

A PRELIMINARY STUDY OF
METHODOLOGICAL PROBLEMS ASSOCIATED WITH
THE MEASUREMENT OF RELIGIOSITY
AND
AN ANALYSIS OF SOCIAL AND PERSONALITY CORRELATES
OF DIFFERENTIAL RELIGIOUS COMMITMENT

An Abstract of
A Thesis

Presented to
the Faculty of the Department of Sociology
University of Manitoba

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
William Kenneth Stuebing

December 1968



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Fundamental to the sociological study of the individual and his religion are two problems which have yet to be satisfactorily resolved: What are the social causes and behavioral consequences of different orientations to religion? The principal limitation is the lack of adequate means to distinguish levels of religious commitment.

This thesis explores the difficulties encountered in the development of a measurement of religiosity. One approach, involving five dimensions of religious commitment (each based on several indicators), was found unworkable. A second approach yielded an "aggregate religiosity" scale based on thirteen single indicators of religiosity. Using this measurement, the sample was divided into four "aggregate religiosity groups." The relationship was tested between census variables and denominational preference - interpreted as the independent variable - and "aggregate religiosity" - as the dependent variable. The relationship between "aggregate religiosity" - as the independent variable - and social and personality orientations - as the dependent variable - was also tested.

Generally stated, it was concluded that in the sample, (1) there was no significant relationship between "aggregate religiosity" and the census variables, (2) "aggregate religiosity" is a function of socio-religious group membership, and (3) contrary to expectation, there is virtually no significant relationship between "aggregate religiosity" and social or personality orientations.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION TO THE STUDY.....	1
The Problem.....	2
Organization of the Thesis.....	3
II. THEORETICAL BACKGROUND AND PRESENTATION OF	
HYPOTHESES.....	6
Review of Literature in the Area.....	6
Limitations of Previous Studies.....	14
Theoretical Background.....	18
Definition of Major Concepts.....	22
Hypotheses.....	27
III. METHODOLOGY I: THE SAMPLE AND STATISTICAL	
TECHNIQUES.....	30
The Sample.....	30
Collection of Data.....	44
Techniques of Analysis.....	46
Significance of the Findings.....	49
IV. METHODOLOGY II: THE MEASUREMENT OF AGGREGATE	
RELIGIOSITY.....	53
The Purpose of the Measurement.....	53
The Method of Construction.....	56
Determination of Aggregate Religiosity Scores.....	69
Observations on the Measurement of Aggregate Religiosity.....	77

CHAPTER	PAGE
V. FINDINGS I: AGGREGATE RELIGIOSITY AS THE DEPENDENT	
VARIABLE.....	88
Census-Data Variables and Aggregate Religiosity.....	88
Denomination and Aggregate Religiosity.....	101
VI. FINDINGS II: AGGREGATE RELIGIOSITY AS THE	
INDEPENDENT VARIABLE.....	105
Social Orientation and Aggregate Religiosity.....	105
Personality Orientation and Aggregate Religiosity.....	126
VII. CONCLUSIONS.....	142
Summary of Findings.....	142
Conclusions.....	147
Recommendations for Future Study.....	155
BIBLIOGRAPHY.....	157
APPENDIX.....	163

LIST OF TABLES

TABLE	PAGE
3:1 Breakdown of the Population as Derived from the List of Electors and by Listing on the Rolls of the Five Area Churches. Proposed Representation of the Groups in the Sample Expressed as a Percentage of the Popu- lation.....	34
3:2 Disposition of 319 Contacts.....	35
3:3 Breakdown of the Sample by Level of Education.....	38
3:4 Breakdown of the Sample by Level of Total Family Income.....	39
3:5 Breakdown of the Sample by Occupation using Blishen's Scale Classes.....	40
3:6 Breakdown of the Sample by Value of Dwellings.....	41
3:7 Breakdown of the Sample by Denomination.....	43
4:1 Thirteen Discriminating Indicators of Religiosity with Dichotomous Values.....	64
4:2 Contracted Correlation Matrix Showing Discriminating Indicators.....	66-7
4:3 Examples of Scoring Method.....	75
4:4 Distribution of Aggregate Religiosity Scores in the Sample - General Scale.....	76
4:5 Percentage of the Sample Found in each of the Four Aggregate Religiosity Groups Under the General Scale and the Subscale.....	79

TABLE	PAGE
5:1 Frequency Distribution of Aggregate Religiosity by Age....	89
5:2 Frequency Distribution of Aggregate Religiosity by Sex....	90
5:3 Aggregate Religiosity by Place of Birth.....	92
5:4 Aggregate Religiosity by Marital Status.....	93
5:5 Aggregate Religiosity by Number of Children.....	94
5:6 Aggregate Religiosity by Education.....	96
5:7 Aggregate Religiosity by Occupation.....	98
5:8 Aggregate Religiosity by Occupational Status.....	99
5:9 Aggregate Religiosity by Total Family Income.....	100
5:10 Aggregate Religiosity by Denomination.....	103
6:1 Attitude Towards Moderate Drinking by Aggregate Religiosity, Disregarding Denomination.....	110
6:2 Attitude Towards Moderate Drinking by Aggregate Religiosity, with Denomination Held Constant.....	111
6:3 Attitude Towards Divorce by Aggregate Religiosity, Disregarding Denomination.....	112
6:4 Attitude Towards Divorce by Aggregate Religiosity, with Denomination Held Constant.....	113
6:5 Ranking of "Vocation of Service" by Aggregate Religiosity, Disregarding Denomination.....	117
6:6 Ranking of "Vocation of Service" by Aggregate Religiosity, with Denomination Held Constant.....	118
6:7 Federal Election Vote by Aggregate Religiosity Disregarding Denomination.....	119

TABLE	PAGE
6:8 Federal Election Vote by Aggregate Religiosity with Denomination Held Constant.....	120
6:9 Mean Value Scores by Aggregate Religiosity.....	131
6:10 F-Ratios Testing the Significance of the Difference Between Mean Scores of the Four Aggregate Religiosity Groups in each of the Six Sets.....	133
6:11 F-Ratios Testing the Significance of the Difference Between Mean Scores of the Two Denominational Groups in each of the Six Sets.....	135
6:12 F-Ratios for the Mean Scores of the Aggregate Religiosity Groups in Denominational Group "A".....	136
6:13 F-Ratios for the Mean Scores of the Aggregate Religiosity Groups in Denominational Group "B".....	137
6:14 A Priori Orthogonal Comparisons Between all Possible Pairs of Means in each of the Six Sets in Denominational Group "A".....	139
6:15 A Priori Orthogonal Comparisons Between all Possible Pairs of Means in each of the Six Sets in Denominational Group "B".....	140

LIST OF FIGURES

FIGURE		PAGE
3:1	Map Showing the District of Fort Garry in which the Survey Took Place.....	30a
3:2	Breakdown of the Sample by Sex and Age.....	36
4:1	Comparison of Three Hypothetical Ordinal Scale Measures of Religiosity by "Level of 'Religiosity'" Indicated by each Category of Response.....	83
6:1	Average Value Profiles of the Four Aggregate Religiosity Groups.....	132

CHAPTER I

INTRODUCTION TO THE STUDY

The Sociology of Religion, as a distinct area of specialization within the broader scope of sociological inquiry, "has had a checkered career."¹ At the time of Max Weber and of his student Ernst Troeltsch, and of Emile Durkheim, it was the focal point of some of the most important work being done in sociology. While largely because of the work of men such as G. Le Bras, the sociological study of religion was not entirely eclipsed in Europe, it did endure a period in the wilderness on the North American continent. This was particularly true during the 1920's and 30's when religion was widely held to be socially insignificant, and not warranting serious consideration.

However, coincident with the post-World War II religious revival in Canada and the United States, there has been a resurgence of interest in this area from sociologists. This is indicated by a marked increase in research and theoretical writings, as well as the publication of several new text books and readers in the sociology of religion. The comparatively disjointed development of this area of specialization has hampered the systematic evolution of a

¹Glock, Charles Y., "The Sociology of Religion," Sociology Today, Robert K. Merton, Leonard Broom, and Leonard S. Cottrell, Jr., New York: Basic Books, Inc., 1959. p. 153.

coherent, integrated body of knowledge concerning the relationship between religion and society. Much theory still falls within the realm of speculation, and research "at one extreme borders on the superb (while) at the other is, at best, mediocre."¹

I. THE PROBLEM

Statement of the Problem. The particular area of the sociology of religion which concerns this study is the consideration of the individual and his religion.² Research in this area is focused generally on three problems: (1) How may individuals be meaningfully distinguished in terms of their orientations to religion? (2) Why do individuals differ in their orientations? (3) What are the behavioral consequences of different orientations?³ At the outset, this present research was conceived as a preliminary investigation of these three problems.

Initially, the purpose of this study was fourfold: (1) to seek a method for measuring religious commitment which would take the form of an interval scale; (2) treating the measurement as the depen-

¹Ibid., p. 154.

²The usual emphasis of the sociological study of the individual and his religion is given to the "normal" forms of religious expression. This is contrasted with the study of pathological forms of expression which has tended to be the emphasis of the psychology of religion.

³See: Glock, Op. Cit., p. 167.

dent variable, to seek the relationship between religious commitment and census data variables and denomination; (3) treating religious commitment as the independent variable, to examine the relationship with personality interests and selected aspects of social behavior; and (4) if the findings would permit, to construct an 'ideal type' of the social behavior and dominant personality interests associated with individuals demonstrating a high level of religious commitment.

As the analysis proceeded, it became apparent that only limited success could be expected in the attempt to measure religious commitment. Secondly, in order to permit the use of a relatively small sample, the sampling plan was designed to reduce the influence of certain census data variables. Therefore, of the four original purposes, the fourth was dropped completely and only secondary emphasis was placed on seeking the relationship between religiosity and census data variables. What remained of concern was the measuring of differential religious commitment and an examination of some of the behavioral consequences of different orientations to religion.

Importance of the Study. For the reasons which are mentioned above and which are detailed in the discussion of the methodology, this report is primarily concerned with the first of the three problems which Glock delineates - how best to distinguish individuals in terms of their orientations to religion.¹ The significance of this

¹Ibid.

study lies in the nature of the difficulties encountered in the attempt to develop a new method of measuring religiosity, and in the resulting recommendations for future research.

The second area of major emphasis was the analysis of some of the consequences of differential religiosity. Here the findings contradicted the results of other studies in virtually all areas tested. The importance of this part of the study is relative to the nature of the independent variable; the measurement of religiosity does not replicate any previous method, and therefore, the validity of the findings hinges on the validity of this measurement.

In any case, no claims are made for the generality of the findings, and all conclusions are only intended to apply to the sample. In sum then, the importance of this study lies in (1) the nature of the methodological problems encountered and the implications for future research, and (2) in the nature of the findings which, despite the limited claims for generality, are the reverse of the expected.

II. ORGANIZATION OF THE THESIS

The organization of the thesis follows the pattern of the development and execution of the research. The next chapter includes a review of relevant literature and an examination of some of the pertinent limitations of previous studies. This is followed by a discussion of the theoretical background to the study and the advancement of the definitions of the major concepts and the hypotheses.

The methodology is discussed in the third and fourth chapters. The third chapter sets forth the methods by which the data were collected and analyzed and includes a discussion of the composition of the sample and of some of the appropriate parameters. The development of the measurement of religious commitment is discussed in the fourth chapter.

Chapters five and six are concerned with the results of the analysis of religiosity as both the dependent and independent variable. In the analysis of the relationships between religious commitment and census data variables and denomination, religiosity is considered the dependent variable, while in the analysis of the relationship between religious commitment and social and personality orientations, religiosity is considered to be the independent variable.

The last chapter, chapter seven, contains a summary of the findings and a discussion of the conclusions. Particular emphasis is given to an elaboration of the nature of religiosity, and a possible explanation is offered for the contradictory nature of the substantive findings. The thesis concludes with some recommendations for future research based on the findings of this study.

CHAPTER II

THEORETICAL BACKGROUND AND PRESENTATION OF HYPOTHESES

I. REVIEW OF LITERATURE IN THE AREA

The classical statements of the relation between religion and society belong to Emile Durkheim and Max Weber. Durkheim contended that the roots of religious belief and practice are to be found in the nature of society itself.¹ His fundamental thesis was that group life is the originating source of religion; that religious doctrine and practice are symbolic of the social group; and that there is a universal distinction between the sacred and the profane which has extended implications for the social life of the group as a whole. Religion - for Durkheim, the "unified system of beliefs and practices relating to sacred things"² - unified the members of a society into a moral community, fulfilling "the substantial function of...the creation, reinforcement, and maintenance of social solidarity."³ Thus Durkheim made the break from the earlier sociological traditions of positivism

¹Durkheim, Emile, The Elementary Forms of the Religious Life, trans. by Joseph W. Swain, Glencoe, Ill.: The Free Press, 1954.

²Timasheff, Nicholas S., Sociological Theory: Its Nature and Types, New York: Random House, 1957. p. 113.

³Ibid.

and economic determinism which tended to view religion as a secondary institution with a negligible, if not negative, role in society.¹

Max Weber's primary concern was not with religion itself, but rather with the larger problem of the distinctive nature of western civilization and just how it had been brought about.² As the Weberian exegete, Talcott Parsons, writes: "He was a sociologist of the total society."³ Nevertheless, it was in the field which is now called the sociology of religion that Weber made some of his greatest contributions.

Weber was not a simple emanationist who believed that religious beliefs automatically extended themselves into a social organization. Rather, as a behaviorist, Weber saw meaningful social action as the unit of analysis, with, by extension, the source of change lying in the realm of ideas.⁴ To his understanding, the rise of

¹The leading examples of the traditions of positivism and economic determinism in sociology are August Comte and Karl Marx, respectively.

²This is the substance of a seminar on Weber delivered by Reinhold Bendix, in Germany, during the summer of 1965, and recounted to me later that year by Prof. W.S.F. Pickering, one of the participants.

³Parsons, Talcott, "On 'The Protestant Ethic,'" Proceedings of the Hazen International Conference on the Sociology of Religion, Washington, D.C., Sept. 1962.

⁴The label "behaviorist", as applied to Weber, is derived from Don Martindale, The Nature and Types of Sociological Theory, Boston: Houghton Mifflin Co., 1960. pp. 376-393. Martindale places Weber among the theorists of the "Social Action" branch of Social Behaviorism who have taken as their distinctive unit of analysis, "meaningful social action."

western civilization was a problem of change that was resolved by the notion of a society based on rationality - the ability to conceive of a given goal and to act accordingly. Rational action emerges and becomes more powerful as economic enterprises arise and become more extensive. In The Protestant Ethic and the Spirit of Capitalism, he attributed the source of the rational self-discipline necessary for this distinguishing feature of western civilization to the 'ethos' of aescetic Protestantism. Weber tested this hypothesis of a connection between the rational ethic of aescetic Protestantism and the rise of the distinctive, western economic institution - capitalism - with comparative studies of western and eastern cultures. He concluded that the cradle of rationality seemed to be found in Judaism, Islam, and Christianity, and noted that it was within these cultures that the phenomenon of western civilization arose.

Weber was concerned with a particular incident of historical change, and therefore concerned himself with a form of capitalism and certain phenomena of a 'religious' society, neither of which still exist. However, his substantive findings are not at issue in this study. The present research is based on two assumptions which underlie his work: (1) every religious group develops its own distinctive orientation to all aspects of life; and (2) these orientations are at least partially independent of the social situation of

the members.¹ Durkheim's notion that social solidarity is a function of the moral community serves to reinforce the hypothesis that religion has extended implications for other sectors of social life.

Contemporary theorists have almost all concentrated on the functional approach to the understanding of religion, with particular emphasis on the function of integration relative to a general theory of society.² Research has been largely limited to narrower areas of interest, such as the socio-cultural setting of religion and the church-sect differential, religion and social conflict and social change, religion and urbanization, industrialization and secularization, and religion and political and economic institutions.³

¹Among Weber's writings which are of interest here are: The Protestant Ethic and the Spirit of Capitalism, trans. by Talcott Parsons, New York: Charles Scribner's Sons, 1930; The Religion of China, trans. by Hans H. Gerth, Glencoe, Ill.: The Free Press, 1951; Ancient Judaism, trans. by Hans H. Gerth and Don Martindale, Glencoe, Ill.: The Free Press, 1952; The Religion of India, trans. by Hans H. Gerth and Don Martindale, Glencoe, Ill.: The Free Press, 1958; The Sociology of Religion, trans. by Ephriam Fischhoff, Boston: Beacon Press, 1963.

²See especially J. Milton Yinger's Religion, Society and the Individual, New York: The Macmillan Co., 1957. pp. 49-72. Also: Elizabeth K. Nottingham, Religion and Society, New York: Random House, 1954; David O. Moberg, The Church as a Social Institution, Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962; Joachim Wach, Sociology of Religion, Chicago: The University of Chicago Press, 1944; Thomas F. O'Dea, The Sociology of Religion, Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1966.

³An illustrative, but by no means exhaustive, list would include the following. THE SOCIO-CULTURAL SETTING OF RELIGION: Paul C. Glock, "Intermarriage and Fertility Patterns among Persons in Major Religious

Other forms of research in this area of sociology have focused on the individual and his religion. Four studies of this type which relate directly to this research are: Joseph H. Fichter's

Groups, "from Religion, Culture and Society, ed. by Louis Schneider, New York: John Wiley and Sons, Inc., 1964. pp. 614-622; H. Richard Niebuhr, The Social Sources of Denominationalism, Hamden, Conn.: The Shoe String Press, 1954; Winfred E. Garrison, "Characteristics of American Organized Religion," Annals of the American Academy of Political and Social Science, March, 1948, pp. 14-24. Glock, C.Y., Ringer, B.B., and Bobbie, E.R., To Comfort and to Challenge, Berkeley & Los Angeles: University of California Press, 1967. Glock, C.Y. and Stark, R., Christian Beliefs and Anti-Semitism, New York: Harper and Row, 1966. CHURCH-SECT DIFFERENTIAL: Russell R. Dynes, "Church-Sect Typology and Socio-Economic Status," American Sociological Review, October, 1955. pp. 555-560; S.D. Clark, Church and Sect in Canada, Toronto: The University of Toronto Press, 1948; Liston Pope, Millhands and Preachers, New Haven: Yale University Press, 1942. RELIGION AND SOCIAL CONFLICT: Robert Lee and Martin E. Marty, eds., Religion and Social Conflict, New York: Oxford University Press, 1964. RELIGION AND SOCIAL STRATIFICATION: Demerath, N.J., Social Class in American Protestantism, Chicago: Rand McNally & Co., 1965. Erich Goode, "Social Class and Church Participation," The American Journal of Sociology, January, 1967. pp. 102-110; Gibson Winter, The Suburban Captivity of the Churches, New York: The Macmillan Co., 1962. RELIGION AND SOCIAL CHANGE: Glock, C.Y. and Stark, R., Religion and Society in Tension, Chicago: Rand McNally & Co., 1965. Talcott Parsons, "Religion as a Source of Creative Innovation," from Yinger, Op. Cit., pp. 558-563; Evon Z. Vogt and Thomas F. O'Dea, "A Comparative Study of the Role of Values in Social Action in Two Southwestern Communities," American Sociological Review, December, 1953. pp. 645-654. RELIGION AND URBANIZATION, INDUSTRIALIZATION, AND SECULARIZATION: J.V. Langmead Casserly, The Retreat from Christianity in the Modern World, London: Longmans, Green and Co., 1952. RELIGION AND POLITICAL AND ECONOMIC INSTITUTIONS: R.H. Tawney, Religion and the Rise of Capitalism, New York: Harcourt, Brace and Co., 1920; Emile Marmorstein, "Religious Opposition to Nationalism in the Middle East," International Affairs, July, 1952. pp. 344-359; Andrew M. Greeley, "Influence of the Religious Factor on Career Plans of College Graduates," American Journal of Sociology, May, 1963. pp. 658-671.

