Loyola University Press, 1952, vii-203 p.

⁴ Ibid., p. 154.

Table XVII.-

Comparison of Mean Standard Scores and Percentages in Categories on the SVIB Minister Scale for Strong's Criterion of Ministers, Lucas' Sample of Catholic Priests and the Ministers and Seminarists of this Sample.

Sample	N	Minister Scale		Percentage in SVIB Cat.		
		Mean	S.D.	A(45+)	A,B (40+)	A,B,B- (35+)
Strong's Ministers	255	50	10	71.2	83.2	90.0
Catholic Priests	105	36.1	10.6	24.8	43.8	56.6
Minister Criterion	45	46.73	10.87	64.4	68.9	82.5
Seminary A Seminarists	38	40.76	11.52	42.1	65.8	78.9
Seminary B Seminarists	21	43.19	9.20	47.6	71.4	80.9

An analysis of the results of the same three criterion groups on the SVIB Group V Social Welfare scale are shown in Table XVIII, according to the percentages of persons scoring in each of the SVIB categories. Criterion Groups A and B of this sample are shown separately as well. The resulting percentages for the seminarians of this sample are also included.

It will be noted that Criterion Group A showed a pattern of percentages almost identical to Strong's Minister Criterion Group.⁵ In contrast to this, Criterion Group B closely resembled Lucas'⁶ sample of Catholic priests on the Group V scale.

On the whole it appears that for the sample used in this study, the SVIB Group V Social Welfare scale is a good indicator of general vocational interest in the social welfare field, of which the pastoral ministry and other similar church-related occupations appear to be specific occupational types. Hence it would seem appropriate that the construct of vocational self-concept be applied to the Group V Social Welfare scale in operational terms relative to the seminarians and ministers of this sample. As such, it would

⁵ Edward K. Strong, Jr., Vocational Interests of Men and Women, Stanford, California, Stanford University Press, 1943, Table 42, p. 172.

⁶ Lucas, Op. Cit., p. 56.

Table XVIII.-

Percentage of Persons in Categories on SVIB Group V Social Welfare Scale for Strong's Criterion of Ministers, Lucas' Catholic Priests and the Ministers and Seminararians of the Present Sample.

Group	N	SVIB Group V Categories				
		A(45+)	B+(40-44)	B(35-39)	B-(30-34)	C(29-)
Strong's Ministers	255	92.0	4.0	3.0	1.0	0
Catholic Priests	105	77.1	6.7	11.4	2.8	2.
Minister Criterion	45	84.4	6.9	6.9	1.6	0
Criterion Group A	25	92.0	4.0	.0	4.0	0
Criterion Group B	20	75.0	10.0	15.0	0	0
Seminary A Seminararians	38	71.5	13.0	13.0	2.5	0
Seminary B Seminararians	21	81.0	9.5	9.5	.0	0

seen in order to refer to this Group V scale interchangeably with the Minister scale in operationally defining vocational self-concept.

With reference to the AVL, the question may also be raised as to whether or not a particular value pattern was manifest in the sample of ministers and seminarians and in the context of prior research on the AVL with similar occupational samples. If a characteristic AVL value pattern, clearly typical of ministers or priests could be demonstrated, then it would appear appropriate and valid to apply the construct of vocational self-concept to such a value pattern in operational terms.

In the Manual of Study of Values, the authors⁷ have published the results of various occupational samples. They claim that these are representative norms, illustrative of occupational differences being reflected in the patterns of the AVL. The mean raw scores for a sample of twenty-six clergymen and for another sample of thirty-one theological students are presented as being characteristic of ministers and seminarians.

On the basis of these mean scores on the six AVL values, both the clergymen and theological students clearly

⁷ Gordon W. Allport, Philip E. Vernon, and Gardner Lindzey, Study of Values Manual, Third Edition, Houghton Mifflin Co., Boston, 1960, p. 14.

manifest a first preference for the Religious value, a second preference for the Social value and a sixth or lowest preference for the Economic value.

In a study of the AVL value patterns of a sample of Catholic major seminarians, Francoeur,⁸ using the ranking method found that the ranked values of his sample of seminarians revealed a distinct pattern, placing the Religious value first, the Social value second and the Economic value sixth or last.

The same ranking method as adopted by Francoeur was used in the present study. The frequencies for the Religious, Social and Economic values for the entire sample were tabulated. These results are presented in Tables XXXI, XXXII and XXXIII in Appendix 2.

According to percentage of frequencies of the total sample of ministers and seminarians, 83.7 per cent chose the Religious value as the first rank, 64.4 per cent chose the Social value as their second preference, and 54.8 per cent ranked lowest or sixth on the Economic value. For the Social value, when those giving it first preference were added to those giving it second preference, the percentage was raised

⁸ Thomas A. Francoeur, A Study of the Value Patterns of a Group of Franco-American Major Seminarians, unpublished Master's thesis presented to the School of Psychology and Education of the University of Ottawa, Ontario, 1963, p. 1-70.

to 74. Likewise in the case of the Economic value, when those who gave it fifth preference were added to those who gave it sixth preference, the percentage rose to 73.3.

These results are entirely in keeping with those reported by the co-authors of the AVL and by Francoeur as mentioned above.

Hence it would seem appropriate to refer to a typical "minister" or "priest" vocational self-concept operationally, as expressed by means of an AVL value pattern in which a person gives first preference to the religious value, second preference to the social value and sixth or lowest preference to the economic value.

6. Summary.

In this chapter the results of the experiment have been presented, in accordance with the particular methods adopted to test the four specific sub-hypotheses. The overall results obtained for the sample of seminarians and ministers on the Strong Vocational Interest Blank and the Allport-Vernon-Lindzey Study of Values were compared with the external criteria established by prior research with these tools. A discussion and evaluation of the significance of these results in relation to the projected hypotheses and theory in question will be dealt with in the next chapter.

CHAPTER IV

DISCUSSION OF RESULTS

In this final chapter the results of the experiment as presented in the previous chapter will be further discussed and evaluated. First, a discussion of the results with specific reference to the four postulated sub-hypotheses is presented. Thereupon, an evaluation of the theoretical construct of vocational self-concept as posed by the general hypothesis of this study follows and leads into the final summary and conclusions.

1. Discussion of the Results with Reference to the Specific Sub-Hypotheses.

In this section, a discussion of the specific significance and meaning of the results obtained in testing the specific sub-hypotheses will be discussed in the broader context of prior research findings along similar lines.

The first sub-hypothesis was formulated to test for significant differences or similarities between the seminarian sub-groups and the minister criterion groups in a cross-sectional analysis of responses on the SVIB and AVL.

The item analysis of the responses to the four hundred items of the SVIB was the first method used to

demonstrate differences or similarities of interests between the compared groups.

First of all, it must be pointed out that the particular method adopted in the item analysis of the SVIB may in itself have seriously affected the results. By arbitrarily assigning half of the "Indifferent" responses to the four hundred SVIB items to the "Like" and "Dislike" response categories respectively, a final summated "Like" score was arrived at and then used in comparing the groups on their responses to each of the four hundred items.

However, there is no definite certainty that the persons in each of the groups would have responded in that manner, had they been given only the two alternatives "Like" and "Dislike" in answering the SVIB items.

Notwithstanding this possible methodological distortion of SVIB responses, the results of the item analysis do suggest a high degree of similarity of vocational interests between the seminarian sub-groups and the minister criterion. This contention would be sustained both on the basis of finding relatively few statistically significant differences as well as demonstrating a high percentage of similarities as to SVIB responses between the compared groups (see Tables III and IV).

These results could be used as a tentative argument for a high degree of vocational self-concept identification on the part of the seminarians with their ministerial counterparts.

The slight tendency for the middler-senior seminarian group to show more significantly different responses to SVIE items than the other seminarian groups when compared to the minister criterion, is contrary to the logical expectation of a gradual development of vocational interests from junior seminarians and on through to senior seminarians.

This unexpected phenomenon was also evident when the seminarian groups were compared with the ministers on the basis of mean standard scores on the SVIE Minister and Group V Social Welfare scales, even to the point of reaching statistical significance (see Tables V and VI).

By way of inference, this apparent decline in vocational interests for the ministry may be accounted for partly by the fact that eight of this combined middler-senior seminarian group of eighteen did not express a first preference for the pastoral ministry. Compared to the other seminarian groups, this group happened to be more heavily weighted with persons not aiming directly for a vocation in the pastoral ministry.

However, this could also be taken to reflect a partial disillusionment with the ministry as a prospective vocation,

after having been subjected to a closer contact with it through the seminary experience.

The AVL results, in comparing these groups of seminarians with ministers on the basis of their ranked value preferences, do not indicate a pattern entirely in keeping with the findings on the SVIB.

As seen in Table VIII, no significant differences were found between the seminarian sub-groups and the minister criterion as to AVL religious, aesthetic and political value preferences. The junior seminarians showed a lower preference for the AVL social value and a higher preference for the theoretical value, when compared with the ministers. This could cautiously be interpreted to indicate less concern for practical humanitarian problems and a greater concern with the theoretical issues of life.

The tendency for both of the other seminarian sub-groups to show a higher preference for the economic value as compared with the total minister criterion cannot be considered to be too important, in view of the fact that the two minister criterion sub-groups also differed in this respect (see Table VII).

The basic difficulty of attaching significance to cross-sectional comparisons and especially with groups as small as in this present study, makes it necessary to conclude

that the results of testing the first sub-hypothesis must be considered as highly tentative.

Hence we proceed to discuss the results of the longitudinal method used in testing the second sub-hypothesis, which sought to demonstrate whether or not significant changes in individual EVIE scores on the Minister, Social Worker and Social Science Teacher scales over a period of years would be evident for a group of seminarians and ministers.

The results (see Table IX) of mean differences of standard scores on the SVIE Minister scale for both the seminarian and the minister group show a significant increase from the time that these persons enrolled in seminary as compared with the present re-administration of the SVIE. This could be inferred as providing evidence of a gradual growth or development of vocational self-concept in terms of vocational interests, although the numbers in each group were quite small.