Dynamics of a City Church; Gerhard Lenski's The Religious Factor; Stewart Crysedale's The Changing Church in Canada; and N.J. Demerath's Social Class in American Protestantism.¹

Fichter's four volume work was an attempt to distinguish Roman Catholics in terms of their participation in the religious structure. For this reason, he developed a typology of religious participants in the urban Roman Catholic parish. His typology employs certain "institutional" indicators - baptism, place of residence, and national origin - by which the Church defines membership in the parish, to identify his population. Individuals within the sample were differentiated on the basis of three "personal" indicators: (1) intention - the individual's self-perception of his interest in the parish; (2) religious adherence - the degree of his participation in the prescribed rituals of the church; and (3) social participation - his involvement in the organizational life of the parish.

Fichter was thus able to classify the urban, white Catholic by four general groupings:

- (a) the nuclear, who are the most active participants and the most faithful believers; (b) modal, who are the normal "practicing" Catholics easily identifiable as

¹Fichter, Joseph H., Dynamics of a City Church, Chicago: The University of Chicago Press, 1951; Lenski, Gerhard, The Religious Factor, Garden City, N.Y.: Doubleday and Co., 1961; Crysedale, Stewart, The Changing Church in Canada, Toronto: The United Church Publishing House, 1965; N.J. Demerath III, Social Class in American Protestantism, Chicago: Rand McNally & Co., 1965. A further study, which was published since this thesis was prepared and which is relevant here, is Rodney Stark and Charles Y. Glock's American Piety: The Nature of Religious Commitment, Berkeley & Los Angeles: University of California Press, 1968.

parishioners; (c) marginal, who are conforming to a bare, arbitrary minimum of the patterns expected in the religious institution; (d) dormant, who have "given up" Catholicism, but have not joined another denomination.¹

In the analysis, Fichter concentrated most on the norms, values, attitudes and behavior patterns of the individuals in each category, seeking primarily the nature and causes of inter-group differences. A particular concern was shown for differences in the reconciliation of contrasting religious and secular norms and values, differences in ethics and morality, differential perceptions of religious authority, and differences in leanings towards secular and religious activity.

In The Religious Factor, Lenski defined his population in terms of denomination, using four socio-religious groups, (1) white Protestants, (2) Negro Protestants, (3) white Catholics, and (4) Jews. He then employed four indicators of religiosity to differentiate between the members of each group in the sample. His indicators were: (1) ritual participation; (2) doctrinal orthodoxy; (3) devotionism or personal religious practice; and (4) associationism or religious self-segregation.

Lenski carried out his analysis on two levels, (1) inter-group, comparing the four socio-religious groups, and (2) intra-group, on the basis of observed differences in the four measures of religiosity.

¹Fichter, Joseph H., "The Marginal Catholic: An Institutional Approach," Social Forces, December, 1953. p. 167

In scope, his study encompassed aspects of economics, politics, family life, education and science. In general, he concluded that:

What is possible, what is probable, and what is inevitable in any given secular organization is a function, in part, of the characteristics of the individuals who staff them; and this in turn is a function, in part, of the socio-religious groups to which they belong.¹

And further, he indicated that: "Socio-religious group membership is a variable comparable in importance to class, both with respect to its potency and with respect to the range, or extent of its influence."²

Of the analysis of religiosity, Lenski wrote:

Not only is the behavior of men influenced by the socio-religious group to which they belong; our evidence also indicates that it is influenced by their religious orientations. Repeatedly throughout this study we found that the orthodox and devotional orientations are linked with differing and even opposed behavior patterns.³

Because of its significance for this study, it should be noted that Lenski found a relatively low order of association between his four indicators of religiosity.

Demerath concerned himself with the relationships between

¹Lenski, Gerhard, Op. Cit., p. 310.

²Ibid., p. 295

³Ibid., p. 291

types of religious involvement and social status. For this purpose, he postulated six measures of religiosity which were intended primarily to distinguish between church-type and sect-type religious involvement. These indicators were: (1) attendance at Sunday services; (2) participation in parish activities; (3) organizational involvements outside the church; (4) communal involvement; (5) religious aid and reward - "how much help is your church membership in...your life?"¹ and (6) perception of the role of the minister in public affairs.²

Crysdale adopted an approach which differed somewhat from that of Lenski or Fichter. In The Changing Church in Canada, he studies only members and adherents of The United Church of Canada. The sample was drawn from all parts of the nation, differentiating between clergy and laity, and on the basis of degree of urbanism. His analysis concentrated primarily on the effects of urbanism on beliefs, concepts of religion and the role of the state, and attitudes towards civil liberties.

II. LIMITATIONS OF PREVIOUS STUDIES

In chapter I, the three general problems associated with the study of the individual and his religion were discussed. These were: (1) how to meaningfully distinguish individuals in terms of differential religiosity? (2) why do individuals differ in their orientations

¹Demerath, Op. Cit., p. 72.

²Ibid., pp. 57-82.

to religion? and (3) what are the behavioral consequences of different levels of religiosity? Glock notes that of the considerable number of studies which have been done with the purpose of answering these questions, "the results...show either no effects at all or effects too slight to be statistically significant."¹ He further notes that the major difficulty encountered was not to be found in the research designs, which were in accord with accepted experimental method, but rather in the relatively crude measures which were used to distinguish the subjects on the basis of religiosity.² These included indicators such as frequency of church participation or children who had received Sunday-school training contrasted with children who had not. The significance of the work of Lenski and Fichter for this study lies in the fact that they represent the renewed attempts to develop a satisfactory measure of religiosity. As yet, however, no one has fully resolved the difficulties involved in this problem.

The limitations with Fichter's typology are three. First, his report does not clearly indicate just how the three "personal" indicators of the individual's religiosity are to be combined to

¹Glock, Charles Y., Op. Cit., p. 167. In collaboration with Rodney Stark, Glock has also studied these three questions. The first volume of their findings has recently been published under the title, American Piety: The Nature of Religious Commitment, (Op. Cit.) and deals with the first problem. The second and third questions will be dealt with in the forthcoming volumes, The Poor in Spirit: The Sources of Religious Commitment, and By Their Fruits: The Consequences of Religious Commitment.

²Ibid., pp. 167-173.

classify persons according to the typology. This has restricted the usefulness of his method for other researchers, and does not, therefore, contribute significantly to the resolution of the current inadequacies in conceptualizations of religiosity.

Second, the four categories do not systematically distinguish the social characteristics of the types, nor do they elaborate on the consequences of membership in a particular grouping for behavior, other than participation in religious institutions. For this reason, Fichter's types are not true comparative categories.

Third, Fichter encounters a difficulty which is often associated with largely arbitrary typologies. This he acknowledges.

Any attempt to arrange a typology of the persons participating in a religious structure involves a number of complicated abstractions. The dividing line between any two categories is admittedly "fuzzy" in that some people do not fall unambiguously into either of them. The criteria employed are relatively arbitrary, and the psycho-social analysis of the persons within each category is not satisfactorily conclusive.¹

Lenski's study incorporates two approaches to the study of the individual and his religion. One method, which he employs, is the analysis of social correlates of some readily observable individual religious difference, in this case, socio-religious group membership or denomination. This approach, however, does not contribute significantly to the solution of any of the three problems.

Much more valuable is Lenski's pioneering attempt to hypothesize indicators of religiosity, and to relate these to several

¹Fichter, Joseph H., Op. Cit., p. 167.

aspects of individuals' complex of social values. There are, however, two relevant limitations to Lenski's use of this approach. First, he does not attempt to develop a comprehensive measurement of religiosity, rather, he employs the four indicators in the analysis individually. Thus, while he concludes that the values studied are related to religiosity, the nature of the relationship varies with each indicator. On balance, he found a low level of association between the four indicators. The second limitation lies in the fact that he does not press this level of the analysis as fully as he does the correlates of socio-religious group membership. The result of this deficiency is a lack of substantive data upon which to base prediction in other studies.

Of Crysdale's The Changing Church in Canada, there is very little that need be said. Crysdale's primary concern is in documenting differences in values and attitudes of United Church members and adherents. As such, it does not pertain directly to this study except as it represents the first large-scale attempt to study the problem of the individual and his religion in Canada. It does, therefore, provide a general guide to the nature of the results which might be expected in this study. Similarly, Demerath's Social Class in American Protestantism does not contribute directly to the problem with which this study is concerned. Demerath focused his work on the differentiation of church-type and sect-type religious commitment rather than on the nature of religiosity itself.

Summary. The major limitations of the literature in the area of the sociological study of the individual and his religion are two: (1) the lack of a consensus over the definition of religiosity; and (2) the unsophisticated nature of the methods that have been used to differentiate types of religious orientations.

III. THEORETICAL BACKGROUND

Following Lenski's The Religious Factor, the theoretical foundation for this study is derived primarily from the writings of Max Weber. It is not the historical hypothesis which Weber develops concerning the distinctive nature and development of western civilization which pertains here, but rather, the basic underlying assumption. Weber saw the source of change existing in the realm of ideas, and the origin of the ideas responsible for the unique society which emerged in the west attributable to a particular religious ethos. This contrasted with the eastern societies where these ideational values were not to be found, either in the societies as wholes, or in the particular religions.

From this, it can be determined that Weber's basis assumptions were. (1) there is a particular orientation towards all aspects of social life distinctive to each religious group; and (2) this distinctive orientation is in part, at least, independent of the social circumstances of the members of the group.¹

¹Lenski, Gerhard, Op. Cit., pp. 6-8.

However, some theoreticians would contend that such contemporary processes as urbanization, industrialization, and secularization have been responsible for a diminishing of the role of religion in modern urban society. Wirth and his followers contend that the "impersonal, superficial, transitory and segmental"¹ relationships which result from the large, dense, and heterogeneous nature of the urban population, coupled with the greatly increased social and physical mobility of the individual, have produced a compartmentalization of all social behavior and relationships. This, they feel, negates the assumption that the values of any single institution could permeate all social activity. Casserley writes of the specific consequences which industrialization has had for religion: (1) the growth of an "industrialized consciousness" which is incompatible with religious values, beliefs, and expression; (2) the breakdown of tradition which has perpetuated the religious society; and (3) the growth of irreligion as a group ideology.² This view is also somewhat supported by Fichter whose general conclusion is that adherence to the standards of the church is high only when they do not conflict with secular values.³

¹Wirth, Louis, "Urbanism as a Way of Life," The American Journal of Sociology, July, 1938. p. 12.

²Casserley, J.V. Langmead, Op. Cit., pp. 106-135.

³Fichter, Joseph, Op. Cit.

Balancing this position are the findings of other researchers that urbanization has not destroyed all continuities with traditional values and behavior.¹ Yinger, with a position fairly representative of current structural-functional theory, develops the concept of the integrative function of religion. It is because of the segmental nature of social life that religion is highly significant in modern society.

Social order requires a unifying value scheme, specifying approved means and ends, to hold in check the conflict involved in the individual pursuit of scarce values and the hostility generated by the frustrations and disappointments of life.²

In another place, he writes:

It is not difficult to develop a plausible thesis that the revival of interest in religion is a manifestation of the conflicts and anxieties of contemporary life.³

Robin Williams suggests that many people continue to use religion as the final arbiter of life's values, which, in effect, supports Weber's assumption of distinctive religious orientations. Williams writes:

Beliefs and value orientations regarding the nature of man, the problem of evil, the final ends of life - all

¹For example, Morris Axelrod, "Urban Structure and Urban Participation," The American Sociological Review, January, 1956. pp. 13-18.

²Yinger, J. Milton, Op. Cit., p. 71.

³Yinger, J. Milton, Sociology Looks at Religion, New York: The Macmillan Co., 1961. p. 25.

the primordial questions - are not subject to immediate, pragmatic demonstration, in any sense. Yet they stand between the believer - the committed participant - and the agony, chaos, meaninglessness of an incomprehensible world. And, more positively, they define avenues of security, meaning, and fulfillment in an ordered life, transcending the "bare surface of things."¹

Lenski is more explicit. He concludes: "Our study has provided striking support for Weber's basic assumption - at least as far as it applies to the major religious groups in contemporary American society."² He demonstrates the fact that the four socio-religious groups differ significantly with respect to all of the major social institutions - economic, educational, scientific, political and kinship.

Lenski also demonstrated that religious group membership does not consist solely of associational or secondary relationships. He noted that: (1) religious groups are basically endogamous, with the result that interaction among members of a family normally involves interaction with members of the same religious group, reinforcing the internalized norms of the religious group; (2) an individual's earliest years, during which the personality and behavior patterns are largely established, are normally spent in the family group, and, in addition, during this period, the child's chief relations are with his mother, whose contacts outside the religious group are more limited than are

¹Williams, Robin M., Jr., "Religion, Value Orientations, and Inter-Group Conflict," Journal of Social Issues, September, 1956, p. 19.

²Lenski, Gerhard, Op. Cit., p. 322.

those of the father; and (3) most sociologists have tended to overlook the importance of the other major type of primary group, the friendly clique. These too, also tend to be religiously homogeneous, and when this is true, function in a fashion similar to the family as subunits of the religious group.¹ Lenski concludes that religious groups must therefore be thought of as associations, but as sub-communities as well. Religious groups are:

...not merely...the carriers of religious norms in any narrow sense, but...the carriers of complex subcultures relevant to almost all phases of human existence...(and) ...since these groups involve communal as well as associational elements, we would expect these differences to manifest themselves in patterns of thought and action in church or synagogue. In these respects we have not been disappointed.²

It is apparent that there is sufficient justification for the expectation that religion is related to social and personality orientations. To quote Glock: "Religion in our society would not be so viable had it no consequences for the individual."³

IV. DEFINITION OF MAJOR CONCEPTS

Religiosity. Before a study of the consequences of different orientations to religion is possible, it is first necessary to distin-

¹Ibid., pp. 17-19.

²Ibid., p. 311.

³Glock, Charles Y., "On the Study of Religious Commitment," Religious Education, Summer Supplement, 1962. pp. S98-S110.

guish individuals in terms of this orientation. Religion is not a homogeneous phenomenon; it is not the same to all men. The fact that there exists a great diversity of variation, both between and within religious traditions, scarcely needs documentation. "The evidence that people think, feel, and act differently when it comes to religion is all around us."¹

The first requirement, therefore, of this study is to suggest some dimensions along which an individual might be religious. The concept of religiosity represents a multidimensional approach to the study of religious commitment. This is a response to the greatest limitation of previous studies, which, for the most part, have tended towards unidimensional measurements of religious commitment, employing such variables as denomination or church attendance.

Conceptually, the only comprehensive statement of the dimensions of religiosity was prepared by C.Y. Glock, in his article "On the Study of Religious Commitment." Glock postulates five dimensions within which "all of the many and diverse manifestations of religiosity prescribed by the different religions of the world can be ordered."² These dimensions are the experiential, the ritualistic, the ideological, the intellectual, and the consequential.

¹Ibid., p. S98. See also Stark & Glock, American Piety: The Nature of Religious Commitment, Op. Cit.

²Ibid., p. S98.

The experiential dimension acknowledges that all religions have expectations that, at one time or another, the individual will experience religious emotion, and thus includes subjective religious experience. The ideological dimension is constituted by the expectation that followers will adhere to certain religious beliefs. The ritualistic dimension encompasses the specifically religious practices expected of the individual by the religious group. The intellectual dimension is closely related to the ideological, being the expectation that the individual will be knowledgeable of the basic tenets of his faith and of its sacred writings. The fifth dimension of religiosity, according to Glock, differs in kind from the first four, being the consequences of the other dimensions for the practical conduct of the individual. "In the language of Christian belief, the consequential dimension deals with man's relation to man rather than with man's relation to God."¹ As a dimension of religiosity, it may not be studied apart from the other dimensions, since attitudes and behavior in secular area of life can be used as measures of religious commitment only where they follow from religious belief, practice, experience, and knowledge.

For this study, a synthesis was developed from the dimensions conceived by Glock and Lenski. The dimension of religious practice, to

¹Ibid., p. S99

be called, after Lenski, ritual participation, was seen to include such indicators as church attendance, proportion of income given to the church, and participation in church activities. Glock's ideological dimension and Lenski's indicators of religious belief were categorized as doctrinal orthodoxy. This dimension encompasses the rational assent to - orthodoxy - or deviation from - heterodoxy - accepted doctrine. Religious experience, as indicated by aspects of personal practice such as prayer, was considered the third dimension, to be called devotionalism. The fourth dimension is Lenski's associationism which acknowledges the communal nature of religious group membership and is understood in terms of religious self-segregation. The fifth dimension of religiosity is a synthesis and extension of Glock's experiential and ideological. Included within this dimension is what is usually referred to as religious "faith" or "belief". However, because of the obvious methodological problem of measurement along this dimension, this dimension will be interpreted substantively as including religious "values." If, as according to Kluckhohn, a value may be conceived of as "a conception, explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable which influences the selection from available modes, means, and ends of action,"¹ it is

¹Kluckhohn, Clyde, "Values and Value-Orientations in the Theory of Action: An Exploration in Definition and Classification," from: T. Parsons and E.A. Shils, ed.'s, Toward a General Theory of Action, New York: Harper and Row, 1951, p. 395.

assumed that religious values will to a degree mirror "faith." No inclusion is made of Glock's intellectual dimension as this is largely encompassed by the related dimension of doctrinal orthodoxy. In addition, Glock's consequential dimension has been omitted since one of the intentions of this study, using Glock's terminology, was to explore variance in the consequential dimension related to variance in an integrated measurement in the other dimensions.

Religiosity defined, therefore, is the manifestation of religious commitment along the dimensions of ritual participation, doctrinal orthodoxy, devotionism, associationism, and religious evaluation.¹ Operationally, religiosity will be interpreted as the scale score of the combined measure of these dimensions.² To distinguish religiosity as used operationally from the theoretical definition, the combined measure will be referred to as "aggregate religiosity."

Social Orientation. The concept of social orientation refers to the complex whole of an individual's social behavior, attitudes, and norms over the wide range of possible social activity. Operationally, the scope of this concept is limited to specific areas, including: (1) religious activity; (2) attitudes towards moral issues;

¹In the case of the first four dimensions, Lenski's terminology is adopted since, for the large part, his measurements were employed.

²The methodological difficulties which were later found to place this approach in doubt are discussed in Chapter IV.

- (3) aspects of public service and participation, including charities;
- (4) attitudes towards occupation; (5) political activity and attitudes;
- (6) economic activity and attitudes; and (7) leisure activity.

Personality Orientations. Personality orientation is defined as the relative dominance of different personality interests for the individual. The types of personality interests were first identified by Spranger, on the basis of which a measurement was developed by Allport and Vernon.¹ Operationally, therefore, personality orientation is interpreted as the profile of personal values as measured by the Allport-Vernon-Lindzey "Study of Values: A Scale for Measuring the Dominant Interests in Personality."²

V. HYPOTHESES

One of the major difficulties with the concept of personality, which has not yet been studied, is the problem of whether or not it is in fact a single phenomenon. It is conceivable that the different dimensions of religiosity might be unrelated, as Lenski's tentative approach would tend to indicate.³ Nevertheless, it is not unreasonable to

¹See Eduard Spranger, Types of Men, trans. by Paul J.W. Pigors, New York; Stechert-Hafner, 1928; and Philip E. Vernon & Gordon W. Allport, "A Test for Personal Values," The Journal of Abnormal and Social Psychology, Oct.-Dec., 1931. pp. 231-248.

²Allport, et. al., Op. Cit.

³Lenski, Gerhard, Op. Cit., pp. 295-297.

assume, as Lenski did and Glock implies, that there are certain religious orientations which transcend socio-religious group differences which may be understood by use of the concept of religiosity. Therefore, the assumption underlying this study is that religiosity is a unitary phenomenon and that a measure of this may be contrived by combining the measurements of several different dimensions.