Table X shows that the seminarian group did not change as to mean scores on the Social Worker and Social Science Teacher scales, while the mean scores for the ministers on these scales did show a significant rise. It may be that in the former case of the seminarians, the time interval was not sufficiently long enough to allow for a general change in social welfare interest to take place.

These results must be seen in the light of other research findings on the SVIB. Strong¹ has reported his cross-sectional studies with the persons engaged in his criterion groups to show the effect of age and experience on the permanence of vocational interests. Using twenty-nine of his occupational scales, Strong compared the respective mean scores of persons engaged in these occupations at four age levels with ten-year intervals, ranging from twenty-five to fifty-five. Of the twenty-nine scales, seventeen showed no change with age, eleven showed a decrease in scores with age. Oddly enough for the present study, only the Minister scale showed an increase with age.

At the age of twenty-five years, the ministers in Strong's criterion group had a mean standard score on the SVIB Minister scale of 46.0; at thirty-five, it was 50.0; at forty-five, it was 51.2; and at fifty-five, it was 52.9, making a total gain of 6.9 standard scores from ages twenty-five to fifty-five.² It must be noted that such a trend was not evident in the minister criterion group of this sample.

1 Edward K. Strong, Jr., Vocational Interests of Men and Women, Stanford, California, Stanford University Press, 1943, p. 360-375.

2 Ibid., p. 374, Table 75.

From this, Strong³ generalized that there could be no justification for the belief that vocational interests are the resultant of long experience in the occupation, but that at the age of 27.5 years such interests are as well established as they will be.

While this tendency for a permanence of interests may hold true in general for most of the SVIB occupational scales, the question of the permanence of interests as measured on the Minister scale still remains and is most pertinent to this study. Could it be that it happens to be a general function of the Minister scale to rise with age?

The longitudinal research of Kelly,⁴ in which he retested 215 males and 231 females, after twenty years showed a decrease on the SVIB Minister scale. Hence, the reported findings are somewhat conflicting and inconclusive.

Upon a close examination of the differences in individual test-retest scores on the SVIB Minister scale (see Appendix E, Tables XXV, XXVI), it will be noted that in most cases the deviations are only slight. A more intensive case study of those showing drastic changes might reveal significant information to account for such marked changes in

3 Strong, Op. Cit., p. 375.

4 E.L. Kelly, "Consistency of Adult Personality", in American Psychologist, Vol. 10, No. 11, 1955, p. 675.

measured interests. For two of the ministers, other biographical material was available to illustrate plausible explanations, that could reflect changes in vocational self-concept.

The first case was the one who registered a standard score of twenty on the SVIE Minister scale upon enrolling in seminary. This definitely indicated a reject pattern for the ministry. Other biographical data indicates that prior to seminary entrance, he was engaged as a teacher in a parochial high school situated in a restricted cultural milieu. Then he made a sudden decision to enter the ministry.

Four years later, when the SVIE was re-administered he obtained a score of fifty on the Minister scale, which was well above the mean for the group. In the meantime he had completed the seminary course and was engaged in a city pastorate. It would be understandable that his vocational self-concept as measured by the SVIE Minister scale would show a significant change toward conformity with Streng's criterion group of ministers, who could be described as the typical "American Protestant clergyman".

The other case is that of the person who showed the greatest decrease in his standard score on the SVIE Minister scale. Other biographical data reveals that upon entering seminary his prime interest was to prepare for the pastoral

ministry. At that time he registered a score of sixty on the Minister scale. Twelve years later when the SVIE was re-administered he obtained a score of forty-four on the same scale. While this still shows a primary interest for the ministry, it does suggest a significant decrease in interest.

In the intervening period, he married a medical missionary and they went to serve as missionaries on a foreign field. His present SVIE profile also shows the highest score on the physician scale. Hence, it may be inferred that his compared SVIE Minister scale scores reflect a change in vocational self-concept in the direction away from the pastoral ministry.

Thus we may contend for the tentative rejection of the second sub-hypothesis in its null form, and hold to the evidence of longitudinal development in vocational self-concept, as reflected both in the means of test-retest scores on the SVIE Minister scale for the seminarian and minister groups, as well as in the study of some individual cases.

The third sub-hypothesis sought to establish whether or not vocational self-concept as measured by the SVIE Minister scale manifested correspondingly similar AVL value patterns. In comparing the high-scoring group on the SVIE Minister scale with the low-scoring group on the same scale according to their ranked AVL value preferences, no

differences were found on the religious and aesthetic values (see Table XI). In view of the fact that seventy-nine per cent of the total sample ranked the religious value first or highest, it is understandable that no significant differences between groups on this value would be discernible.

As to the other four AVL values, differences in the expected directions were found between the high-scoring and low-scoring groups on the SVIB Minister scale. The high-scoring group on the SVIB showed corresponding higher preferences for the AVL Social and Political values, than did the low-scoring SVIB group. This could suggest that the former manifested a greater dominant interest for humanitarian concerns and in giving leadership, than did the latter.

On the other hand, the high-scoring SVIB group showed a lower preference for the theoretical and economic values on the AVL than did the low-scoring group. This could be interpreted to correspond well with the higher preference for the social and political values. The lower preference for the AVL theoretical and economic values could indicate a naturally expected shying away from the discovery of truth by means of the empirical and rational approach, and a corresponding disdain for the mundane, materialistic pursuits of life.

Thus the third sub-hypothesis could be considered to have been rejected, with the exception of the AVL religious

and aesthetic values, which appear to have tapped a dimension of dominant interests, quite unrelated to the interest pattern reflected on the SVIE Minister scale.

The fourth sub-hypothesis called for a testing for significant differences of vocational self-concept on the measures of the SVIE and AVL between two groups of seminarians differentiated by their responses to the Index of Vocational Preferences. The group of seminarians expressing a first preference for the pastoral ministry were shown to be very significantly different from the group expressing first preferences for other vocations, in terms of their respective mean standard scores on both the SVIE Minister and Group V Social Welfare scales (see Table XII). When these two groups were separately compared with the total minister criterion group on the Minister scale, the former group of seminarians had a mean standard score almost identical to the ministers, while the latter group whose claimed first preferences were not for the pastoral ministry were found to be very significantly different from the minister criterion as to mean scores on the Minister scale (see Table XIV).

The basic question as to the appropriateness or validity of using mean standard scores can be raised. In keeping with the operational definition of vocational self-concept as used in this study, the mean scores could be

viewed as reflecting the degree to which the seminarian consciously and unconsciously identified himself with the persons in the criterion group.

When the same two groups of seminarians were compared as to their respective AVL ranked value preferences, significant differences were found on two of the values, with tendencies in the expected direction on two others, in keeping with the value patterns found to differentiate the high and low-scoring groups on the SVIB Minister scale. Thus the group expressing first preference for the pastoral ministry showed a higher preference for the political and social values and a lower preference for the theoretical and economic values, as compared with the group expressing other first preferences (see Table XIII).

When these two groups were compared with the minister criterion group on the AVL, the seminarian group expressing first preference for the pastoral ministry was found to show a value preference pattern almost identical to the ministers except for the political value. Here the seminarians tended to rank this value higher than the ministers. This may be interpreted to reflect a more progressive and aggressive attitude towards the value of resorting to power and political means on the part of the seminarians as compared with the total group of ministers.

In the comparison of the group of seminarians, not expressing first preference for the pastoral ministry, with the minister criterion on the AVL, the former showed a significantly higher preference for the economic value, with tendencies to rank the theoretical and political values higher than the ministers.

Hence we notice that the AVL did not differentiate these groups of seminarians when compared with each other and when each was compared with the ministers, in as clear-cut a manner as did the SVIE Minister scale. However, in the case of both measures of vocational self-concept, it seems fair to conclude that the fourth sub-hypothesis of no differences was rejected.

A possibility for further research arises from the results of the testing of the fourth sub-hypothesis. It would appear that those seminarians expressing first preference for teaching, missionary work or other church-related vocations, have a somewhat different vocational self-concept or pattern of interests than those seminarians who expressed a first preference for the pastoral ministry.

This proposition is in accord with research conducted with Catholic priests. D'Arcy⁵ developed a new SVIE

⁵ Paul F. D'Arcy, "Review of Research on the Vocational Interests of Priests, Brothers and Sisters", in Magda Arnold, et al., Screening Candidates for the Priesthood and Religious Life, Chicago, Loyola University Press, 1982, p. 155-159.

occupational scale called the Missionary Priest scale and found that it was more effective in detecting the interests of missionary priests than Lhota's SVIE Diocesan Priest scale.

Hence, attempts might be made to develop special scales on the SVIE or on other measures to tap the distinctive interest patterns of Protestant missionaries or of those in other church-related vocations such as theology teaching, but other than the pastoral ministry. The latter seems to represent a rather distinctive homogeneous grouping on the basis of the Index of Vocational Preferences used in this study.

2. Evaluation of Vocational Self-Concept Theory with Reference to the General Hypothesis.

Having discussed the possible tentatively established significance of the results with reference to the four specific sub-hypotheses, it is further necessary to relate these findings to the general hypothesis, in order to evaluate the theory of vocational self-concept in question.

In referring to the two-pronged nature of the general hypothesis as presented at the end of the first chapter, the first part of this hypothesis, related to self theory, set out to demonstrate no consistent similarities of the vocational self-concepts between seminarians and ministers.

Since no statistical procedures have as yet been devised to test for the significance of similarities between uncorrelated and unmatched groups, the approach in the specific sub-hypotheses has been to test for statistically significant differences, and wherever none were found, to assume the suggested probability of a high degree of similarity. Obviously, this indirect or reversed way of testing for similarity renders the interpretation of the results all the more tentative.

The first and fourth sub-hypotheses would appear to have contributed most toward a demonstration of similarity between the seminarian and minister criterion groups. The SVIB item analysis provided both indirect and positively direct evidence of a high degree of similarity of vocational interests on the part of the seminarians toward their ministerial superiors.