Several studies have shown that religious commitment is in part a function of census variables such as age, sex, marital status, and social class. This influence is therefore anticipated and the general nature of the relationships is predicted.¹

Finally, consistent with the theoretical framework which has been developed, it is predicted that there will be a significant relationship between aggregate religiosity and social and personality orientations. Further, it is expected that these observed relation-

¹Lenski, for example demonstrated the connection between socio-religious group membership and religiosity. The strong connection between social class and church participation has been revealed by many studies, one of which is Erich Goode's "Social Class and Church Participation," Op. Cit. Of particular interest here, however, is Bernard Lazerwitz' "Religion and Social Structure in the United States," from Louis Schneider, Op. Cit., pp. 426-439. Lazerwitz demonstrates relationships of varying significance between denomination and social class, denomination and frequency of church attendance, church attendance and social status as measured by education and occupation, sex and church attendance and age and church attendance. W.S.F. Pickering, in a privately circulated study, "The Shape of Five Anglican Churches in Central Winnipeg," demonstrated the existence of relationships between church attendance and age, sex, marital status, occupation, and percentage of females in the labour force.

ships will lend themselves to the construction of an "ideal-type" orientation common to all individuals with a high religious commitment as indicated by a high value for aggregate religiosity.

On the basis of these assumptions and expectations, four hypotheses were formulated:

- (1) The unitary nature of the phenomenon, "religiosity," may be demonstrated by means of a test of the predicted homogeneity of the indicators employed to measure the five dimensions of religiosity. On this basis it is further predicted that an aggregate measure of religiosity can be developed.
- (2) Aggregate religiosity, as the dependent variable, will be significantly influenced by age, sex, marital status, occupation, education and income.
- (3) Aggregate religiosity, as the dependent variable, will be significantly influenced by the independent variable, denomination (socio-religious group membership.)
- (4) Aggregate religiosity, as the independent variable, will significantly influence the nature and type of social and personality orientations. Subsidiary to this hypothesis is the prediction that there will be demonstrated a common type of social and personality orientation associated with high aggregate religiosity.

CHAPTER III

METHODOLOGY I: THE SAMPLE AND STATISTICAL TECHNIQUES

I. THE SAMPLE

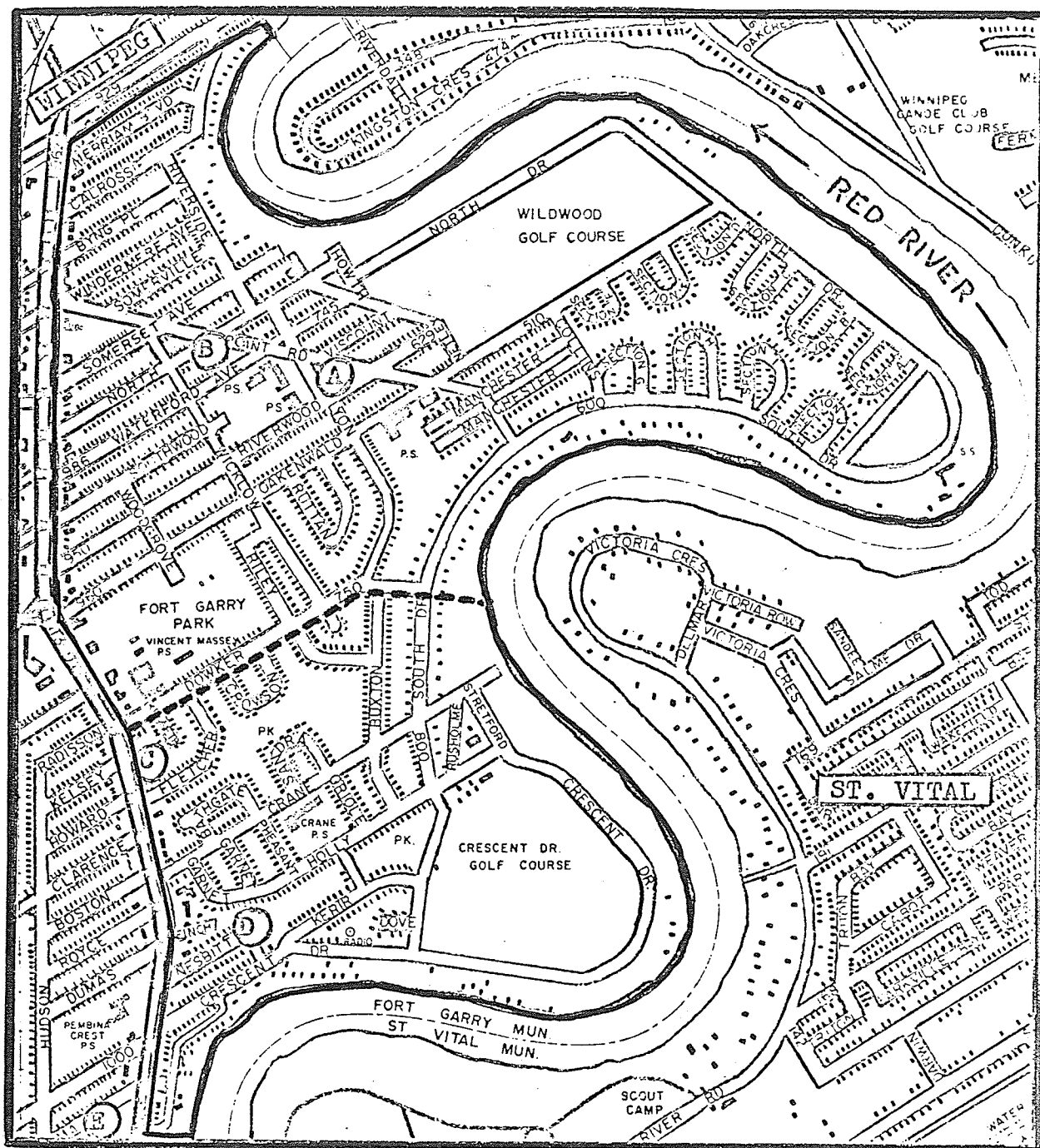
Area Surveyed. The study was conducted during the summer and early fall of 1967 in the northern part of suburban Fort Garry east of Pembina Highway.¹ The area encompasses nearly 1.3 square miles and has a total population of approximately 7600. It is a residential district composed almost entirely of single-family dwellings. On the basis of the 1961 census returns, it should be considered upper-middle class.² Using the criteria of education, occupation, income and value of dwellings, it is well above the figures for Metropolitan Winnipeg as a whole. The census showed that 75% of the adult population of the sample area had at least three years of secondary education as opposed to 41.8% in the total metropolitan area. Of these totals, 23.1% and 8.4% respectively had attended university. In 1961, 29.1% of the work force was classified as managerial in the sample area, and 23.1% as professional and technical. The comparable percentages in the metro area were 12.4% and 8.8%. With respect to income, the

¹See fig. 3:1, a map of the area. The boundaries of the survey area were taken as: North: the lane between Jubilee Ave. and Merriam Blvd., the Winnipeg city limits; East and South: the Red River; West: the east service lane of Pembina Hwy.

²As of July, 1968, the tract of figures from the 1966 census were not available. The figures quoted here are taken from the 1961 census bulletin CT-17, for census tract #64 which takes in approximately two-thirds of the sample area. (see fig. 3:1).

Fig. 3:1 MAP SHOWING THE DISTRICT OF FORT GARRY IN WHICH THE SURVEY TOOK PLACE.

Key: ————— Limits of the Survey Area
 - - - - - Census Tract No. 64, South Limit.



Key to Location of Churches in the Survey Area:

- | | |
|--------------------------------------|---|
| 'A'-Fort Garry United Church. | 'B'-St. Paul's Anglican Church. |
| 'C'-Hope Lutheran Church. | 'D'-St. John the Baptist Anglican Church. |
| 'E'-St. Vital Roman Catholic Church. | |

mean male income in the section of Fort Garry surveyed was \$5,821, and the mean total family income was \$6,090, while the total metropolitan figures were \$3,907 and \$5,222, respectively. The average value of houses in the sample area was \$15,044 as compared with \$12,999 for metropolitan Winnipeg.

There were basically five reasons leading to the choice of the Fort Garry area for the study. First is the fact that the area was well situated from the standpoint of convenience and accessibility. More important, however, were two ecological reasons. With the river forming the limits of the survey area on three sides and the major north-south traffic artery on the fourth, the area is, in many respects, a subcommunity. Second, as fig. 3:1 indicates, there are five churches within the district, a fact which enhances the probability of including a reasonably large number of individuals of high religiosity in the sample.¹ The fourth reason was of a more practical nature. Since the area is relatively homogeneous from the standpoint of occupation, education and income, it was hoped that these variables would not influence religiosity in the sample. If the wide variety of census variables and

¹Prof. Pickering has on many occasions stated that the effective working radius of a church in a residential area is approximately one mile. Thus given the nature of the sample area, it is likely that there will be a good proportion of high religiosity types. After two years of searching, I have forsaken the attempt to find the source of Pickering's evidence, but see, for example, his "St. Andrews and St. George's, Winnipeg: Two Churches Different only in Denomination," unpub. paper, St. John's College Library, 1964. p. 17.

denomination had proved to be significantly related to religiosity in the sample, the problem of extracting an "ideal type" social and personality orientation would have been complicated considerably.

While not a practical consideration, it is the fifth reason which most influenced the decision to survey this area. Up until a year before the survey was conducted, this district had been the residence of the writer, and therefore curiosity on the part of the writer about his "home town" was the deciding factor.

Nature and selection of the sample. The population was defined as all resident homeowners whose names appear on the 1966 List of Electors, who are resident within the survey area, and who were not listed as retired at the time of enumeration. The basic probability sampling design of a simple random sample was selected to insure a representative sample.¹ Denomination was considered to be one of the more crucial variables in the study, therefore, a representative sampling plan was adopted to further guarantee an accurate denominational representation.²

The List of Electors was secured and the names of all ineligible individuals within the sample area were removed.³ The list was

¹The procedure was adopted from Claire Selltitz, et.al., Research Methods in Social Relations, New York; Holt, Rinehart and Winston, 1964, pp. 521-526.

²Ibid., pp. 513, 526-533.

³Including the above and also those of Jewish faith.

then compared with the membership rolls of the five area churches, and each name was coded for denomination and whether or not it appeared on the church rolls.¹ The names were then assigned numbers and a comprehensive list of the population was drawn up.

After each name had been coded, it was discovered that the number found on the church rolls and the number not found on the rolls were almost equal and therefore it was decided to draw half the sample from each group. The former group was further classified by denomination, as indicated in Table 3:1. A table of random numbers was used to draw a sample of 200 and a backup of the same size to provide fill-ins. In each case, when an element of the population was selected, his spouse was considered ineligible.

All individuals selected were informed of the study by letter and were subsequently contacted by an interviewer. A total of 335 letters were sent to individuals in the sample and 319 contacts were made. It was determined that the remaining sixteen individuals were still resident in the area, but contact could not be made by October 31, 1967 when the interviewing ceased. Of the 319 contacts, 17.2% refused to be interviewed, 19.8% had moved from the area, and 5.4% were ineligible, sick, or deceased.² Table 3:2 shows the disposition of the 319 contacts.

¹The indebtedness of the writer to the clergy of the five area churches is gratefully acknowledged.

²Individuals selected for the sample and subsequently contacted were considered ineligible on the grounds of religion, that is, non-Christians, and familiarity with the Allport-Vernon-Lindzey, "Study of Values." Five of the ineligibles were non-Christian - four Jews and one Buddhist -

Table 3:1 BREAKDOWN OF THE POPULATION AS DERIVED FROM THE LIST OF ELECTORS AND BY LISTING ON THE ROLLS OF THE FIVE AREA CHURCHES. PROPOSED REPRESENTATION OF THE GROUPS IN THE SAMPLE EXPRESSED AS A PERCENTAGE OF THE POPULATION.

	N _{population}	%	N _{sample}
St. Paul's Anglican	536	16.0	32
St. John the Baptist Anglican	76	2.0	4
Fort Garry United (members)	531	16.0	32
Fort Garry United (adherents)	377	11.5	23
Hope Lutheran	27	1.0	2
St. Vital Roman Catholic	112	3.5	7
ON CHURCH ROLLS (total)	1659	50.0	100
NOT ON THE CHURCH ROLLS	1600	50.0	100
TOTAL:	3259	100.0	200

After the interviewing was concluded, the sample numbered 184, or 57.6% of the contacts.¹

and the remaining two - a psychologist and a personnel manager - had prior knowledge of the "Study of Values."

¹It was decided to conclude the interviewing at the end of October in order to leave sufficient time for the analysis of the data. At that time, the sample was 16 short of the intended 200 individuals. However, since the research was a preliminary study and the results were not intended to provide generalizations about the population, it was felt that this was a sufficient sample for the analysis.

Table 3:2 DISPOSITION OF 319 CONTACTS.

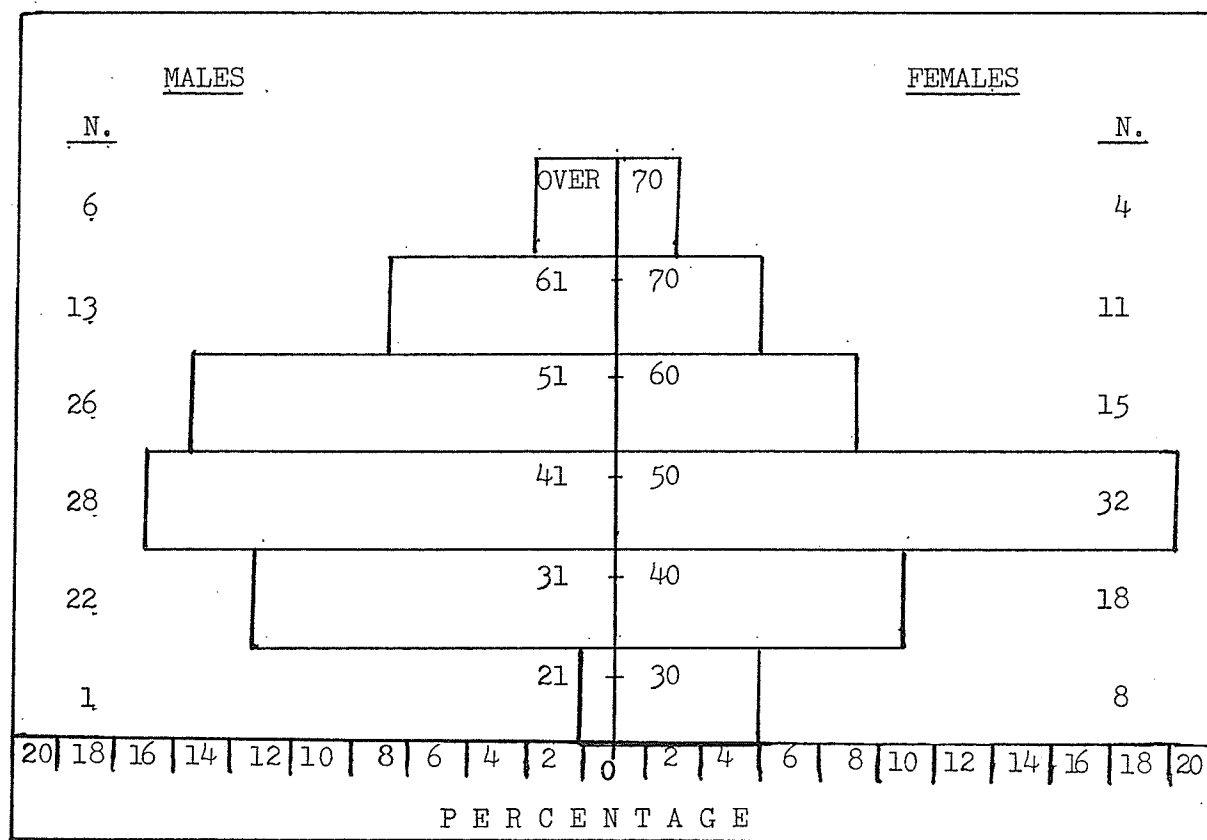
Denomination	Interviewed	Refused Interview	Moved	Sick or Deceased	Ineligible	Total
Anglican -St. Paul's	29	8	3	1	2	43
Anglican -St. John	4	-	1	1	-	6
United -Fort Garry	54	7	7	2	1	71
Lutheran -Hope	2	-	1	-	-	3
Roman Catholic -St. Vital	7	1	1	-	-	9
On Church Rolls SUB-TOTALS	96	16	13	4	3	132
Not on Church Rolls	88	39	50	6	4	187
TOTALS: 184		55	63	10	7	319

Composition of the Sample.¹ The composition of the sample was broken down by several of the census variables including sex, age, marital status, place of birth, level of education, family income, occupation, length of residence in the sample area, value of dwellings, and denomination.

¹Appendix 1 shows the sample breakdown along with some of the appropriate parameters, however, since the results are not generalized, the parameters are not included in the text.

The sex-ratio in the sample was 109.1 reflecting an imbalance in the sample in favour of males over females. This is not representative of the population where there are more females than males, and a sex-ratio of 93.1. As figure 3:2 shows, with respect to age, the category 21-30 has considerably fewer individuals than one might expect.

Fig. 3:2 BREAKDOWN OF THE SAMPLE BY SEX AND AGE.



This may be attributed to two factors: (1) the large number of single persons in the population of the area who are living at home were not included in the study population; and (2) the enumeration for the List of Electors took place two years prior to the survey making the

minimum age in the sample 23. The fact that there are more females than males in this age group probably reflects the fact that males in our society tend to select a wife who is younger than themselves.¹

All of the individuals in the sample were married, as this had been specified in the definition of the population. Of the total, however, 3.8% were widowed and 2.1% separated or divorced. Breaking the sample down by birthplace showed that 81.0% were born in Canada and 17.4% outside of Canada. Three individuals, or 1.6% of the sample either did not know their place of birth or gave no response.

The median level of education in the sample was Grade XII. This reflects the fact that the sample was drawn from a population which has a relatively high level of education. The 1961 census showed that 51.9% of the adult population had at least three years of high school and that 23.1% had at least one year of university education. Table 3:3 shows the breakdown of the sample by education.

In breaking the sample down by income, the expression chosen was that of total family income, which includes all wages or salaries, interest and capital gains, and pensions or annuities received by all members of the family resident in the home during the year previous to the study. The median total family income was calculated to be \$9,500.

¹The Dominion Bureau of Statistics reports that in 1964, the average age of bachelors at the time of marriage was 25.4 while that of spinsters was 22.7. See Canada Year Book 1967, p. 269.

Table 3:3 BREAKDOWN OF THE SAMPLE BY LEVEL OF EDUCATION.

Level of Education	N.	%
Elementary (Grade VI or less)	5	2.7
Junior High School (Grades VII-IX)	16	8.7
Some High School (Grade X)	19	10.4
Junior Matriculation	37	20.0
Senior Matriculation	33	17.9
Some Post-Secondary	32	17.4
Bachelor's Degree	23	12.5
Some Post-Graduate	19	10.4
TOTALS	184	100.0

The breakdown is given in Table 3:4.

Occupation was classified according to the Occupation Class Scale developed by Bernard R. Blishen. On the scale, occupations are grouped according to income and years of schooling and is, therefore, more properly a measurement of social class than of occupation. Nevertheless, Blishen's scale does provide a convenient categorization of occupations by relative degrees of prestige which pertains specifically to the Canadian labor force. On the whole, the scale may be compared to the occupational grouping used by the Dominion Bureau of Statistics as follows:

Blishen Scale Classes 1-2 - DBS Groups - Managerial
 - Professional and
 Technical

Table 3:4 BREAKDOWN OF THE SAMPLE BY LEVEL OF TOTAL FAMILY INCOME.

Income Level	N.	%
\$3-5,999*	26	14.2
6-8,999	59	32.0
9-11,999	50	27.2
12-14,999	25	13.6
15-17,999	10	5.5
18-20,999	9	4.9
21,000 and over	5	2.6
TOTALS	184	100.0

* None of the individuals in the sample reported a total family income of less than \$3,000.

Blishen Scale Classes 3-4 - DBS Groups - Clerical
 - Sales
 - Service and Recreation

Blishen Scale Classes 5-7 - DBS Groups - Transport and Communication
 - Primary
 - Craftsmen, Production Process and Related Workers
 - Laborers.