However, as the Index of Vocational Preferences helped to demonstrate, the seminarian sub-groups that constituted the cross-sectional comparisons were relatively heterogeneous sub-groups. A re-grouping of the seminarians on the basis of their claimed first preferences for the pastoral ministry resulted in a more homogeneous sample, whose vocational self-concepts appeared to be very similar to those of the ministers when measured and compared both on the SVIB Minister and

Group V Social Welfare scales as well as on the basis of AVL value preferences.

The second aspect of the general hypothesis called for a demonstration of the development of the vocational self-concepts of seminarians and ministers when measured both cross-sectionally and longitudinally.

The cross-sectional method of comparing the SVIB and AVL results did in no way yield any indications of vocational self-concept development.

The longitudinal method as demonstrated by the rejection of the second sub-hypothesis of a significant increase of mean scores on the SVIB Minister scale can be used as tentative evidence for the development of the vocational self-concepts with age and experience in the vocation. However, in view of Strong's findings, that of all the SVIB occupational scales, only the Minister scale showed an increase with age, it appears that, for the present, the generalization of being able to demonstrate development on the SVIB must cautiously be restricted to the Minister scale.

In evaluating the theory of vocational self-concept in the light of this two-pronged general hypothesis, it must be readily admitted that it is rather difficult to test the central and dynamic aspects of both self and development in experimental research explorations. Thus the criticism

levelled at Super by Kehas,⁶ that the proposition of self-concept is both complex and ambiguous, would seem to be partially justified and borne out by the findings of the present study.

In a more recent evaluation of vocational self-concept theory, Field and his associates⁷ state: "As it became feasible to reconsider it operationally, self-concept began to appear not only more central but also far more variable and complex."

The translation of vocational self-concept into operational terms as used in this study appears to have been both appropriate and valid. This would apply to its two alternate operational designations, as a vocational interest score on the SVIE Minister scale or as a typical ministerial AVL value pattern, in which the religious value is ranked first, the social value is ranked second and the economic value is ranked sixth or lowest.

However, it appears that generally speaking, the SVIE measures vocational interests at a fairly stable level of the adult personality. The AVL in turn appears to tap

⁶ Chris Kehas, "Letter to the Editor", in Journal of Counseling Psychology, Vol. 9, No. 1, 1962, p. 91.

⁷ Frank L. Field, C. Kehas, and D.V. Tiedeman, "The Self-Concept in Career Development: A Construct in Transition", in Personnel and Guidance Journal, Vol. 41, No. 9, May 1963, p. 768.

a person's value system at an even more stable and deeper level. Along with many other researchers, this was also the conclusion of Kelly,⁸ who in his longitudinal study of males and females found that the value systems as measured by the AVL and vocational interests as measured by the SVIB, to be the most stable of five domains of personal variables, the other three being self-ratings, attitudes and personality variables.

In comparing his findings on the AVL with the SVIB, Kelly⁹ made the logical conclusion that a person may change his vocational interests without necessarily shifting his basic value systems. The results of the present study would, generally speaking, tend to bear out this observation.

In view of this apparent fact of the generally stable level of vocational interests, and the even more stable and deeper level of value systems in adults, it would seem that their judicious incorporation into vocational self-concept theory would be highly appropriate and useful in the general counseling situation. However, in the realm of experimental research explorations, the complexity of demonstrating with some greater degree of certainty, both the dynamic and global functions of self-expression and of self-concept

⁸ Kelly, Op. Cit., p. 675.

⁹ Ibid., p. 679.

development as translated into the vocational terms of interests and values, appears to be a most difficult if not an impossible task.

SUMMARY AND CONCLUSIONS

In an attempt to test the two-pronged general hypothesis which called for a demonstration of both the consistent similarity and the gradual development of the vocational self-concepts of compared sub-groups of seminarians and ministers, four specific sub-hypotheses, each involving distinct methods and appropriate statistical procedures, were formulated.

In the cross-sectional method of comparing seminarian sub-groups with the minister criterion group(s), the SVIB item analysis and SVIB mean standard score on the Minister and Group V Social Welfare scales, as well as the rank value preferences of the AVL were used. With full awareness of methodological shortcomings as well as the relatively small numbers in each of the sub-groups, the first sub-hypothesis of no significant differences on the stated variables among sub-groups was largely upheld, thus indirectly suggesting the probability of a high degree of similarity of vocational self-concept between the seminarian sub-groups and the ministers.

Using the longitudinal method of comparing the mean differences in test-retest standard scores over an interval of years on the SVIB Minister scale, a group of seminarians and another group of ministers showed a significant rise in

mean scores. This gave support to the rejection of the second sub-hypothesis of no significant changes or development in vocational self-concept, as defined operationally.

However, in view of Strong's findings, that of twenty-nine SVIB occupational scales, the Minister scale was the only one that seemed to increase with age and experience in the occupation, it may be possible that this phenomenon is limited to this particular scale, thus preventing broader generalization of the demonstration of vocational self-concept development by this method.

The inter-test method of dividing the total sample into a high-scoring group and a low-scoring group on the basis of their individual standard scores on the SVIB Minister scale, and then comparing these two groups on the basis of their ranked AVL value preferences, resulted in the partial rejection of the third sub-hypothesis of no significant differences between these two groups as to vocational self-concept, operationally defined by their AVL value patterns. On four of the six AVL values these groups showed diverging value preferences in the expected directions, thus suggesting that the AVL and the SVIB tended to complement each other in tapping distinctly variable vocational self-concepts in groups of seminararians and ministers.

By dividing the total sample of seminararians into two groups, one expressing first preferences for the pastoral

ministry and the other group expressing other first preferences for related vocations, on the basis of the seminarians' responses to the Index of Vocational Preferences, the fourth sub-hypothesis of no significant differences of vocational self-concept between these two groups was clearly rejected on the basis of mean standard scores of the SVIB Minister and Group V Social Welfare scales, but it was only partly rejected on the basis of the AVL value preferences.

By further comparing these two groups with the minister criterion group on the same SVIB and AVL variables, the seminarian group expressing first preferences for the pastoral ministry was found to show an apparent close resemblance or identity with the minister criterion group. Hence it was concluded that this group of seminarians constituted a much more homogeneous group in terms of ministerial self-concept, than if those seminarians expressing first preferences other than for the pastoral ministry were also included, as was the case in the cross-sectional comparisons.

Two recommendations for further research have been suggested. The first recommendation would call for a more intensive longitudinal study of those individual persons who manifest a marked change in vocational self-concept with age and vocational contact, as reflected by their SVIB or AVL patterns. This may be particularly pertinent, in

view of the apparent fact that for the majority of persons, especially in adulthood, their vocational interests and value systems seem to so stable and permanently set that they defy measurement of any slight changes or development at this deep level of personality organization.

The second recommendation would suggest the need for further differentiation of various vocational self-concept types within seminarian populations. Besides the distinctive "pastoral ministry" type, it may be possible to distinguish "missionary" or "theology professor" types, even though all of these groups show considerable similarity of basic or general vocational self-concept. It may be necessary to adopt more rigorous methods and to devise more sensitive measuring techniques, in order to be able to demonstrate such fine distinctions in vocational self-concept within seminarian populations.

Herewith, this research exploration into vocational self-concept theory in terms of the vocational interests and values of seminarians and ministers reaches its formal conclusion.

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APPENDIX 1

**TEN PROPOSITIONS FOR A COMPREHENSIVE THEORY OF
VOCATIONAL DEVELOPMENT**

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TEN PROPOSITIONS FOR A COMPREHENSIVE THEORY OF VOCATIONAL DEVELOPMENT¹

1. People differ in their abilities, interests and personalities.
2. They are qualified, by virtue of these characteristics, each for a number of occupations.
3. Each of these occupations requires a characteristic pattern of abilities, interests, and personality traits, with tolerance wide enough, however, to allow both some variety of occupations for each individual and some variety of individuals in each occupation.
4. Vocational preferences and competencies, the situations in which people live and work, and hence their self-concepts change with time and experience (although self-concepts are generally fairly stable from late adolescence until maturity), making choice and adjustment a continuous process.
5. This process may be summed up in a series of life stages characterized as those of growth, exploration, establishment, maintenance, and decline, and these stages may in turn be sub-divided into a) the fantasy, tentative, and

¹ Donald E. Super, "A Theory of Vocational Development", in American Psychologist, Vol. 8, No. 2, 1953, p. 189-190.

realistic phases of the exploratory stage, and b) the trial and stable phases of the establishment stage.

6. The nature of the career pattern (that is the occupational level attained and the sequence, frequency, and duration of trial and stable jobs) is determined by the individual's parental socioeconomic level, mental ability, and personality characteristics, and by the opportunities to which he is exposed.

7. Development through the life stages can be guided, partly by facilitating the process of maturation of abilities and interests and partly by aiding in reality testing and in the development of the self-concept.

8. The process of vocational development is essentially that of developing and implementing a self-concept: it is a compromise process in which the self-concept is a product of the interaction of inherited aptitudes, neural and endocrine make-up, opportunity to play various roles, and evaluations of the extent to which the results of role-playing meet with the approval of superiors and fellows.

9. The process of compromise between the individual and social factors, between self-concept and reality, is one of role-playing, whether the role is played in fantasy, in the counseling interview, or in real life activities such as school classes, clubs, part-time work, and entry jobs.

10. Work satisfactions and life satisfactions depend upon the extent to which the individual finds adequate outlets for his abilities, interests, personality traits and values; they depend upon his establishment in a type of work, a work situation, and a way of life which he can play the kind of role which his growth and exploratory experiences have led him to consider congenial and appropriate.