While there is some overlapping in this comparison, the fact remains that the Blishen scale classes not only rank the various occupations by prestige, but also provide a descriptive classification.¹ The

¹Blishen, B.R., "The Construction and Use of an Occupational Scale," from

breakdown of the sample by occupation is shown in Table 3:5.

Table 3:5 BREAKDOWN OF THE SAMPLE BY OCCUPATION USING BLISHEN'S SCALE CLASSES.

Occupation	N.	%
Blishen Class 1	4	2.2
Blishen Class 2	58	31.5
Blishen Class 3	22	12.0
Blishen Class 4	9	4.9
Blishen Class 5	10	5.5
Blishen Class 6	6	3.2
Blishen Class 7	5	2.7
Retired or Unemployed	4	2.2
Housewife*		

	n.	% of sample
No Occupation	28	15.2
Blishen Class 1	1	0.6
Blishen Class 2	7	3.8
Blishen Class 3	15	8.1
Blishen Class 4	10	5.5
Blishen Class 5	-	-
Blishen Class 6	5	2.7
Blishen Class 7	-	-
Sub-Totals (Housewife)	<u>66</u>	<u>35.8</u>
TOTALS	184	100.0

* To be presently classed as a housewife in the sample, a female respondent must work less than $2\frac{1}{2}$ days per week. Respondents classed as housewives were then asked whether or not they had held a full-time job outside the home since marriage. The classification "housewife" was then broken down further by this secondary classification.

The breakdown by occupation shows a high proportion of relatively high prestige occupations in the sample, in that 54.3% of the labour force is classified in Blishen's first two classes. This fact, along with relatively high median income and level of education within the sample, supports the observation that the socio-economic status of the sample tends towards upper-middle class. This observation is reinforced by the median dwelling value in the sample of \$18,000. The breakdown of the sample by dwelling value is given in Table 3:6.

Table 3:6 BREAKDOWN OF THE SAMPLE BY VALUE OF DWELLINGS.

Value	N.	%
\$10-15,000*	54	29.5
16-20,000	97	52.7
21-25,000	18	9.8
26-30,000	9	4.9
30,000 and over	6	3.1
TOTALS	184	100.0

* None of the dwellings were valued at less than \$10,000.

Blishen et.al., eds., Canadian Society, Toronto: Macmillan of Canada, 1964. (In the third (revised) edition of Canadian Society, Blishen has revised and up-dated the scale, but this was unavailable at the time of the survey.) pp. 449-458.

The denomination of approximately half the sample was known from the beginning because of the nature of the sample plan. While some inaccuracies were encountered in that part of the sample which was drawn from the lists derived from the church rolls, this knowledge was largely correct. However, in the other half of the sample, denomination was unknown. It was anticipated that a proportion of these would have no denominational preference but that most would be known to churches outside the survey area. In this respect, the breakdown of the sample by denomination is interesting for it shows that only 3.2% have no denominational affiliation and that only 12.0% of the sample claim a preference not represented in the area. The majority of the "unknowns", therefore, belonged to one of the four denominations represented in the area, but attended a church outside Fort Garry. Table 3:7 shows the breakdown of the sample by denomination.¹

While it was determined that the majority of the respondents claimed a preference for the denomination in which they had been brought up, a large minority of 30.9% had changed their denominational affiliation.² Again, the majority reported that the denomination of

¹Appendix 2 shows the previous denomination of respondents and/or spouses who have changed preference, along with the denomination of the spouse, father, and mother by respondent's preference.

²See Appendix 2.

Table 3:7 BREAKDOWN OF THE SAMPLE BY DENOMINATION.

Denomination	N.	%
United Church of Canada	85	46.1
Anglican Church of Canada	47	25.7
Roman Catholic Church	18	9.8
Lutheran Church (all Synods)	6	3.2
Baptist Church (all Conferences)	4	2.2
Presbyterian Church of Canada	3	1.6
Mennonite Church	8	4.4
Other Denominations*	7	3.8
No Denominational Preference	6	3.2
TOTALS	184	100.0

* "Other Denominations" includes: Unitarian (2); Pentecostal (2); Christian Science (1); Greek Orthodox (1); and Independent Church (Bethesda) (1).

the spouse was the same as their own, with a smaller minority of 24% reporting the spouse's preference as different.¹ In cases where either the respondent or the spouse had changed denomination, the reason most frequently given was change to the affiliation of the other after marriage. This was reported as the reason by 33.3% of the respondents and 50% of the spouses. The next most frequently reported reason was what might be considered as a "matter of conscience," which would include matters of belief and doctrine or form of service. The remainder

¹See Appendix 2.

of the changes reported were attributed to reasons of convenience, such as proximity of the church.

II. COLLECTION OF DATA

The data were collected through personal interviews of the individuals chosen for the sample. Of the 184 completed interviews, 81 were done by the writer with the balance being carried out by a team of interviewers specially trained for this study. Each interview consisted of an interview schedule to which the respondent replied orally and the "Study of Values" which was completed by the respondent. The degree of co-operation provided by the respondents was very gratifying and the interest in, and enthusiasm for, the study which was revealed by almost all respondents was most encouraging. There is a consensus that generally the interview, which took between an hour and an hour and a half to complete, was a pleasurable experience for both the interviewee and the interviewer.

The Interview Schedule. The interview schedule was constructed specifically for this study, making use of instruments developed by Lenski and Pickering for similar studies.¹ The interview schedule was designed to elicit information in three general areas - census variables, religious commitment, and social attitudes and behavior.²

¹Lenski, Gerhard, Op. Cit., and W.S.F. Pickering, The Religion of The Undergraduate, unpublished study at St. John's College, University of Manitoba.

²The Interview Schedule is found in Appendix 3.

An interview schedule was prepared, consisting of both standardized and "open-ended" questions, and was pretested on a purposive sample of high and low religious commitment types. The individuals in the pretest sample were also asked for their reactions to the questions after the interview was completed. The results of the pretest and the impressions of the pretest sample provided the basis for extensive revising and editing of the instrument. The final schedule was rigidly standardized to insure that the data would be compatible and to compensate for experimenter bias. In its final form, the schedule took between 35 and 45 minutes to administer.

The "Study of Values." The "Study of Values" was first developed by Phillip E. Vernon and Gordon W. Allport in 1931 as a means of measuring "the relative prominence of six basic interests or motives in personality."¹ It was subsequently revised in 1951 and 1961. It is the 1961 edition which is used in this study. The test consists of 45 questions based on a variety of familiar situations in which the subject records his preference for the alternative answers provided. The test is easily scored and provides six relative scores of the personality interests. Since the scores are relative, the "Study of Values" in no way may be interpreted as a measure of the intensity of

¹Allport, et.al., Manual to the "Study of Values", Op. Cit., p. 3.

the various interests. The test is recommended for a population in which there is a relatively high level of education. In this respect the sample was adequate, and with the exception of two instances - one case where the respondent was not too familiar with the English language and another where one woman simply could not make up her mind - there was no reported difficulty in the administration of the "Study."¹

III. TECHNIQUES OF ANALYSIS

The Plan of the Analysis. The central feature of this study is the attempt to measure religiosity, and therefore it was to this attempt that first attention was directed in the analysis. Because of the crucial importance of this measurement, however, it will be dealt with only briefly at this point and the following chapter will cover the development of a religiosity scale in detail.

Briefly, the procedure was to cast the indicators of religious commitment into a correlation matrix, correlating each item with every other item. Those items which showed a low level of association were then discarded as nondiscriminating and the remainder interpreted as real indicators of religiosity. These retained indicators were then dichotomized around the median response category and individuals were then scored with either a "1" or a "0" on each item. The aggregate

¹The interpretation of the "Study of Values" and the six personality interests is dealt with in Ch. V under the analysis of "Personality Orientations and Aggregate Religiosity".

score of each individual was then calculated, as was the mean and standard deviation of all scores.¹ Four "religiosity groups" were then derived on the basis of distribution on the continuum. The group above +1σ was considered "high" aggregate religiosity, the group below -1σ was considered "low" aggregate religiosity, and the two groups between the mean and +1σ and the mean and -1σ were considered "moderately high" and "moderately low" aggregate religiosity respectively. In this way, the members of the sample were categorized according to the level of their religious commitment.

The measure of religiosity was used as both a dependent and an independent variable. The theoretical framework of the study, as stated in the hypotheses, predicted that aggregate religiosity would be influenced by the census data variables and denomination, while in turn aggregate religiosity would influence social and personality orientations. The testing of these relationships constituted the balance of the analysis.

At the outset, it was hoped that the analysis of the data would lend itself to the construction of an "ideal type" social and personality orientation characteristic of a high degree of religiosity. It soon became apparent, because of the nature of the results, that this would be of little value, and the plan was abandoned.

¹The methodological difficulties of this approach are discussed in the next chapter.

The Statistical Techniques Employed. The data involved in the determination of religiosity were of two types - continuous and dichotomous. Therefore, in the correlation matrix, three varieties of correlation were employed: (1) for correlation of continuous by continuous, Pearson's product-moment method of correlation was used, and its significance tested by reference to a table of the critical values of the coefficient; (2) for dichotomous by continuous, the method used was that of point-biserial correlation, also a product-moment correlation. The significance of the point-biserial coefficient was tested by a comparison of the two means in a t test; and (3) in the case of dichotomous by dichotomous data, the method of correlation employed was the fourfold point correlation, or phi coefficient. The significance of the phi coefficient was determined by the calculation of the corresponding value for X^2 , and then reference to a table of the critical values of X^2 . In all these correlations, as in all statistical tests throughout the analysis, α was taken to be .05.

To test the relationship between religiosity as both a dependent and independent variable, the statistic most frequently used was the chi square test for the goodness of fit. Here again, α was taken to be .05, and the significance of the observed distribution determined from a table of the critical values of X^2 .

Two departures from this procedure are found in the analysis. Two questions - on leisure activity and desirable occupational characteristics - required the respondent to rank his choices. In these

cases, a group ranking for each of the four religiosity groups was determined by assigning weights to each choice, and the differences in the group rankings tested by means of Kendall's coefficient of concordance. The significance of this coefficient was determined by the calculation of the corresponding value of X^2 .

The other departure from this procedure was the analysis of the results of the Allport-Vernon-Lindzey "Study of Values." Here the method was that of analysis of variance, calculating the F ratio for each of the six sets of means. Orthogonal a priori comparisons were then made between all possible pairs of means within each set following the Scheffé method. The significance of the F ratio was determined by consulting a table of the critical values of F at the .05 level. Any comparison of pairs of means was considered to be significant if the calculated value of F was greater than or equal to the quantity F' , derived from the value of F found in the table of critical values.¹

IV. SIGNIFICANCE OF THE FINDINGS

Statistical Significance. The basic problem connected with

¹See George A. Ferguson, Statistical Analysis in Psychology and Education, New York: McGraw-Hill, 1966. pp. 296-297 for an explanation of the Scheffé method of multiple comparisons. The statistical references used in this study were for the most part Ferguson's text and Sidney Seigel, Nonparametric Statistics, New York: McGraw-Hill, 1956. Other statistical works referred to are listed in the bibliography.

much research in the social sciences concerns what are known as tests of significance. In other words, at what point may it be considered that differences in distribution of some variable between two subgroups is in fact a "real" difference which could not be entirely due to chance or sampling error. The procedure usually employed in making this decision is to define a priori a region of rejection in the theoretical sampling distribution, that is, a subset of extreme values for which the probability of occurrence under the null hypothesis is quite small. Thus, when the observed value falls within the region of rejection, the null hypothesis is assumed to be false and the alternate hypothesis, that there is a real difference between the subgroups, to be true. The probability of any value in the region of rejection occurring through chance or sampling error is therefore less than or equal to the defined limits of the region of rejection or, at it is more commonly called, the level of significance (α). The most common levels of significance chosen for research of this nature are .05 or .01.

A level of significance of .05 has already been specified for this study. This level was chosen for two reasons: (1) the data collected do not produce a distinction between members of the sample sufficient to allow a more rigorous procedure; and (2) a less stringent level of significance, while increasing the probability of rejecting the null hypothesis improperly (and thereby concluding a relationship which does not in fact exist,) does lessen the probability of Type II error, making the discovery of a pattern of relationships more likely.

It was previously stated that one of the purposes of this study was to delineate just such a pattern rather than merely to seek the specific relationships which exist between aggregate religiosity and particular variables.

Social Significance. The most common abuse of tests of statistical significance in the social sciences is the frequent assumption that statistical significance equals social significance. Since many studies employ only a single sample, this tends to be a somewhat spurious assumption; tests of significance are poor substitutes for replication. Reliable judgements about relationships between variables are more likely to be derived from several independent samples than from any single sample, as this procedure mitigates the arbitrariness of tests of significance and the probability of either Type I or Type II error.

A conscious awareness of this problem has limited the claims that the findings for the sample could be generalized for the population. With only one sample employed, statistically significant observations were not extended as generalizations of social significance. In addition, such generalizations were further inhibited by the size of the sample which was too small to permit claims for a high degree of reliability, and the lack of accurate parameters which did not allow a determination of sampling error.

The nature of measurement of aggregate religiosity used in the analysis, as described in the following chapter, depicts phenomena

observed in the sample, but is such that the findings cannot be confidently extended to the population. If this were not the case, the fact that several variables have been held constant in the selection of the sample would mean that any generalizations could only relate to one narrowly defined stratum of society.

The primary emphasis of this study, as has been stated previously several times, was upon the methodological problem of meaningfully distinguishing individuals on the basis of religious commitment. As a result, generalization was not a priority at the time the survey design and sampling plan were put forward. It would therefore be imprudent to attempt now to superimpose a justification for large scale generalization on a structure which was not constructed for this purpose.

No claims, therefore, are made for the specific social significance of the findings; statistically significant observations will be interpreted within the context of the sample only.

CHAPTER IV

METHODOLOGY II: THE MEASUREMENT OF AGGREGATE RELIGIOSITY

I. THE PURPOSE OF THE MEASUREMENT

The first hypothesis formulated in this study stated the belief that religiosity is in fact a unitary concept which may be understood along five dimensions - ritual participation, doctrinal orthodoxy, devotionism, associationism, and religious evaluation. This approach constitutes a response to the limitations in the area of the sociological study of the individual and his religion. The first concern here is of a theoretical nature and has already been discussed, namely, the lack of a consensus within the field over the definition of religiosity. The position taken in this study was precipitated by Lenski's prefatory work in this area, and closely resembles Glock's concept of religiosity.¹

The method of approach, which will be discussed here, is implied by the theory, and represents an attempt to overcome the relatively unsophisticated nature of the measurements which have been used in previous studies to differentiate the various types of religious commitment. Rather than duplicate other studies, which employed only one or two indicators to categorize differential religiosity, an

¹Lenski, Op. Cit., and Glock, Op. Cit. See also Stark and Glock's recently published study of the nature of religious commitment which is an empirical examination of Glock's postulates, Op. Cit.

effort was made to measure religiosity in several dimensions. The underlying position then, is that religiosity is less a matter of type and more a matter of degree, that high and low religious commitment are differentiated quantitatively, not qualitatively.

To this end, it was felt that differential religious commitment could best be represented by a measurement such as an interval scale and continuum rather than by means of categorization. The purpose of the measurement which is discussed below was to account for and demonstrate the existence of religiosity, and to provide a more valid measurement of religious commitment. The development of this measurement was considered the principal goal of the study, with the delineation of the social and personality correlates of religiosity being considered of secondary consideration. Because this study was regarded as the precursor of more extensive research, the methodological implications of the theory were given first consideration.

After this study had gone far past the stage of data collection, Charles Y. Glock, in collaboration with Rodney Stark, published the results of his study of the nature of religious commitment.¹ Although Stark and Glock's work was received too late to be included in this research, it deserves mention here since the theory underlying the measurement of religiosity in this study owes much to Glock's

¹American Piety: The Nature of Religious Commitment, Op. Cit.

earlier writings.¹

Glock and Stark have developed nine measures or scales of religiosity based on Glock's five dimensions of religious commitment. As in this study, the consequential dimension was not considered as a measure of religious commitment, however, scales were developed as indicators of the other four dimensions. To measure the ideological dimension, which Glock and Stark re-named the dimension of "orthodoxy," three scales were developed measuring orthodoxy, denominational particularism, and ethicalism. The ritualistic dimension, re-named "practice," was measured on two scales, ritualism and devotionism. One scale was developed to measure each of the intellectual and experiential dimensions which were also re-named, "knowledge" and "experience," respectively. In addition, two other scales were developed to measure communal involvement and the proportion of close friends belonging to the same congregation.

Essentially, there are two major differences between the method employed by Glock and Stark and the method used in this study. (1) Glock and Stark have constructed separate scales for each dimension while the intent of this study was to construct one scale as a cumulative measure of all dimensions. (2) Glock and Stark adopted as their criterion for item selection the universal acceptability of

¹"On the Nature of Religious Commitment," Op. Cit.

each particular item as a valid measure by the denominations involved in their study. In the present research, it was proposed that the criterion for item selection be a test of homogeneity with other items in each dimension as determined through intercorrelation. Items which did not intercorrelate significantly were then discarded.

II. THE METHOD OF CONSTRUCTION

Collection of the Data. The data which constituted the basis of the construction of the measure of aggregate religiosity were derived from both the interview schedule and the "Study of Values." Questions designed to provide indicators of the first four dimensions of religiosity - ritual participation, associationism, orthodoxy, and devotionism - were included in the interview schedule. The score for religious values on the "Study of Values" was used as the indicator of the fifth dimension, religious evaluation. The questions included in the interview schedule were pre-tested to uncover any ambiguities or redundancies, and checked informally as to whether or not they returned the desired information. After editing, there were four indicators of ritual participation, fourteen of associationism, and ten and eight of orthodoxy and devotionism respectively, along with the score for religious values, the one indicator of religious evaluation.¹

¹A complete list of the thirty-seven indicators of religiosity is given in Appendix 4.

The indicators of ritual participation were: (1) frequency of attendance at religious services; (2) participation in church activities other than attending services; (3) the frequency of this extra service participation; and (4) the percentage of income given to the church.¹

The indicators of associationism included measurements of socio-religious group membership of both associational and communal type. Associational group membership was indicated by: (1) whether or not the respondent has a denominational preference; and (2) if this has always been his affiliation; (3) proximity of the church which the respondent attends; (4) membership in and; (5) length of attendance at that church.² Indicators of communal group membership included: is the denominational affiliation of the respondent the same as that of (1) his father; (2) his mother; and (3) his spouse; (4) general agreement with his spouse on religious matters; does the respondent talk about religion with (5) his co-workers; (6) his neighbors; the proportion of (7) his close relatives; and (8) his most intimate friends, having the same denominational affiliation; and (9) whether his friends and/or his relatives would attempt to discourage him if he proposed to change his socio-religious group membership.³

¹ Determined from: (1) Q.24; (2) Q.29; (3) Q.41; (4) Q.'s 14 & 80. See Appendix 3. The percentage of income was determined by interpolating the categories of Q.'s 14 and 80.

² Determined from: (1) Q.17; (2) Q.18; (3) q.25; (4) Q.26; (5) Q.27. See Appendix 3.

³ Determined from: (1) Q.'s 17 & 22; (2) Q.'s 17 & 23; (3) Q.'s 17 & 37;

Doctrinal orthodoxy was indicated by: (1) a belief in God; (2) the respondent's beliefs about the nature of God; (3) belief that prayers are answered; and (4) understanding of the nature of answered prayer; (5) a belief in a life after death; and (6) a belief in ultimate judgement; (7) belief concerning the necessity of regular, formal worship; (8) conceptualization of the nature of the roles of the clergy and laity; and beliefs about (9) the nature of Christ; and (10) the authority of the Bible.¹

The indicators of personal religious practice, the dimension of devotionism, were: (1) the locus of decisions with respect to the religious performance of children; (2) the respondent encourages his children to pray; (3) the asking of a blessing at mealtimes; the respondent has (4) discussions with his children about religious matters; and (5) family worship and/or Bible reading at home; (6) the frequency of private prayer; and (7) consciously asking the will of God before making decisions; and (8) the frequency with which the respondent reads the Bible.²

(4) Q.42; (5) Q.66; (6) Q.68; (7) Q.70; (8) Q.71; (9) Q.74. See Appendix 3.

¹Determined from: (1) - (4) Q.'s 50-53; (5) - (8) Q.'s 55-58; (9) Q.63. See Appendix 3, All indicators of orthodoxy were checked out with clergy of the Anglican, Roman Catholic and United Churches to insure universality.

²Determined from: (1) - (5) Q.'s 45-49; (6) Q.54; (7) Q.60; (8) Q.64; See Appendix 3.

It will be remembered that religious evaluation is not a dimension of religiosity "per se," but rather is a measurable approximation of the degree or intensity of religious "faith" or "belief." As such, it is this study's counterpart of Glock's experiential dimension.¹ The indicator of religious evaluation was the score recorded by the individual for "religious values" on the Allport-Vernon-Lindzey test. It is therefore, a measurement of the relative dominance of these values, or religious interests, in the individual's personality.

The Treatment of the Data. To test the homogeneity of the indicators within each dimension, several inter-correlation matrices were cast. On a priori grounds it was determined that if the indicators correlated significantly with each other, they could be assumed to measure aspects of the same phenomenon - religiosity. In addition, any indicators which did not correlate could be considered not to measure religiosity and thus discarded.²

The first attempt with this method saw the indicators of the postulated religiosity dimensions of ritual participation, associationism, orthodoxy, and devotionism cast into separate correlation matrices with the purpose of first testing for homogeneity between the

¹Glock, Op. Cit...

²The fact that this approach does not allow for the generation of weights for the indicators presented a problem which is discussed later in this chapter.

indicators of each dimension. It was planned then to discard non-correlating items and to develop weights for the remaining indicators which would then permit cumulative values to be determined in the four dimensions for each respondent. The four cumulative values could then be cast in a correlation matrix with the value for the fifth religiosity dimension - the score for "religious values" from the Allport-Vernon-Lindzey "Study of Values" - and the homogeneity of the five dimensions tested. In this way, it was felt that (1) the existence of religiosity as a unitary phenomenon could be demonstrated as well as that each of the five dimensions of religiosity did in fact measure what they were purported to measure, and (2) that a valid basis would be provided for developing an aggregate religiosity score.

However, when the correlations within the first four dimensions were carried out, an extremely low level of association was observed between most of the indicators.¹ In the correlation matrix for ritual participation, only one indicator - frequency of church attendance - appeared to differentiate between the respondents, and in the matrix for doctrinal orthodoxy, seven of the ten indicators appeared to discriminate. Of the fourteen indicators of associationism, none tested successfully, while, of the eight indicators of devotionism, only two - the frequency with which the respondent prayed and read the Bible - could be considered to discriminate effectively. These findings

¹The four correlation matrices are presented in Appendix 4.

placed the balance of the proposed method in jeopardy. If the non-correlating items were discarded, only one of the four dimensions - doctrinal orthodoxy - would remain meaningful, in addition to the dimension of religious evaluation which, to this point, had not been tested. In effect, the concept of "dimensions of religiosity" would have to be discarded.

The problem now was one of salvage. The number of indicators which did not discriminate within the four dimensions - and presumably, therefore, did not contribute to the measurement of religiosity - was unexpectedly large. In addition, the responses to some of the postulated indicators were largely homogeneous throughout the sample and the correlation coefficients could not be calculated.¹ But, if the efficacy of the concept of dimensions, within the context of this research design, was now known, it was also apparent that some of the indicators did discriminate relatively well within these dimensions. Therefore it was decided to continue to attempt to develop an aggregate religiosity scale, and a modified method was proposed.

Instead of casting matrices for each of the first four dimensions and a further matrix for the cumulative values of these dimensions and the value for religious evaluation, the concept of religiosity dimensions was put aside and it was proposed to establish one full matrix consisting of all thirty-seven indicators. The same procedure of dis-

¹Three such indicators were "the respondent has a denominational preference (associationism and belief in God and belief that prayers are

carding indicators which failed to discriminate could then be followed, with the result that the remaining items could be assumed to be valid measurements of aspects of religiosity. Since the retained indicators would, on the same a priori grounds, be assumed to exhibit homogeneity, it was further assumed that together they would provide the basis for the development of an aggregate religiosity scale.

A full matrix, as described, was then cast and the levels of significance were determined.¹ Levels of significance beyond .10 were

not always answered affirmatively (both orthodoxy.)

¹The full correlation matrix is shown in Appendix 4 along with a table of corresponding levels of significance. The extremely large number of calculations required to complete a matrix consisting of some 638 correlations made it impractical for the matrix to be done by hand. Therefore, a request for assistance was made to the Department of Computer Science at the University of Manitoba. After several discussions with the Assistant Head of the department, Prof. D.R. Sprague and the Director of Programming, Mr. W. Doran, three programs were written for the IBM 360 which have since become part of the permanent program library for use in projects with similar needs. These programs consist of:

- A. A program for the calculation of "Pearson's r" correlation coefficient. The particular value of this program lies in the nature of the input data. In a fashion similar to much of the research done in the Department of Sociology, the data for this study consisted of ordinal scales. IBM punch cards were produced for manual sorting, on which the responses of the various individuals - as ordinal scale values - were punched. The number of response categories varied from question to question and included such "non-data" response categories as "no response" or "not applicable." The program made it possible for the data to be used directly in this form without transcription, effectively discriminating between data and non-data categories in each case while also allowing for different numbers of data categories in each question. Thus, the unique feature of this program lies not in the operation conducted, but rather in the nature of the data input which is quite common in

then substituted for the coefficients in the matrix and a process of elimination begun. Beginning with that indicator which correlated least well with the others, all non-discriminating indicators were removed and the matrix was progressively contracted. At the completion of this process, there remained thirteen indicators among which was observed a significant level of association. All of the correlation coefficients, with two exceptions, were significant beyond the .05 level, with 87.5% of these being beyond the .001 level. The two exceptions were the correlation of "percentage of income given to the

research in the social sciences. The output includes:

- (1) the "Pearson's r" coefficient to six decimals.
- (2) the number of non-data responses.
- (3) the number of data responses.
- (4) the location of the correlation within the matrix.

B. A program for generating frequency-distribution tables for "Pearson's r" correlations. Once again, the unique feature of this program lies in the nature of the data input which is similar to that for the "Pearson's r" correlation. The output includes:

- (1) the frequency-distribution table of a size varying with the number of response categories to each variable, up to a size of 10x10.
- (2) the location of the frequency-distribution table within the matrix.

C. A program for the calculation of the "Point Biserial" correlation coefficient, again using the same form of data input. The output includes:

- (1) the "Point Biserial" coefficient.
- (2) the number of non-data responses.
- (3) the proportions on each half of the dichotomy.
- (4) the location of the correlation within the matrix.

Table 4:1 THIRTEEN DISCRIMINATING INDICATORS OF RELIGIOSITY WITH DICHOTOMOUS VALUES.

INDICA- TOR NUM- BER.	DETER- MINED FROM.	INDICATOR	DICHOTOMOUS VALUES	
			1	0
1.	Q.24	Frequency of atten- dance at church services.	Twice a month or more.	Less than twice a month.
2.	Q.14 & Q.80	Percentage of in- come given to the church	1.4% or more.	1.3% or less.
3.	Q.51	Belief about God.	Belief in Father.	Other belief
4.	Q.52	Belief that prayer is answered.	Believe.	Do not believe.
5.	Q.55	Belief in life after death.	Believe.	Do not believe.
6.	Q.57	Belief that God ex- pects regular wor- ship.	Believe.	Do not believe.
7.	Q.59	Belief about the nature of Christ.	Son of God. Good man.	Other beliefs.
8.	Q.63	Belief about the authority of the Bible.	Word of God. Inspired by God but some human errors.	Good book - not inspired by God. Outdated.
9.	Q.47	Ask blessing at meals.	Yes.	No.
10.	Q.54	Frequency of prayer.	Once a day or more.	Less than once a day.
11.	Q.60	Consciously asking God's will before decisions.	Yes.	No.

Table 4:1 (continued)

INDI-CATOR NUMBER	DETER-MINED FROM.*	INDICATOR	DICHOTOMOUS VALUES	
			1	0
12.	Q.64	Frequency of Bible reading.	At least once in past year.	Not at all in past year.
13.	Q.133	Religious values.	Scores of 42-60.	Scores of 10-41.

* See Appendix 3.

church" with "belief about the nature of God" which was significant at the .10 level, and the correlation of "ask blessing at mealtimes" and "consciously ask the will of God when making decisions" which was significant at the .30 level. Table 4:1 shows a list of the discriminating indicators, and table 4:2, the contracted matrix.

With thirteen significantly discriminating indicators now "in hand", it was necessary to develop a method of scoring the various items in order to produce values of aggregate religiosity. It was acknowledged that the most clearly reliable method would involve developing weights for the different response categories within each indicator and for each of the thirteen indicators themselves. However, the consensus of the thesis committee at that time was that this approach would be undesirable since a considerable amount of time had already been spent on this problem and, with the deadline for the submission of the thesis at hand, the analysis showed results to this point of a quality less than expected. It seemed, therefore, unwise to base elaborate scoring

Table 4:2 CONTRACTED CORRELATION MATRIX SHOWING DISCRIMINATING INDICATORS.

INDICATOR NUMBER*	KEY TO SYMBOLS					
	r - Pearson's Coefficient R - Point Biserial Coefficient ϕ - Fourfold Point (Phi) Coefficient					
2.	r=.4156 n=159 p .001					
3.	R=.3671 n=174 p .001	R=.1473 n=152 p .10				
4.	R=.4461 n=163 p .001	R=.3045 n=141 p .001	ϕ =.6390 n=162 p .001			
5.	R=.3468 n=138 p .001	R=.1929 n=120 p .05	ϕ =.3716 n=139 p .001	ϕ =.3068 n=132 p .001		
6.	R=.3096 n=158 p .001	R=.3194 n=139 p .001	ϕ =.3718 n=139 p .001	ϕ =.2774 n=147 p .001	ϕ =.3078 n=127 p .001	
7.	r=.3008 n=162 p .001	r=.1690 n=142 p .05	R=.4674 n=161 p .001	R=.4464 n=152 p .001	R=.3520 n=129 p .001	R=.3881 n=146 p .001
8.	r=.2736 n=184 p .001	r=.1538 n=159 p .05	R=.5106 n=174 p .001	R=.4666 n=163 p .001	R=.4033 n=138 p .001	R=.3798 n=158 p .001
9.	R=.4585 n=169 p .001	R=.2485 n=149 p .01	ϕ =.2711 n=159 p .001	ϕ =.2944 n=147 p .001	ϕ =.3546 n=125 p .001	ϕ =.2479 n=143 p .001
10.	r=.5373 n=174 p .001	r=.3484 n=152 p .001	R=.3801 n=173 p .001	R=.5454 n=162 p .001	R=.4054 n=137 p .001	R=.3438 n=157 p .001
11.	r=.2620 n=171 p .001	r=.2712 n=149 p .001	R=.2379 n=170 p .001	R=.2669 n=159 p .001	R=.2264 n=135 p .001	R=.3265 n=154 p .001
INDICATOR NUMBER.	1.	2.	3.	4.	5.	6.

(continued over...)

Table 4:2 CONTRACTED CORRELATION MATRIX SHOWING DISCRIMINATING INDICATORS. (cont.)

INDICATOR
NUMBER.*

12.	r=.3939 n=183 p .001	r=.4102 n=158 p .001	R=.2540 n=173 p .001	R=.2300 n=162 p .01	R=.2481 n=137 p .01	R=.2185 n=157 p .01
13.	r=.4017 n=184 p .001	r=.2758 n=159 p .001	R=.4762 n=174 p .001	R=.5208 n=163 p .001	R=.3884 n=138 p .001	R=.3360 n=158 p .001

INDICATOR
NUMBER.

1. 2. 3. 4. 5. 6.

8.	r=.4233 n=162 p .001					
9.	R=.1819 n=148 p .05	R=.3253 n=169 p .001				
10.	r=.4273 n=161 p .001	r=.3304 n=174 p .001	R=.3618 n=159 p .001			
11.	r=.2459 n=158 p .01	r=.2395 n=171 p .01	R=.0893 n=156 p .30	r=.3571 n=170 p .001		
12.	r=.1742 n=161 p .05	r=.3459 n=183 p .001	R=.2886 n=168 p .001	r=.4649 n=174 p .001	r=.3707 n=170 p .001	
13.	r=.4675 n=162 p .001	r=.5027 n=184 p .001	R=.4273 n=169 p .001	r=.5535 n=174 p .001	r=.3951 n=171 p .001	r=.4374 n=183 p .001

INDICATOR
NUMBER.

7. 8. 9. 10. 11. 12.

methods on such a shaky foundation, In addition, the statistical techniques required were beyond my capabilities and it was agreed that it would be better to complete the thesis with some other method and to improve upon the study at some future date, rather than to protract the current research further. Thus an alternative scoring method was agreed upon and followed.

Two assumptions were made which are central to the scoring method employed. Since the homogeneity of the indicators had been demonstrated by means of the correlation matrix, it was assumed that the different indicators each measured one aspect of a single phenomenon. In addition, none of the coefficients was found to indicate an inverse relationship. Thus, assumptions were made that: (1) all weights were equivalent; and (2) all weights were positive.¹ Thus, it was further assumed that the indicators may be aggregated.

Hence, a method of scoring the indicators was developed. the indicators were to be dichotomized around the median with scores of either '1' or '0' assigned to individual responses. Those responses above the median were to be scored as '1' and those below the median in the distribution were to be scored as '0.' Individual scores on the dichotomized indicators were then determined and summed. Individual

¹Whether or not these assumptions are justified will be discussed later in this chapter. It was realized after the thesis was submitted that the assumption of all weights being equivalent is highly suspect, and places the determination of aggregate religiosity in doubt.

proportions of responses above the median response category could then be calculated. For convenience, the proportions were to be converted to standard scores about a mean of 50 with a standard deviation of 15. The standard scores would be considered aggregate religiosity scores.

III. DETERMINATION OF AGGREGATE RELIGIOSITY SCORES

Dichotomizing the Indicators. As noted, the method employed in the determination of aggregate religiosity required that the indicators be dichotomized. In only eight of the thirteen indicators was it necessary to impose a dichotomy on the response categories since five of the indicators were derived from questions for which the structured response in the interview schedule already formed a dichotomy. These five were indicators 3, 4, 5, and 6, (beliefs about the nature of God, prayer, life after death, and worship,) and indicator 9 (whether or not the respondent asks a blessing at mealtimes.)¹ These data were obtained from the following questions.²

Q.51 Do you think that God is like a heavenly Father who is concerned about you, or do you have some other belief?

Q.52 Do you believe that God answers people's prayers, or not?

¹The numbering of the indicators follows the numbering shown in Table 4:1.

²The structured response categories appropriate to each question are shown in the Interview Schedule as given in Appendix Three.

- Q.55 Do you believe that there will be some sort of life after death?
- Q.57 Do you believe that, when they are able, God expects people to worship Him in their churches every week?
- Q.47 Do you usually ask a blessing at mealtimes in your family?

In the remaining eight indicators, it was decided to impose a dichotomy by dividing the responses in half around the median. This procedure, it was felt, avoids the issue of making theological value judgements concerning the point in the distribution of responses at which to distinguish those individuals who show a tendency towards "high" religiosity from those tending towards "low" religiosity. For the sake of consistency, this practice was rigidly adhered to, and unfortunately, resulted in the use of somewhat erratic dichotomies.¹ The aggregate religiosity scores are therefore questionable on this point.²

The frequency of attendance at religious services, indicator 1, was determined from the question:

- Q.24 How often, if ever, have you attended religious services in the past year?

¹At the time that the analysis was conducted it was not realized that this method assumes "interval scale" distribution of the responses for all indicators. Since the response categories are represented by ordinal scales, however, this method groups together widely disparate responses. The best (worst?) example of this problem is the treatment of indicator 7.

²This limitation was not realized until after the analysis was complete. It has not, therefore, been corrected, but attention is drawn to its existence and the limitation acknowledged.

By interpretation it was found that the median response occurred .13 into the third response category, and, since this was below the mid-point in category three, the dichotomy was structured with the division falling between the second and third categories.¹ A value of '1,' was assigned to attendance of twice a month or better, and a value of '0' to once a month or less.

The responses for indicator 2, the percentage of the total family income given to the church, ranged from 0 to 13.3%. The median was determined to be 1.3%, and, consequently, a value of '1' was given to 1.4% or better, while 1.3% or less was scored as '0.' Indicator 7, belief about the nature of Christ, was determined from the following question:

Q.59 What do you believe about Jesus? Do you believe that he was God's Son, sent into the world to save sinful men; or would you say that he was simply a good man and teacher; or do you have some other belief?

Of the 177 responses, only 29 gave the first answer, 115 gave the second and 33 the third. The interpolated median was found to fall .52 into the category "good man and teacher," hence scores of '1' were assigned to the first two categories, and '0' to the third alternative, "some other belief."²

¹The response categories to this, and all questions, are shown in Appendix 3.

²By uncritically employing the method of dichotomizing around the median, the belief that Jesus was God incarnate and the belief that he was simply a good man and teacher were grouped together. One of the

Indicator 8, beliefs about the nature of the Bible, were derived from the question:

- Q.63 Here are four statements which have been made about the Bible, and I would like you to tell me which of them is closest to your view.
- The Bible is God's word and all that it says is true.
 - The Bible was written by men inspired by God and its basic religious and ethical statements true, but because the writers were men, it contains some human errors.
 - The Bible is a valuable book because it was written by wise and good men, but God had nothing to do with it.
 - The Bible was written a long time ago and is of little use today.

Of the 184 members of the sample, 29 chose the first statement, 115 the second, 33 the third, and 7 indicated the fourth alternative. The median was found to be .55 into the second category, with the result that the first two statements were given a value of 1 and the last two, 0. As noted above, indicator 9 was derived from a dichotomous question and values were assigned directly, with those respondents who indicated that they did ask a blessing being given 1 and those who did not, 0.

Indicator 10 was derived from the question: "How often do you pray?" - Q.54. There were seven categories of response, ranging from "two to three times a day (or more)" to never, and the median was found to be .38 into the third alternative, "several times a week."

members of the thesis committee has observed that to include such an obviously heterodox response with the responses showing a tendency towards "high" religiosity is patently ridiculous. Thus the erratic nature of the method of dichotomization around the median so as to avoid theological value judgements and to insure consistency is demonstrated. However, as noted, this fault was only fully realized after the analysis was completed, and therefore, as before, the fault is recognized and acknowledged but has not been ammended.

Thus, a 1 was given to a frequency greater than once a week, and a 0 to once a week or less.¹

Indicator 11 related to the place of prayer in an individual's life and was determined from the question:

Q.60 When you have decisions to make in your everyday life, do you consciously ask yourself what God would want you to do?

Thirty-six respondents indicated that they did this "often", 47 replied "sometimes" and 87 stated that they "never" did this. The median was found to be .02 into the third or "never" category, and therefore, the dichotomy was structured with the division between the second and third categories, and the value 1 being given to both "often" and "sometimes."

Indicator 12 was determined from the question, "how often have you read the Bible in the past year?" -Q.64. The responses were placed on a nine-point ordinal scale which ranged from "two to three times a day (or more)" to not at all, with the following results: "two to three times a day" -1; once a day -12; several times a week -9; once a week -11; two to three times a month -12; once a month -12; more than six times -7; six times or less -40; not at all -79. One respondent refused to answer this question. Indicating that reading the Bible is less than a favorite pastime in the sample, the median was found to be .69 into the eighth category, "six times or less."

¹Exact breakdown of responses: 2-3 times a day (32); once a day (48); several times a week (18); once a week (15); 2-3 times a month (12); once a month or less (26); never (23).

Hence, in dichotomizing this indicator, the division was between those who had read the Bible in the past year and those who had not, with values of 1 and 0 being assigned respectively.