APPENDIX 2

ADDITIONAL DATA

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Table XIX.-

Distribution of Rank Preferences for the Six Values of the
AVL for Minister Criterion Group A.^a

Value	Rank					
	1st	2nd	3rd	4th	5th	6th
Religious	<u>21</u>	4	0	0	0	0
Social	5	<u>16</u>	3	0	0	1
Theoretical	0	1	5	7	11	1
Economic	0	0	0	1	1	<u>23</u>
Aesthetic	0	3	7	5	10	0
Political	0	0	10	11	3	1

a N:25.

Table XX.-

Distribution of Rank Preferences for the Six Values of the
AVL for Minister Criterion Group B.^a

Value	Rank					
	1st	2nd	3rd	4th	5th	6th
Religious	<u>17</u>	2	1	0	0	0
Social	2	<u>13</u>	4	1	0	0
Theoretical	0	3	1	8	6	2
Economic	0	1	4	2	5	8
Aesthetic	2	0	5	3	5	5
Political	0	0	5	6	4	5

a N:20.

Table XXI.-

Distribution of Rank Preferences for the Six Values of the AVL for the Total Criterion Group of Ministers.^a

Value	Rank					
	1st	2nd	3rd	4th	5th	6th
Religious	<u>38</u>	6	1	0	0	0
Social	7	<u>29</u>	7	2	0	0
Theoretical	0	4	6	15	17	3
Economic	0	1	4	3	6	31
Aesthetic	2	3	12	6	15	5
Political	0	0	15	17	7	6

^a N:45.

Table XXII.-

Distribution of Rank Preferences for the Six Values of the
AVL for the Junior Seminarists.^a

Value	Rank					
	1st	2nd	3rd	4th	5th	6th
Religious	<u>14</u>	4	1	0	0	1
Social	1	<u>7</u>	6	5	1	0
Theoretical	2	1	7	4	4	2
Economic	1	0	1	3	5	10
Aesthetic	1	3	3	5	4	4
Political	1	5	2	3	6	3

^a N:20.

Table XXIII.-

Distribution of Rank Preferences for the Six Values of the
AVL for the Group of Middler and Senior
 Seminararians.^a

Value	Rank					
	1st	2nd	3rd	4th	5th	6th
Religious	<u>16</u>	2	0	0	0	0
Social	1	<u>14</u>	1	1	1	0
Theoretical	1	0	6	5	6	0
Economic	0	1	2	5	2	8
Aesthetic	2	1	6	5	4	0
Political	0	0	3	2	5	8

^a N:18.

Table XXIV.-

Distribution of Rank Preferences for the Six Values of the
AVL for the Sample of Seminary B Seminarists.^a

Value	Rank					
	1st	2nd	3rd	4th	5th	6th
Religious	<u>19</u>	0	1	0	0	1
Social	1	<u>17</u>	2	1	0	0
Theoretical	1	0	5	7	2	6
Economic	0	1	1	5	6	8
Aesthetic	0	2	4	3	7	5
Political	0	1	8	4	6	2

^a N:21.

Table XXV.-

Standard Score Differences in Test-Retest on Three SVIB Scales
for a Group of Seminarians Retested after 2-3 Year
Intervals.

Seminarians	Minister Scale			Social Worker			Social Sci. Teacher		
	A ¹	A ²	Diff.	A ¹	A ²	Diff.	A ¹	A ²	Diff.
Seniors ^a									
1.	37	47	+10	32	42	+10	39	41	+2
2.	17	17	0	22	27	+5	29	31	+2
3.	40	42	+2	47	51	+4	43	43	0
4.	35	40	+5	35	32	-3	46	42	-4
5.	25	44	+19	36	42	+6	48	51	+3
6.	20	27	+7	21	17	-4	33	31	-2
7.	46	38	-8	45	36	-9	54	45	-9
8.	48	55	+7	38	43	+5	45	45	0
Middlers ^b									
1.	43	48	+5	40	30	-10	40	27	-13
2.	37	38	+1	37	34	-3	35	41	+6
3.	25	38	+13	16	23	+7	20	24	+4
4.	36	34	-2	41	35	-6	38	33	-5
5.	32	24	-8	33	24	-9	42	38	-4
6.	35	44	+9	43	47	+4	36	44	+8
7.	32	41	+9	34	32	-2	28	30	+2
8.	42	46	+4	53	45	-8	45	46	+1
9.	38	46	+8	37	38	+1	38	40	+2
Total Diff.			+77			-4			-5

a N: 8, 3 year interval.

b N: 9, 2 year interval.

Table XXVI.-

Standard Score Differences in Test-Retest on Three SVIB Scales
for a Group of Ministers Retested after 4-12 Year
Intervals.