The last indicator is the relative dominance of a religious personality interest and was determined from the score for religious values on the Allport-Vernon-Lindzey test. Here the median score was found to be 41.75, with the result that scores of 42 or above were assigned a 1 and scores of 41 or below, assigned a 0.¹

Scoring the Sample. The scoring method was essentially one of assigning either a 1 or a 0 to the individual responses for the thirteen indicators, totaling the scores, and calculating a proportion. This was slightly complicated by the fact that not all individuals responded to all questions - only 51.62% did. This is a result of either the respondent declining to answer, or, by nature of the structured interview, the respondent was not asked certain questions. For example, Q.50 reads: "Some people wonder whether there is a God or not; how do you feel? Do you believe that there is a God or not?" If the respondent stated that he did not believe, the interviewer was instructed to omit the next ten questions on items of belief and score them as not applicable. The omitted questions included indicators 3 to 7 and 10 to 11. Hence that individual would score on only seven of

¹A summary of the indicator dichotomies is shown in table 4:1.

a possible thirteen indicators. While this situation occurred in only a small number of the interviews - nine in all - a large minority in the sample did not respond to one or two of the questions thus scoring on only eleven or twelve of the indicators.

This difficulty was resolved by counting both the number of indicators on which a respondent scored and the number on which he was eligible to score. The proportion was then calculated on the basis of total scored divided by total eligible. The proportions ranged from 0.000 to 1.000, with a mean of 0.573 and a standard deviation of 0.2848.

Since it was necessary to recalculate the proportion minus indicator 13 - religious values - for the analysis of the relationship between religiosity and personality interests, the scores were standardized so that scores on both the general scale and the subscale would be directly comparable. This was done by calculating the standard score or z value, and from that a value for z' with a mean of 50 and a standard deviation of 15. In table 4:3 there are six examples of the scoring method, while table 4:4 shows the distribution of these scores in the sample.¹ Depending on whether the general score included a value

¹Appendix 5 shows the distribution of the subscale scores in the sample, a comparison of scores on the general religiosity scale, and the subscale.

Table 4:3 EXAMPLES OF SCORING METHOD

INDIVI- DUAL	RELIGIOSITY INDICATORS													Total Score	Total Eligible	P.	z	z'
	1	2	3	4	5	6	7	8	9	10	11	12	13					
"A"	C	1	2.1	1	1	1	1	2	1	2	1	8	46					
	V	1	1	1	1	1	1	1	1	1	1	1	1	1	13	13	1.00	+1.50
"B"	C	2	2.0	2	1	-	2	1	2	1	3	9	49					
	V	1	1	0	1	*	0	1	1	1	0	0	1	8	12	0.67	+0.33	54.93
"C"	C	5	0.8	2	2	2	1	2	2	7	2	8	25					
	V	0	0	0	0	0	1	1	0	0	1	1	0	5	13	0.39	-0.66	40.08
"D"	C	1	0.6	-	-	-	-	3	2	-	-	9	18					
	V	1	0	*	*	*	*	0	0	*	*	0	0	1	6	0.17	-1.43	28.59
"E"	C	4	1.0	1	1	1	1	1	2	2	1	2	48					
	V	0	0	1	1	1	1	1	1	1	1	1	1	11	13	0.85	+0.96	64.37
<p>"C" indicates Response Category; "V" indicates Dichotomy Value; "-" indicates no response; "*" indicates not scored. NOTE: Response categories for the indicators may be found in Appendix 3 under the appropriate questions. The scores used here are the actual scores of 5 respondents. The mean for p.'s was 0.573 and the o was 0.2848. z' is based on a mean of 50 and a o of 15.</p>																		

Table 4:4 DISTRIBUTION OF AGGREGATE RELIGIOSITY SCORES IN THE
SAMPLE - GENERAL SCALE.

p (X=0.573; o=0.2848)	z' (X=50; o=15)	N	%
1.000	72.48	16	8.7
.923	68.42	8	4.4
.917	68.10	6	3.2
.846	64.37	14	7.7
.833	63.68	6	3.2
.818	62.90	2	1.0
.769	60.32	7	3.8
.750	59.31	6	3.2
.692	56.25	10	5.5
.667	54.93	7	3.8
.636	53.30	3	1.6
.615	52.20	5	2.7
.583	50.51	6	3.2
.556	49.10	1	0.6
.545	48.51	2	1.0
.538	48.14	7	3.8
.500	46.14	7	3.8
.462	44.13	8	4.4
.456	43.82	4	2.2
.444	43.19	1	0.6
.417	41.76	7	3.8
.385	40.08	8	4.4
.364	38.97	1	0.6
.333	37.34	4	2.2
.308	36.03	2	1.0
.250	32.97	3	1.6
.231	31.97	8	4.4
.181	29.34	1	0.6
.167	28.59	6	3.2
.154	27.92	3	1.6
.091	24.60	1	0.6
.083	24.17	5	2.7
.077	22.57	4	2.2
.000	19.80	5	2.7
TOTALS:		184	100.0

of 1 or 0, the subscale score would be either approximately the same or slightly higher. A correlation of the two scores showed an r coefficient of .9878.¹

IV. AGGREGATE RELIGIOSITY IN THE ANALYSIS

In appearance, the aggregate religiosity scale which has been developed in this study resembles an interval scale. However, while this was the major intention of this research, the rigid requirements of an interval scale - a constant and common unit of measurement - have not been met. This limitation was apparent early in the analysis and a secondary goal was set, that of constructing an ordinal scale of aggregate religiosity. While an ordinal scale would not indicate the degree of religiosity differentiating any given individuals, it would show some individuals to have a greater religious commitment, but not how much greater.²

The aggregate religiosity scale was considered to be ordinal for the purpose of analysis of "religiosity" as a dependent and independent variable.³ However, since the categories were based upon calculated proportions, the resulting values were not considered to

¹See Appendix 5.

²See Siegel, Op. Cit., pp. 23-28.

³The fact that unless the weights are equivalent, as assumed, the scale can be positively misleading, is discussed in the next section of this chapter under "Limitations of the Approach."

discriminate absolutely. For example, the scale value of 72.48 was derived from the proportion 1.000 which could be the result of 13 '1' values out of 13 or 12 out of twelve. However, for 12 out of 13 '1' values the scale score would be 68.42, while for 11 out of 12, the aggregate religiosity scale score would be 68.10. If this were a true ordinal scale, the conclusion would be one of difference, yet does a real difference exist between scale scores of 68.42 and 68.10? The scale cannot be assumed to provide the answer to this question; therefore, instead of using rank-order correlation techniques in the analysis, it was decided to partition the scale and employ statistical methods appropriate to nominal measurement. The scale was therefore arbitrarily partitioned at the mean and at +1 and -1 standard deviation units.

In the analysis, aggregate religiosity refers to a cumulative measurement of thirteen indicators which has been grouped into four discrete categories. Scale scores above +1 σ (68.10 - 72.48) were categorized as "high" aggregate religiosity; scores between the mean and +1 σ (50.51 - 64.37) were grouped together as "moderately high" religiosity; between the mean and -1 σ (36.03 - 49.10) scores were grouped as "moderately low" aggregate religiosity; and scores below -1 σ (19.80 - 32.97) were considered to represent "low" aggregate religiosity. For convenience, these categories are subsequently referred to as aggregate religiosity groups 1, 2, 3, and 4 respectively.

After the scores were grouped in this manner, it was found that 16.4% of the sample fell into aggregate religiosity group 1; 35.8% in group 2; 28.2% in group 3; and 19.6% in group 4. With the recalculation of scores for the subscale, some change of category was noted as shown in table 4:5 below. Of the 9.7% of the sample who changed aggregate religiosity group, 6.5% entered the next higher group and 3.2% dropped down one group.¹ The rank-order correlation

Table 4:5 PERCENTAGE OF THE SAMPLE FOUND IN EACH OF THE FOUR AGGREGATE RELIGIOSITY GROUPS UNDER THE GENERAL SCALE AND THE SUBSCALE.

GENERAL SCALE		AGGREGATE RELIGIOSITY GROUP	SUBSCALE	
N.	%		N.	%
30	16.4	"1"	31	16.8
66	35.8	"2"	71	38.7
52	28.2	"3"	45	24.5
36	19.6	"4"	37	20.0
184	100.0	TOTALS	184	100.0

coefficient was calculated for the grouping of the sample under the general aggregate religiosity scale and the subscale with the result, $r = 0.9395$.

V. OBSERVATIONS ON THE MEASUREMENT OF AGGREGATE RELIGIOSITY

Limitations of the Approach. The fundamental purpose of this

¹See Appendix 5: A Comparison of Grouping from the General Scale and the Subscale.

study was to attempt to meaningfully distinguish individuals on the basis of religious commitment. It is doubtful that this has been accomplished. An aggregate religiosity scale has been developed and the members of the sample categorized on the basis of this measurement. However, the validity of this scale may be questioned by questioning the central assumptions concerning the weighting of the indicators: namely that all weights are positive, and that all weights are equivalent.

It was assumed that because the thirteen indicators were directly correlated in the correlation matrix, therefore the weights for each indicator were positive. In the weighting of each item, consequently, only positive (1) or non-negative (0) weights were employed. The implication of the scoring method was that differential aggregate religiosity was the sum of positively weighted partial derivatives or indicators. Hence, each indicator should either increase the aggregate score or leave it unchanged. Thus, if all weights are positive, the method is unambiguous.

However, since the aggregate score is based upon a proportion of "high religiosity" responses out of the total eligible indicators (i.e., different total number of indicators are employed for different respondents) in effect a negative weight is introduced. It was intended that relative aggregate religiosity would be obtained by comparing the sum of one set of scores with another sum. Thus, for example, two individuals with responses tending towards high religiosity on seven

indicators would be assumed to have equivalent aggregate religiosity. However, if one individual responded to all thirteen indicators while the other responded to nine, their aggregate religiosity scores would be 48.14 and 60.32 respectively. After the scale was partitioned, the result would be two individuals of presumed equivalent aggregate religiosity being located in different aggregate religiosity groups. The method of determining differential aggregate religiosity thus appears to be ambiguous.

A second assumption, which is central to the scoring method, is that all weights are equivalent. This presupposes also that the scales along which each indicator are measured are equivalent. With the validity of these assumptions undemonstrated, the validity of the aggregate religiosity scores is in doubt. This may be demonstrated by considering two individuals who are scored on only two criteria: frequency of church attendance and beliefs about the nature of the Bible, for example. One individual attends church once a week and regards the Bible as a "good book" but not the word of God. The other individual attends church twice a year and considers the Bible to be the work of men inspired by God. Considering the scores on the dichotomized indicators as shown in table 4:1, the first individual scores a '1' and a '0', while the second individual scores a '0' and a '1.' Hence, under the method used in the study, both score a total of one and are treated as demonstrating equivalent aggregate religiosity. However, whether the first individual's "religiosity" is the same as, or greater than,

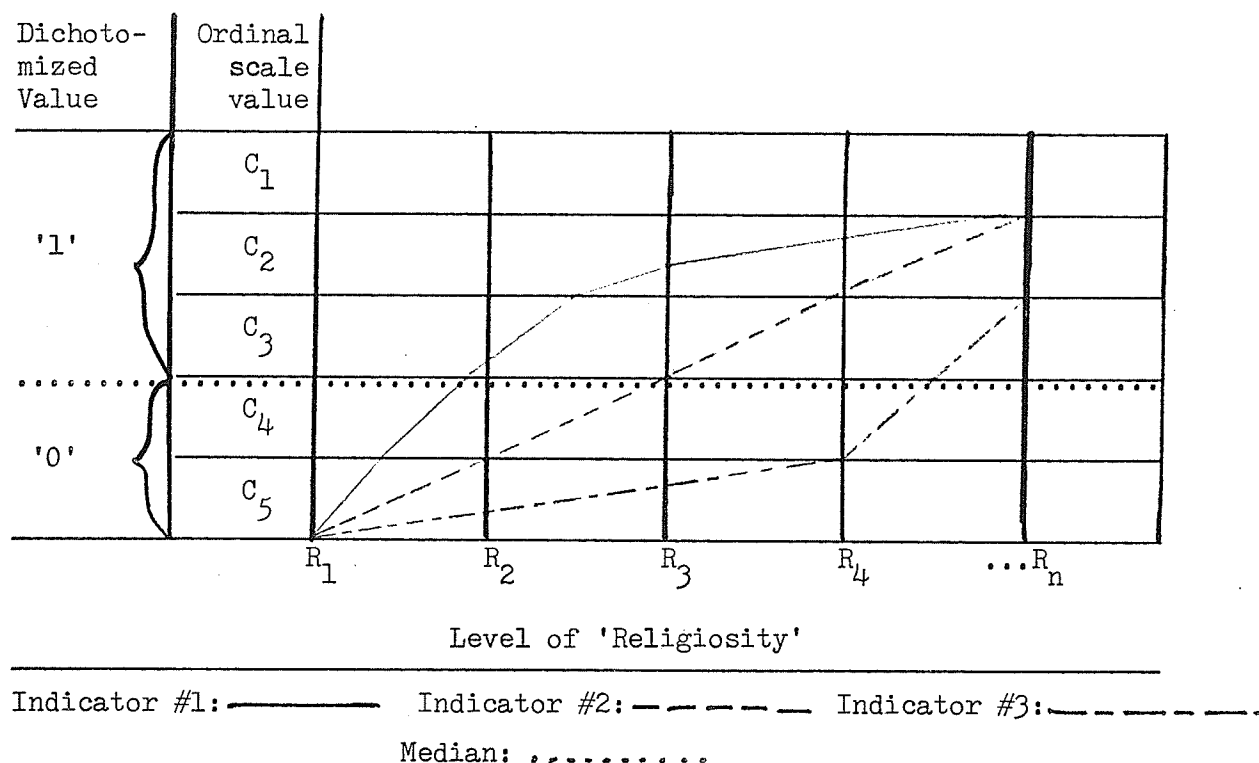
or less than the second's, depends entirely upon the assumptions made as to the relative weights of the two indicators.¹ Since the assumption of equivalency, which is at the heart of the scoring method, has not been tested, the measurement of aggregate religiosity which has been developed in this study is potentially misleading.

This difficulty is further compounded by the assumption that the dichotomized scales upon which individuals were differentiated within each indicator are also equivalent. This could be true if the dichotomies were superimposed on equivalent interval scales. However, since the response categories form ordinal scales, the degree of "religiosity" indicated by each position on the scale - and hence the degree of "religiosity" represented by each half of the dichotomized scale - may vary greatly. This is demonstrated by the illustration of three hypothetical ordinal scales in figure 4:1.

The illustration demonstrates the potential error embodied in the assumption that the weights and the different ordinal scales are equivalent. The hypothetical "level of religiosity" indicated by each of the five response categories (C_1 , C_2 , C_3 , etc.) is seen to vary with the indicator used. Similarly, after each of the hypothetical indicators is dichotomized about the median, it can be seen that the same weight, '1', is accorded actual "levels of religiosity" of 1.5, 3, and 4.5 respectively. Thus, an individual responding to category '4' in

¹Glock & Stark, Op. Cit., also make this same assumption concerning equivalent weights and use a similar method of scoring the items.

Figure 4:1 COMPARISON OF THREE HYPOTHETICAL ORDINAL SCALE MEASURES OF RELIGIOSITY BY "LEVEL OF 'RELIGIOSITY'" INDICATED BY EACH CATEGORY OF RESPONSE.



each case would have a weighted score of zero while another individual responding in response categories 3, 3, and 5 on the three indicators respectively would have a weighted score of two. However, the first individual would have an "actual" score or "level of religiosity" of "seven" while the second would have an "actual" score of "five." The conclusion is, therefore, that the aggregate religiosity scale is potentially misleading and of doubtful validity.

It is not known to what extent, if at all, the measurement of aggregate religiosity is invalidated by these criticisms. The

problems with the two central assumptions were raised after the analysis had been completed and these potential difficulties are therefore acknowledged but not fully examined. To eliminate all sources of potential error in the aggregate religiosity scale would require that the research be redesigned and begun again. Thus, the present aggregate measurement is employed in the analysis with recognition given to potential limitations.

A second question which concerned this study from the outset, has, in addition, not been answered: does religiosity exist as a unitary phenomenon, or is it a false concept? Of thirty-seven hypothesized indicators, thirteen were found to share a high level of association and have cumulatively been called "religiosity." But it has not been demonstrated that these indicators are aspects of a unitary phenomenon, hence the use of the term "religiosity" may be a misnomer which this study would then share with other studies mentioned in Chapter II.

In summary, there would appear to be three areas of limitation in the use of the concept "religiosity" in this study. (1) The central assumptions underlying the scoring method are questionable. It is assumed that all weights are positive, but the inadvertent introduction of a negative bias in the scoring renders the aggregate scores ambiguous. It is also assumed that all weights are equivalent, but the justification for this - that the indicators are homogeneous - is suspect and the real nature of the weights is unknown. If the weights are in fact not equal, the aggregate scores would be misleading.

(2) The problem of weights is further complicated by the method by which the indicators were dichotomized. The unfortunate nature of this method calls into question the concept of relative "religiosity." Are the indicators in fact dichotomized at that point above which there is a tendency away from religious commitment? If not, the demonstration of "relative" aggregate religiosity could be in error. (3) The third limitation has to do with the measurement itself. Within the study, the members of the sample have been distinguished on the basis of a measurement of aggregate religiosity. But, having not achieved the desired level of interval scale measurement, what has been done - at best - is to expand the method of ordinal measurement in a rather complicated fashion. Thus the measurement would share the limitations for which other ordinal scales were criticized in Chapter II. However, despite the many problems encountered this attempt at the measurement of aggregate religiosity has resulted in certain insights and implications for the future study of this problem, now to be discussed.

Methodological Implications. While the unitary nature of the phenomenon, religiosity, has not been demonstrated, it has not been disproved. However, it is certain that religiosity, should it exist, will not be found to be unidimensional. The problem then of scaling religiosity will involve several considerations which are presently beyond the capabilities of the writer.

Techniques of multidimensional scaling will be required before the complex nature of religiosity can be understood. Whereas in this

study, values have been assigned to attributes with the purpose of locating them on a straight line or unidimensional scale, in a more elaborate study, the attributes will be assigned sets of values which would locate them in a multidimensional space, in terms of a set of relations between the points as specified by a chosen geometric model. Rules of correspondence would be established to relate the elements and properties of the model to observable data, thus rendering the model into a verifiable theory. If the theory is verified, the existence of religiosity would be proved and numerical values may then be assigned to the quantities of religiosity. Such techniques involve advanced statistical methods and a knowledge of scaling theory and methods of which only the peripheries are presently understood by the writer. Thus the need for further study of statistics and research methods is indicated before any additional attempts can be made, by the writer, to study the nature of the phenomenon, religiosity.¹

It is suggested that, after the necessary prefatory study, future research should consist of two aspects: (1) research into the nature of religiosity, the problem of measurement, and the construction of an appropriate religiosity scale; and (2) employing this scale,

¹Multidimensional scaling is discussed in Warren S. Torgerson, Theory and Methods of Scaling, New York: John Wiley & Son, Inc., 1958. pp. 37-40, 247-297; and Clyde H. Coombs, A Theory of Data, New York: John Wiley & Son, Inc., 1964. pp. 245-283.

research into the determinants of differential religious commitment and consequences of different levels of commitment for behavior in secular spheres of social life. In essence, this is to say that future studies should attempt to answer the three questions which were raised by Glock in Sociology Today, and which inspired this study.¹

¹C.Y. Glock; Op. Cit., p. 167. Glock and Rodney Stark are now in the process of publishing the results of their examination of these three problems. See: American Piety: The Nature of Religious Commitment, Op. Cit., and yet to be published, The Poor in Spirit: The Sources of Religious Commitment and By Their Fruits: The Consequences of Religious Commitment.

CHAPTER V

FINDINGS I: AGGREGATE RELIGIOSITY AS THE DEPENDENT VARIABLE

I. CENSUS-DATA VARIABLES AND AGGREGATE RELIGIOSITY

Numerous studies have shown a relationship between such indicators of religiosity as frequency of church attendance or whether children attend Sunday school and variables such as age, sex, occupation and education. It was therefore hypothesized that census data variables - age, sex, place of birth, marital status, number of children, education, occupation, and income - would be, in part, determinants of religiosity. The sampling plan was designed so that some of the census data variables would be constant in the sample.

Age and Aggregate Religiosity. The sample was chosen from the voters' list of the survey area, and since this eliminates residents of the area under the voting age, the variable age was held partially constant in the sample. Of the ages sampled - 21 to 70+ - however, none of the age groups used in the analysis showed a radical disproportion when cast into a frequency distribution table by aggregate religiosity group. As table 5:1 shows, there is an over-representation of the age-category 41 - 50 in aggregate religiosity group 4, and an under-representation

of the category 51 - 60 in the same aggregate religiosity group. But beyond this, the distribution of aggregate religiosity by age approximates normal distribution. The Chi-Square value for the table was calculated at 19.72, which, with 15 degrees of freedom, is not significant at the .05 level. Therefore, it was concluded that age was not related to aggregate religiosity in the sample.

Table 5:1. FREQUENCY DISTRIBUTION OF AGGREGATE RELIGIOSITY BY AGE.

RELIGIOSITY GROUP	AGE CATEGORY						TOTALS
	21-30	31-40	41-50	51-60	61-70	OVER 70	
"1"	2	8	7	6	4	3	30
"2"	4	14	18	18	7	5	66
"3"	0	11	18	13	9	1	52
"4"	3	7	17	4	5	0	36
TOTALS	9	40	60	41	25	9	184
$\chi^2 = 19.72; \text{ df} = 15; p > .05$							

Sex and Aggregate Religiosity. It was expected that there would be an over-representation of females in the "High" and "Moderately High" aggregate religiosity groups and a corresponding under-representation of males in the same two groups. In the lower two groups, the reverse was expected. Actual observed distribution, as shown in table 5:2, conformed to this expectation, but did not represent a significant departure from

normality when tested, leading to the conclusion that, in the sample, sex was not related to aggregate religiosity. Since this variable was not held constant by the sampling plan, it was expected that there would be a significant relationship with aggregate religiosity.¹ The results of this study would indicate either sampling error, or the fact that this relationship is not as hard and fast as Pickering suggests.² Although sampling error cannot be tested in this sample, since the sample was selected in accordance with accepted procedures, the latter conclusion would seem to be indicated.

Table 5:2. FREQUENCY DISTRIBUTION OF AGGREGATE RELIGIOSITY BY SEX.

RELIGIOSITY GROUP	SEX		TOTALS
	MALE	FEMALE	
"1"	12	18	30
"2"	32	34	66
"3"	33	19	52
"4"	20	16	36
TOTALS	97	87	184
$\chi^2 = 4.93; df = 3; p > .05$			

¹ This was demonstrated by Pickering in two studies done in Winnipeg, "St. Andrew's and St. George's" and "The Shape of Five Anglican Churches in Central Winnipeg," both unpublished and on deposit in the library, St. John's College, University of Manitoba.

² Ibid.

Place of Birth and Religiosity. Herberg put forward the thesis that the church was the focal-point of the ethnic community for immigrants, with the result that there was a high degree of religious activity among first generation Americans.¹ The second generation, he found, was intent upon "Americanization" and shunned the ethnic church, resulting in a low level of religious activity, while third and subsequent generations, secure in an "American identity," found participation in the ethnic church a "status symbol" with the result that church participation increased among these generations. Lenski attempted to test this hypothesis as part of his massive study, with quite different results.² Instead of the predicted trend of high participation among the first generation, a decline for the second, and a rising level of participation through the third and subsequent generations, Lenski found that church participation was lowest among the first generation and increased with each successive generation.³ It was expected in this study that some connection between place of birth and aggregate religiosity would therefore exist, but the nature of the relationship was unpredicted.

¹ Herberg, Will, Protestant-Catholic-Jew, New York: Doubleday & Co., 1955.

² Lenski, Op. Cit.

³ In private conversation with Herberg this spring, I was told that Lenski had misinterpreted an historical study which makes no claims for generality.

Table 5:3. AGGREGATE RELIGIOSITY BY PLACE OF BIRTH.

RELIGIOSITY GROUP	PLACE OF BIRTH		TOTALS
	IN CANADA	ELSEWHERE	
"1"	25	4	29
"2"	54	12	66
"3"	44	7	51
"4"	26	9	35
TOTALS	149	32	181*
$\chi^2 = 2.40; df = 3; p > .05$			

* 3 individuals declined to state place of birth.

As indicated in table 5:3, the distribution resembles that of Lenski's, with an under-representation of those not born in Canada in the first two aggregate religiosity groups and an over-representation in the second two groups. However, as in the previous table, where an expected relationship was found, it was not statistically significant in this sample. It was therefore concluded that, for the sample, place of birth was not related to aggregate religiosity.

Marital Status and Aggregate Religiosity. Pickering, among others, has shown that married people have a higher degree of religious activity than do single people.¹ This relationship was expected and marital status

¹ Pickering, "The Shape of Five Anglican Churches in Central Winnipeg," Op. Cit.

was held constant in the sample by omitting the names of all single people from the population lists. However, since a number of widows and widowers, and separated and divorced persons were found in the sample, the relationship between aggregate religiosity and marital status - those presently married and living with their spouse and others - was tested. The Chi-Square test on the frequency distribution table shown in table 5:4 returned a value of 0.05 which, with 3 degrees of freedom, is not significant at the .05 level. It was therefore concluded that differences in marital status did not contribute to differences in aggregate religiosity in the sample.

Table 5:4 AGGREGATE RELIGIOSITY BY MARITAL STATUS.

RELIGIOSITY GROUP	MARITAL STATUS		TOTALS
	MARRIED	OTHER	
"1"	28	2	30
"2"	62	4	66
"3"	49	3	52
"4"	34	2	36
TOTALS:	173	11	184
$\chi^2 = 0.05; \text{ df} = 3; p > .05$			

Number of Children and Aggregate Religiosity. The recent pastoral experience of the writer has indicated a trend in the level of religious participation of adults which seems to correspond to the size of their

families.¹ In the late teens, there is a tendency for individuals to drift away from religious participation with a return after marriage and the birth of their first or second child. After the children have been brought to the church for baptism, the link between the church and the individual is re-secured and as the children grow older and participate in church or church related activities, such as Sunday school or youth programs, the parents tend to become progressively more involved in the church.

In line with this observation, it was expected that aggregate religiosity would vary directly with the number of children in the family. The frequency distribution obtained in the testing of this relationship is shown in table 5:5 and does not reflect this expectation.

Table 5:5. AGGREGATE RELIGIOSITY BY NUMBER OF CHILDREN.

RELIGIOSITY GROUP	NUMBER OF CHILDREN					TOTALS
	NONE	ONE	TWO	THREE	4 OR MORE	
"1"	2	6	7	5	10	30
"2"	5	5	27	17	12	66
"3"	4	5	23	10	10	52
"4"	2	8	10	9	7	36
TOTALS	13	24	67	41	39	184
$\chi^2=12.58; df=12; p>.05$						

¹ This seems to be the consensus among clergy and was noted by Pickering, Op. Cit.

Only 13 respondents indicated no children and these were proportionately distributed among the four aggregate religiosity groups with no over-representation in the "low" or "moderately low" groups, as was expected. Inexplicably, those respondents with only one child are over-represented in both "high" and "low" groups and under-represented in the two "moderate" groups. The exact reverse is true of respondents with two children. About the only cell in the table which conforms to the expectations is the over-representation of those with four or more children in group "1." Because of the lack of an overall pattern, it would seem that either there is no relation between aggregate religiosity and the number of children, or more probably, this reflects the effect of an additional variable or variables. For this study, it was concluded that a significant relationship does not exist in the sample and the matter left to future study for solution.

Education and Aggregate Religiosity. Many of the studies of the individual and his religion have concentrated on the association between social class and religiosity. One such study, by Erich Goode, uses education, occupation and income as indicators of social class, and seven indicators of church participation, such as church attendance and the number of church-association memberships.¹ In correlating the indicators of social class with the indicators of "religiosity," Goode found that church participation varied directly with social class - all of his Chi-Square values were significant beyond the .001 level.

¹ Goode, Op. Cit. Goode also provides a short bibliography of similar studies in the introduction to his article.

Goode's findings are fairly typical of the results of such studies; however, it was not expected that a relationship would exist between the variables education, occupation and income and aggregate religiosity in this study, since to limit the extent of these relationships, the sampling plan allowed for the three variables to be held partially constant. The relationships were, however, tested for the effect of their variance on religiosity to be certain that no significant relationships existed in the sample.

Table 5:6. AGGREGATE RELIGIOSITY BY EDUCATION.

RELIG- IOSITY GROUP	LEVEL OF EDUCATION							TOTALS
	UP TO JUNIOR HIGH SCHOOL	SOME HIGH SCHOOL	JUNIOR MATRIC- ULATION	SENIOR MATRIC- ULATION	SOME POST SECON- DARY	BACH- ELOR'S DEGREE	SOME POST GRAD- UATE	
"1"	5	3	3	5	6	4	4	30
"2"	7	6	12	17	13	8	3	66
"3"	8	6	10	7	8	8	5	52
"4"	1	4	12	4	5	3	7	36
TOTALS	21	19	37	33	32	23	19	184
$\chi^2 = 18.20; \text{ df} = 18; p > .05$								

The observed relationship between education and aggregate religiosity in the sample is approximately the reverse of what might have been

expected, had not the variable, education, been controlled. A pattern is apparent in the distribution with the lower levels of education being over-represented in aggregate religiosity groups "1" and "2," with the higher levels of education under-represented in these groups and over-represented in groups "3" and "4." While this relationship is not statistically significant, there does exist a tendency towards an inverse correlation between level of education and aggregate religiosity in the sample. This could not, however, be generalized, since, by the nature of the sampling plan, the distribution of individuals by level of education is negatively skewed. In comparison with Goode's analysis therefore, it is noted that with the exception of the first level of education, all of the levels in table 5:6 fall into the second category of Goode's dichotomous classification. The table is, therefore, largely an elaboration of only one educational category, and whether the observed relationship would obtain given proportionate representation of the lower levels of education, is, in the light of similar research, doubtful.

Occupation and Aggregate Religiosity. The analysis of the relationship between occupation and aggregate religiosity was carried out on two levels, by occupational classification on the Blishen scale, and by grouping those in the sample who are presently employed and those who are not employed, including housewives, retired and unemployed.¹ Previous studies have indicated that there is a direct relationship

¹ See Blishen, Op. Cit.

between white-collar occupations and high levels of church participation; low levels of religious activity are associated with blue-collar occupations. The sampling plan resulted in this variable, occupation, being held partially constant; thus, while similar results were expected, it was anticipated that the relationship between aggregate religiosity and occupation would not prove to be statistically significant.

Table 5:7. AGGREGATE RELIGIOSITY BY OCCUPATION.

RELIGIOSITY GROUP	BLISHEN OCCUPATIONAL SCALE ¹			TOTALS
	CLASSES 1-2	CLASSES 3-4	CLASSES 5-7	
"1"	9	2	3	14
"2"	16	13	8	37
"3"	24	7	7	38
"4"	13	9	3	25
TOTALS	62	31	21	114
$\chi^2 = 6.31; df = 6; p > .05$				

The observed distribution, shown in table 5:7, indicates no over-all pattern in the relationship between occupation and aggregate religiosity group in the sample. Blishen classes 5-7 are over-represented in the two "high" aggregate religiosity groups which is the opposite of

¹ See Blishen, Op. Cit.

the findings of previous research, while Blishen's classes 1-2 are over-represented in aggregate religiosity groups "1" and "3."¹ The reverse of this is true for occupational classes 3-4. The net result is that few conclusions can be drawn other than to say that there seems to be a tendency towards higher aggregate religiosity among the blue-collar occupations in the sample. However the Chi-Square value was calculated to be 6.31 with 6 degrees of freedom, indicating that the relationship is not statistically significant for this study.

A distinct relationship exists in the sample between working/not working and aggregate religiosity, or at least, since the relationship is only significant at the .10 level, a pattern is indicated.

Table 5:8. AGGREGATE RELIGIOSITY BY OCCUPATIONAL STATUS.

RELIGIOSITY GROUP	OCCUPATIONAL STATUS		TOTALS
	PRESENTLY WORKING	NOT WORKING: HOUSEWIFE; RETIRED/UNEMPLOYED	
"1"	14	16	30
"2"	37	29	66
"3"	38	14	52
"4"	25	11	36
TOTALS	114	70	184
$\chi^2 = 7.43; df = 3; p > .05$			

¹ Previous research indicated here is Goode's, Op. Cit.

The pattern is that of under-representation of individuals who are presently working in the first two aggregate religiosity groups coupled with an over-representation of those who are not working. Since 94.3% of the "not working" category are full-time housewives, it would appear that the observed relationship is a refinement of the sex-aggregate religiosity relationship. It is concluded that there is a tendency towards a higher aggregate religiosity among females who are not employed, but spend most of their time in the family home.

Income and Aggregate Religiosity. Income is the third of the three indicators of social class employed by Goode in his study of the relationship between class and church participation.¹ It was expected therefore, that a direct correlation between level of income and aggregate religiosity might be observed despite the fact that income was partially held constant. Again the results contradicted the expectation.

Table 5:9. AGGREGATE RELIGIOSITY BY TOTAL FAMILY INCOME.

RELIGIOSITY GROUP	LEVEL OF TOTAL FAMILY INCOME				TOTALS
	UP TO \$5,999	\$6-8,999	\$9-11,999	OVER \$12,000	
"1"	7	8	10	5	30
"2"	12	22	18	14	66
"3"	5	14	14	19	52
"4"	2	15	8	11	36
TOTALS	26	59	50	49	184
$\chi^2 = 12.32; df = 9; p > .05$					

¹Op. Cit.

In a fashion similar to the observed distributions of aggregate religiosity by education and occupation, there is an over-representation of the lowest income level in the "high" aggregate religiosity groups and an under-representation of the highest income group in the same categories. Again, however, the relationship is not statistically significant at the .05 level.

Taking the three indicators of social class together, there appears to be the trace of a pattern in the observed relationships. With the distribution of these three indicators negatively skewed in the sample, it would be unwise to attempt to generalize the findings, but for the sample it can be said that there is an indication of an inverse relationship between social class and aggregate religiosity. This pattern is suggested, but did not prove statistically significant.

II. DENOMINATION AND AGGREGATE RELIGIOSITY

In the main, the sample was composed of Anglican and United Churchmen, approximately 71.8%, as indicated in table 3:7. The remainder was composed of Roman Catholics (9.8%,) Lutherans (3.2%,) Baptists (2.2%,) Presbyterians (1.6%,) Mennonites (4.4%,) and two Unitarians, two Pentecostals, one Christian Scientist, one Greek Orthodox, and one adherent of an independent Protestant church for a total of 3.2% classified as "others." One basic hypothesis of the study was that common social and personality orientations associated with a strong religious commitment transcended socio-religious (denominational) group membership, while aggregate religiosity was also related to denominational

membership. In general, it was expected that lower aggregate religiosity would be associated with those denominations in which the requirements of membership were minimal, and that aggregate religiosity would increase as the demands placed on the adherents increased. This expectation is derived from an understanding of the nature of socio-religious group membership and is somewhat analogous to church-sect differentiation. However, to thus use the typology and equate a high degree of membership requirements with "sect" and a low level with "church" would be an overstatement of the distinction.

The frequency distribution of aggregate religiosity group by denomination, table 5:10, conformed to this expectation with an underrepresentation of Anglicans, United and Presbyterians in aggregate religiosity in groups "1" and "2" and an overrepresentation of Roman Catholics and other, smaller Protestant churches in the same two groups. This observed relation obtained a Chi-Square value of 22.49 which, with 9 degrees of freedom, is statistically significant at the .05 level.¹

The most striking features of the distribution is the disproportionately large numbers of Anglicans in aggregate religiosity group "4" and of Catholics in groups "1" and "2." The figures for "others" include respondents who indicated no denominational preference with the result that the figures for groups "3" and "4" are somewhat inflated with the addition of two and four individuals respectively.

¹ See Appendix 6 for a breakdown of all denominations by aggregate religiosity group.

Table 5:10. AGGREGATE RELIGIOSITY BY DENOMINATION.

RELIGIOSITY GROUP	DENOMINATION				TOTALS
	UNITED AND PRESBYTERIAN	ANGLICAN	ROMAN CATHOLIC	OTHERS (INCL. "NO PREFERENCE")	
"1"	9	5	5	11	30
"2"	33	14	10	9	66
"3"	30	14	2	6	52
"4"	16	14	1	5	36
TOTALS	88	47	18	31	184
$\chi^2 = 22.49; df = 9; p < .05$					

Of the relationship between denomination and aggregate religiosity, it was concluded that, within the limitations of this study, aggregate religiosity is, in part, at least a function of denomination. It became necessary therefore to control for "denomination" in the subsequent analysis of aggregate religiosity as an independent variable. Since, with the exception of Anglicans and United, no socio-religious group was represented in the sample in sufficient number to allow for the analysis of any dependent variable by exclusive socio-religious groups, the denominations were grouped into two categories, within which the influence of denomination upon the distribution of aggregate religiosity was minimal. Denominational group "A" consisted of Anglicans, United and Pres-

byterians, as well as the six "no preferences;" denominational group "B" consisted of the remainder of the sample - Roman Catholics, Lutherans, Baptists, Mennonites and "others."¹

¹ Tables in Appendix 6 show the distribution of aggregate religiosity on both an "inter-" and "intra-" denominational group basis. The significant relationship between denomination and aggregate religiosity held true for twelve of the thirteen separate indicators of aggregate religiosity. These relationships are also shown in Appendix 6.

CHAPTER VI

FINDINGS II: AGGREGATE RELIGIOSITY AS THE INDEPENDENT VARIABLE

The fourth hypothesis which was formulated at the beginning of this study predicted that aggregate religiosity would be associated with distinctive social and personality orientations in the sample. The relationship between aggregate religiosity and areas of social attitudes and behavior and personality interests was analyzed, therefore, to determine the nature of these orientations. In this part of the analysis, aggregate religiosity was considered to be the independent variable.

I. SOCIAL ORIENTATION AND AGGREGATE RELIGIOSITY.

Aspects of seven selected areas of social activity were measured, including attitudes towards religious issues, attitudes on moral issues, attitudes towards organized charities and related activity, attitudes towards occupation, personal economic activity and attitudes, political attitudes and activity, and leisure activity.

Aggregate Religiosity and Religious Attitudes. Five areas of "religious" attitudes were measured in the study. To determine attitudes towards religious endogamy, respondents were asked these questions:

Q.72 As a general rule, do you think that it is most desirable for Protestant (Catholics) to marry other Protestants (Catholics); or do you not consider this important?

Q.73 (PROTESTANTS ONLY: IF "DESIRABLE" IN Q.72) Would you say that it was desirable for people of the same denomination to marry?

In response to the first question, 62% of the sample felt that inter-marriage was not desirable, with 79% of aggregate religiosity group "1" sharing this attitude while, for group "4," the corresponding percentage was only 50%. A similar pattern was evident in the responses to Q.73, with higher aggregate religiosity associated with the desirability of denominational endogamy. However, in neither case was the observed relationship statistically significant, with the result that the relationship is not proved.¹

The majority of the sample - 80% - had favorable attitudes towards church union. This was determined by asking:

Q.75 Would you like to see your own denomination unite with any other denomination?

The distribution of the responses indicated that there was proportionately less opposition to union among the two lower aggregate religiosity groups, particularly group "4," but again, no clear pattern emerged as the relationship was not significant.²

It was anticipated that there would be differences between the four aggregate religiosity groups on the question of whether or not there was disagreement between science and religion. The respondents

¹Frequency distribution tables are shown in Appendix 7.