Ministers in Order of Year Intervals		<u>Minister Scale</u>			<u>Social Worker</u>			<u>Social Sci. Teacher</u>		
		A1	A2	Diff.	A1	A2	Diff.	A1	A2	Diff.
4 Year	1.	20	50	+30	43	59	+16	36	44	+8
	2.	37	56	+19	38	55	+17	53	53	0
	3.	30	45	+15	38	42	+4	39	47	+8
	4.	23	43	+20	26	27	+1	28	33	+5
	5.	34	37	+3	45	40	-5	44	42	-2
5 Year	1.	49	56	+7	52	57	+5	43	55	+12
	2.	46	51	+5	43	44	+1	52	55	+3
	3.	49	51	+2	61	58	-3	48	57	+9
6 Year	1.	52	48	-4	45	43	-2	52	41	-9
	2.	51	56	+5	46	52	+6	51	59	+8
7 Year	1.	38	34	-4	40	38	-2	35	45	+10
8 Year	1.	45	36	-9	26	29	+3	35	34	-1
9 Year	1.	34	33	-1						
10 Year	1.	46	53	+7						
	2.	46	53	+7						
11 Year	1.	35	39	+4	40	55	+15	38	60	+22
	2.	45	51	+6						
12 Year	1.	46	56	+10						
	2.	60	44	-16						
Total Diff.				+106				+60		

Table XXVII.-

Distribution of Rank Preferences for the Six Values of the AVL for the High Scoring Group^a of Seminarians and Ministers on the SVIB Minister Scale.

Value	Rank					
	1st	2nd	3rd	4th	5th	6th
Religious	42	9	3	0	0	1
Social	8	35	8	4	0	0
Theoretical	1	1	10	15	22	6
Economic	1	0	3	7	7	37
Aesthetic	2	5	15	12	17	4
Political	1	5	16	17	9	7

^a N:55.

Table XXVIII.-

Distribution of Rank Preferences for the Six Values of the AVL for the Low Scoring Group^a of Seminarians and Ministers on the SVIE Minister Scale.

Value	Rank					
	1st	2nd	3rd	4th	5th	6th
Religious	15	7	0	0	0	1
Social	5	8	5	2	3	0
Theoretical	1	3	9	6	3	1
Economic	0	3	2	4	7	7
Aesthetic	1	2	4	5	3	8
Political	1	0	3	6	8	5

a N:23.

Table XXIX.-

Distribution of Rank Preferences for the Six Values of the
AVL for a Group^a of Seminarians Expressing First
 Preference for the Pastoral Ministry.

Value	Rank					
	1st	2nd	3rd	4th	5th	6th
Religious	30	1	2	0	0	2
Social	2	24	6	3	0	0
Theoretical	3	0	4	14	7	7
Economic	0	1	4	3	8	17
Aesthetic	0	3	9	8	9	14
Political	1	4	9	5	11	3

^a N:35.

Table XXX.-

Distribution of Rank Preferences for the Six Values of the AVL for a Group^a of Seminarists not Expressing First Preference for the Pastoral Ministry.

Value	Rank					
	1st	2nd	3rd	4th	5th	6th
Religious	17	5	0	0	0	0
Social	2	11	4	3	2	0
Theoretical	1	3	8	4	4	2
Economic	0	2	1	6	7	6
Aesthetic	1	1	3	5	4	6
Political	1	0	4	4	5	8

^a N:28.

Table XXXI.-

Predominance of First Rank Preference for the AVL Religious Value for the Total Sample of Seminarians and Ministers.

Group	Frequency of Religious Value		Total N
	1st Rank	2nd-5th Ranks	
Minister Criterion	38	7	45
Seminary A Senior-Middler	16	2	18
Junior	14	6	20
Seminary B	19	2	21
Total Sample	87 ^a	17	104

a Percentage = 83.7.

Table XXXII.-

Predominance of Second Rank Preference for the AVL Social Value for the Total Sample of Seminarians and Ministers.

Group	Frequency of Social Value			Total N
	1st Rank	2nd Rank	3rd-6th Ranks	
Minister Criterion	7	29	9	45
Seminary A Senior-Middler	1	14	3	18
Junior	1	7	12	20
Seminary B	1	17	3	21
Total Sample	10	67 ^a	27	104
1st and 2nd Rank Combined	77 ^b			

a Percentage = 64.4

b Percentage = 74.

APPENDIX 3

ABSTRACT OF

Vocational Self-Concept in Terms of the Vocational Interests
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ABSTRACT OF

Vocational Self-Concept in Terms of the Vocational Interests and Values of Seminarists and Ministers¹

This thesis attempted to test and evaluate the theoretical construct of vocational self-concept expression and development as formulated by Bordin and Super and as operationally defined in terms of vocational interests and values. The Strong Vocational Interest Blank and the Allport-Vernon-Lindzey Study of Values were alternately used as measures of vocational self-concept. A sample of Mennonite seminarists and ministers was analyzed on the basis of their responses on these tools, using the cross-sectional, longitudinal, inter-test and claimed versus measured interest methods to test four specific sub-hypotheses.

The results provide tentative evidence of a high degree of similarity of vocational self-concept between seminarists and ministers. The longitudinal study indicated a development of vocational self-concept with age and experience, as shown by the significant rise of the SVIB Minister scale in test-retest comparisons of mean scores.

¹ William W. Dick, master's thesis presented to the School of Psychology and Education, University of Ottawa, Ottawa, May 1964, ix-121 p.

The AVL and SVIB appear to complement each other in tapping variance of vocational self-concepts in contrasted groups. There is some evidence that the SVIB or more sensitive measures could be used in further research to distinguish varied interest types within a seminarian population.