²See Appendix 7.

were asked:

Q.78 Do you feel that there is any disagreement between what science teaches on the one hand, and what your church teaches on the other?

Q.79 (IF "YES" TO Q.78) Would you say that these disagreements were very serious, somewhat serious, or not very serious?

The observed distribution showed that, contrary to the expectation, there is very little difference between the aggregate religiosity groups in this matter. Of those who feel that such disagreements do exist, there was a tendency for those of the lowest group to view them as being more serious than the other groups, but, as before, the relationship was not significant.¹

Attitudes towards the political role of the church were determined by three questions.

Q.92 Do you think that the churches should take a public stand on such issues of External Affairs as Canada's position with respect to the war in Viet Nam or the recognition of Mainland China?

Q.93 Do you think that the churches should take a public stand on such domestic issues in the area of social legislation as medicare, education, or anti-poverty measures?

Q.94 Do you think that religious leaders ought to take a stand for or against some candidate for public office?

These questions were a response to the claims of religion to dominance in all spheres of life and it was therefore expected that the higher aggregate religiosity groups would be more sensitive to this aspect of the church's role in society. Q.94 was intended to press these attitudes to the limit. The patterns which emerged conformed to

¹ See Appendix 7.

this prediction; however, none of the three frequency distributions varied significantly. Overall, 43% of the sample felt that the churches should speak out on issues of External Affairs, 55% felt that the churches had the right to speak out on social legislation, and only 20% wanted religious leaders to speak out publicly on the merits of candidates for office.¹

The last religious attitude to be correlated with aggregate religiosity concerned the activity of the churches in the area of social welfare. Respondents were asked:

Q.118 Some people say that the churches are too much involved in social service and social welfare programs, while others say that they are not involved enough. How do you feel about this? In your opinion, are the churches involved too much, about enough, or too little?

Here it was anticipated that the high aggregate religiosity groups would show a tendency towards the response category, "too little." The observed results showed that the majority - 54% - shared this attitude while 44% felt that the churches were presently doing enough. Only 2% believed that the churches were too involved. This pattern of distribution was approximately the case for each of the four aggregate religiosity groups.²

Aggregate Religiosity and Moral Issues. Attitudes on five moral issues - gambling, drinking, birth control, abortion, and divorce - were measured in the sample. In each case the question was phrased so that

¹ See Appendix 7. These results come as no surprise to the social service agencies of the churches who have been getting a similar response for years.

² See Appendix 7.

the respondent was asked whether, from the moral standpoint, the particular practice was always wrong, usually wrong, sometimes wrong or never wrong. With respect to drinking, respondents were first asked for their attitude towards moderate drinking, with a supplementary question substituting the phrase "heavy drinking" being asked of those respondents who replied "sometimes" or "never" wrong.¹

With respect to gambling, a pattern emerged from the distribution of the responses through the four aggregate religiosity groups. A disproportionate number of groups "1" and "2" felt that gambling was "always" or "usually" wrong, while groups "3" and "4" were more tolerant in their attitudes. The relationship, however, was not significant at the .05 level.²

Of the replies to the question on moderate drinking, there was considerable over-representation of the two "high" aggregate religiosity groups in the breakdown of the response categories "always" and "usually" wrong. As shown in table 6:1, nine of the eighteen individuals who answered this way were from aggregate religiosity group "1." Conversely, there was an over-representation of aggregate religiosity group "4" in the "never" response category. This relationship between aggregate religiosity and attitudes towards moderate drinking was found to be statistically significant and remained so with denomination held constant.

¹ See Appendix 3, Q.'s 81, 83, 85, 86, 88, and 90.

² See Appendix 7.

Of those who had indicated that moderate drinking was "sometimes" or "never" wrong, about 75% indicated that they felt heavy drinking to be "always" wrong. The responses to this supplementary question were approximately normally distributed among the four aggregate religiosity groups.¹ The results indicate a pronounced tolerance of moderate drinking in the sample with an equally pronounced condemnation of heavy drinking. The "high" aggregate religiosity group, however, demonstrates a significantly lower tolerance of moderate drinking, while group "4" shows a correspondingly higher tolerance.

Table 6:1. ATTITUDE TOWARDS MODERATE DRINKING BY AGGREGATE RELIGIOSITY DISREGARDING DENOMINATION.

ATTITUDE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Always or Usually Wrong	9	4	4	1	18
Sometimes Wrong	12	28	26	10	76
Never Wrong	8	33	20	25	86
TOTALS	29	65	50	36	180
$\chi^2 = 21.52; \text{ df} = 6; p < .05$					

¹ See Appendix 7.

Table 6:2. ATTITUDE TOWARDS MODERATE DRINKING BY AGGREGATE RELIGIOSITY WITH DENOMINATION HELD CONSTANT.

ATTITUDE	DENOMINATIONAL GROUP								
	"A"					"B"			
	RELIGIOSITY GROUP				TOTALS	RELIGIOSITY GROUP			TOTALS
	"1"	"2"	"3"	"4"		"1"	"2"	"3"&"4"	
Always; Usually; Sometimes; Wrong	9	26	29	9	73	12	6	3	21
Never Wrong	5	20	16	24	65	3	13	5	21
TOTALS	14	46	45	33	138	15	19	8	42
$\chi^2 = 10.82$; $df = 3$; $p < .05$					$\chi^2 = 8.48$; $df = 2$; $p < .05$				

Of 178 responses to the question on birth control, only 6.2% indicated that they considered this practice to be "always" or "usually" morally wrong. However, there was a significant over-representation of aggregate religiosity group "1" who stated "usually," and a corresponding over-representation of group "4" who considered it "never" wrong, from the moral standpoint. This relationship was brought into clearer focus when the intervening variable, denomination, was held constant. The results then showed that a liberal attitude towards birth control was most apparent in denominational group "A", while denominational group "B" tended to be more conservative in its attitudes. It is group "B" which includes the Roman Catholic representation in the sample. Neither frequency-distribution, when denomination was controlled, resulted in a significant Chi-Square value, resulting in the conclusion that the

observed differences in the sample are a function of denomination, not aggregate religiosity.¹

While only 6.7% of the respondents indicated that they considered abortion to be "never" morally wrong, the over-all distribution showed predominantly liberal attitudes in the sample with fully 56% responding "sometimes" and another 28% stating "usually." The distribution through the four aggregate religiosity groups was approximately equivalent, with a slight pattern showing the "lows" to be proportionately more conservative in their attitudes than the "highs." The relationship was, however not significant.²

On the question of divorce, 27 respondents expressed the view that, from the moral standpoint, divorce was "always" or "usually" wrong. Of this total, 24 were from the two "high" aggregate religiosity groups, while none were from group "4." To complete the pattern, which is shown in table 6:3, none of the "never wrong's" were from group "1" while 15 of the 19 were from groups "3" and "4."

Table 6:3. ATTITUDE TOWARDS DIVORCE BY AGGREGATE RELIGIOSITY, DISREGARDING DENOMINATION.

ATTITUDE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Always or Usually Wrong	11	13	3	0	27
Sometimes Wrong	19	49	41	26	135
Never Wrong	0	4	7	8	19
TOTALS	30	66	51	34	181
$\chi^2 = 29.18; df = 6; p < .05$					

¹See Appendix 7.

²See Appendix 7.

The Chi-Square value for the distribution of attitudes towards divorce by denomination was calculated to be 24.44 with 2 degrees of freedom, significant at the .05 level, thus making it necessary to control for denomination. Table 6:4 shows the relationship between aggregate religiosity and divorce, holding denomination constant.

Table 6:4. ATTITUDE TOWARDS DIVORCE BY AGGREGATE RELIGIOSITY, WITH DENOMINATION HELD CONSTANT.

ATTITUDE	DENOMINATIONAL GROUP								
	"A"					"B"			
	RELIGIOSITY GROUP				TOTALS	RELIGIOSITY GROUP			TOTALS
	"1"	"2"	"3"	"4"		"1"	"2"	"3"&"4"	
Always or Usually Wrong	2	5	3	0	10	9	8	0	17
Sometimes or Never Wrong	12	42	42	32	128	7	11	8	26
TOTALS	14	47	45	32	138	16	19	8	43
$\chi^2 = 4.40$ df= 3; $p > .05$						$\chi^2 = 7.29$ df= 2; $p < .05$			

With denomination held constant, the results were divided. The distribution within denominational group "B" was found to be significant at the .05 level, while the relationship between attitudes towards divorce and aggregate religiosity was not significant in group "A." Within group "B" the more conservative attitudes are over-represented in the two "high" religiosity groups while in denominational group "A," the attitudes are more normally distributed.

The relationship between attitudes towards divorce and denomination definitely exists in the sample; the observations on the relation-

ship between aggregate religiosity and divorce are inconclusive. Little reliance is placed on the Chi-Square values calculated for the frequency distribution in the two denominational groups since too many of the "expected" frequencies were unacceptably low. For this reason, no conclusions are offered concerning this relationship in the sample.

Aggregate Religiosity and Charities. Four of the questions contained in the interview schedule were intended to probe the attitudes of the respondents towards the organized charities and related activities.

- Q.116 The government is not the only institution interested in the welfare of Canadians. There are a number of social service agencies, many of which are represented in Winnipeg through the United Way. After the past two appeals, you will of course be familiar with the "fair-share" concept of giving. Do you feel that this is a reasonable request on the part of the charities?
- Q.117 Were you a fair-share giver in the last campaign?
- Q.119 Do you give any of your time to any social service agencies such as for example, the Volunteer Bureau?
- Q.122 All told, how much would you estimate that your family gave to charities last year?

The distribution of the responses to Q.116 was approximately normal within the four aggregate religiosity groups with 84% indicating that the "fair share" was a reasonable request on the part of the charities. Seventy-one percent of the sample stated that they had given their fair-share in the last United Appeal, with the responses again being normally distributed within the four aggregate religiosity groups. The only real departure from normality in either distribution occurred in group "2" where a disproportionately large number felt that the fair-

share was an unreasonable request and also indicated that they were not fair-share givers. Neither relationship tested significant and it was concluded that there is no association between aggregate religiosity and these two variables.¹

The two major requests which the charities make of the public are for funds and for volunteer participation. It was expected that the responses to these requests, as measured by questions 119 and 122 would vary directly with the strength of religious commitment. However the 25% of the sample who indicated that they do participate in the work of the charities was approximately normally distributed with perhaps a slight over-representation of religiosity group "2," but the relationship was not significant.² The frequency distribution of aggregate religiosity group by the amount of money given to the charities showed a slight pattern which resembled the expected. The "highs" tended to give more than the "lows," but again the relationship was not significant indicating that no real association exists in the sample between aggregate religiosity and participation in the organized charities.³

Aggregate Religiosity and Occupation. Different people have different expectations with respect to occupation. Some seek personal fulfilment, some authority, some only short hours and a high salary. With the hypothesis that there would be a distinctive orientation to-

¹ See Appendix 7.

² See Appendix 7.

³ See Appendix 7 for the frequency distribution table.

wards all aspects of life associated with a high level of aggregate religiosity, it was predicted that the preferred attributes of occupation would vary with aggregate religiosity group. In order to test this hypothesis, respondents were asked to rank the following ten occupational characteristics in the order of their preference. They were expressly asked to judge them on the basis of those things which they considered important, not on the basis of what they find in their present occupation.

Q.102 Now I am going to give you ten cards on which are listed things which people consider important in selecting a job. I would like you to arrange these cards so that the one which you consider the most important is on top, the second most important, second, and so on until you come to the last card which you consider to be the least important. Please understand that we are asking you to tell us which characteristics you consider important, NOT those which you find in your present occupation.

- a. A chance to add to the sum of man's knowledge.
- b. The work is important and gives a feeling of accomplishment.
- c. A high income.
- d. Short working hours with plenty of free time to enjoy the really beautiful things in life.
- e. A vocation of service to other people.
- f. A chance to employ my mental capacities to the full.
- g. Something practical.
- h. A chance for advancement to a position of authority.
- i. A chance for individualism and creativity.
- j. The opportunity for dealing with people face-to-face.

To test the significance of the results, a cumulative ranking by aggregate religiosity group was determined. To do this, the value "10" was given for a first choice, "9" for a second, and so on with the value "1" given to a tenth choice. In this way an "average" ranking was derived for each aggregate religiosity group.

The Kendall coefficient of concordance was calculated on these

rankings with the result, $W=.9015$. The corresponding Chi-Square value was found to be 32.45 with nine degrees of freedom, significant beyond the .05 level. The results thus indicated a significant similarity between the average rankings of each group, and the hypothesis was rejected.¹

An analysis of the rankings of individual attributes showed agreement between the four aggregate religiosity groups on the most desirable occupational characteristic - "the work is important and gives a feeling of accomplishment" - and on the relatively least desirable - "short working hours." These were ranked first and tenth respectively by each of the four groups. Attribute "e" - "a vocation of service to other people" - was the only characteristic over which there was a real difference in the ranking of the groups. Aggregate religiosity groups "1" and "2" ranked this second, while the average rank in group "3" was fifth and in group "4," seventh. This relationship was further examined and proved to be significant in the sample as shown in table 6:5.

Table 6:5. RANKING OF "VOCATION OF SERVICE" BY AGGREGATE RELIGIOSITY DISREGARDING DENOMINATION.

RANK	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
1 - 3	24	35	13	5	77
4 - 6	3	17	23	13	56
7 - 10	3	14	16	18	51
TOTALS	30	66	52	36	184
$\chi^2 = 42.18; df = 6; p < .05$					

¹See Appendix 7.

Table 6:6. RANKING OF "VOCATION OF SERVICE" BY AGGREGATE RELIGIOSITY, WITH DENOMINATION HELD CONSTANT.

RANK	DENOMINATIONAL GROUP								
	"A"					"B"			
	RELIGIOSITY GROUP				TOTALS	RELIGIOSITY GROUP			TOTALS
	"1"	"2"	"3"	"4"		"1"	"2"	"3" & "4"	
1 - 3	8	25	11	5	49	16	10	2	28
4 - 6	3	12	20	13	48	0	9	6	15
7 - 10	3	10	15	16	44				
TOTALS	14	47	46	34	141	16	19	8	43
$\chi^2 = 19.67$; $df = 6$; $p < .05$						$\chi^2 = 15.56$; $df = 2$; $p < .05$			

With denomination held constant, as shown in table 6:6, the relationship was unaffected, being significant in both denominational groups. This would indicate that while in the main, there is little difference in attitudes towards desirable occupational characteristics which could be associated with aggregate religiosity, there is one significant exception: individuals with high levels of aggregate religiosity place a higher value on service to other people than do individuals with lower levels of aggregate religiosity in the sample.

Aggregate Religiosity and Politics. The relationship between aggregate religiosity and politics was tested on two levels, (1) the political activity of the individual, and (2) his attitudes toward certain broad areas of government policy. To measure the political behavior of the respondent, five questions were asked.

Q.95 Which party did you vote for in the last Federal election?

Q.96 Which party did you vote for in the last Provincial election?

Q.97 Did you vote in the last municipal election?

Q.98 Do you belong to a political party, and if so, which one is that?

Q.123 Have you ever run for public office of any kind?

The distribution of responses to Q.95 are shown in table 6:7.

Since the federal constituency that includes the survey area returned the Progressive Conservative candidate in the election preceding the study, the interesting feature of the distribution is the over-representation of Conservative voters in aggregate religiosity group "2" and the under-representation of voters for the same party in groups "1" and "4."

Table 6:7. FEDERAL ELECTION VOTE BY AGGREGATE RELIGIOSITY, DISREGARDING DENOMINATION.

PARTY VOTED FOR	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Prog. Conservative	11	41	26	9	87
Liberal	14	21	19	21	75
New Democratic	1	2	4	4	11
TOTALS	26	64	49	34	173
$\chi^2 = 15.60; \text{ df} = 6; p < .05$					

The findings on this relationship are inconclusive. There appears to be a relationship between denomination and the federal election vote as well as between aggregate religiosity and the party vote, but no clear pattern is evident. The frequency distribution of the Provincial election vote was similar (but not statistically significant,) suggesting the existence of some intervening variable that has not been

identified.¹ Therefore, no conclusions are drawn on the relationship between aggregate religiosity and party choice.

Table 6:8. FEDERAL ELECTION VOTE BY AGGREGATE RELIGIOSITY, WITH DENOMINATION HELD CONSTANT.

PARTY	DENOMINATIONAL GROUP								
	"A"					"B"			
	RELIGIOSITY GROUP					RELIGIOSITY GROUP			
	"1"	"2"	"3"	"4"	TOTALS	"1"	"2"	"3"&"4"	TOTALS
Liberal/ N.D.P.	7	15	19	23	64	6	10	2	18
P.C.	5	31	24	9	69	8	8	6	22
TOTALS:	12	46	43	32	133	14	18	8	40
$\chi^2 = 12.37; df = 3; p < .05$						$\chi^2 = 2.11; df = 2; p > .05$			

The analysis of the distribution of those who voted in the last municipal election showed a slight over-representation in each of the first three aggregate religiosity groups with a large under-representation in group "4." The distribution was significant for the total sample, but with denomination held constant, this did not obtain.² It is concluded that individuals of "low" aggregate religiosity tend to be less inclined to vote in municipal elections than individuals with higher aggregate religiosity, but that this relationship has not been shown to be independent of the influence of denomination.

Twenty-five per cent of the sample indicated that they held membership in a political party. Of these individuals, there is a slight

¹ See Appendix 7.

² See Appendix 7.

over-representation of aggregate religiosity groups "1" and "2," but this relationship is far from significant and it is concluded that there is no association between aggregate religiosity and membership in political parties in the sample.¹

Only eight of 184 who responded to Q.123 stated that they had at one time run for public office. While this proportion was too small for any meaningful statistical analysis, it is of interest to note that seven of these eight individuals are also found in either the "high" or "moderately high" aggregate religiosity groups. No conclusions are drawn on this relationship, but the suggested pattern warrants consideration in research with a larger sample.

Respondents' attitudes towards four areas of government policy were measured with the following questions:

- Q.101 In your opinion, does Canada give too much in foreign aid, about the right amount, or too little?
- Q.112 Some people say that the government should do more than it has with respect to the treatment and rehabilitation of juvenile and adult offenders, while others feel that it is already doing too much. At the present time, would you say that the government is doing too much, about enough, or too little in this matter?
- Q.113 What about censorship of movies and books? Do you feel that the government is doing too much, about enough, or too little in this matter?
- Q.114 With respect to such problems as medi-care, better housing for the poor, unemployment, education, and so on, would you say that the government is at present doing too much, about enough, or too little?

The frequency distributions of attitudes towards Canada's foreign

¹See Appendix 7.

aid program, penal and correctional policies, and the social legislation of the government by aggregate religiosity were approximately equivalent.¹ The responses to the question probing attitudes towards censorship did, however, indicate a pattern, with attitudes of "too little" being associated with the "highs" while "low" aggregate religiosity groups tended to feel just the opposite, that there was too much censorship.² This relationship was significant for the whole sample, but with denomination held constant, it did not remain so.³ Thus it is concluded that there are no significant differences in attitudes towards government policies associated with aggregate religiosity in the sample, but that there is a relationship between denomination and attitudes towards censorship.

Aggregate Religiosity and Personal Economics. Four questions from the interview schedule were used as indicators of personal economic attitudes and practices. Respondents were asked whether they thought purchasing minor items on an instalment plan was a good idea, whether they kept accurate records of family expenses, and whether they felt that every family should attempt to save a part of its monthly income, or not.⁴ Taken together, the distribution of the responses by aggregate religiosity group showed no relationship between personal economics

¹See Appendix 7.

²See Appendix 7.

³See Appendix 7.

⁴See Appendix 3, Q.'s: 104, 105, 107, and 108.

and religiosity.

In response to the first of these questions, is instalment buying a good idea or not, aggregate religiosity group "1" was distributed proportionately in the response categories, groups "2" and "4" leaned towards favouring this practice, and aggregate religiosity group "3" contained a disproportionate number of non-favouring responses. The compute Chi-Square value of 7.08 was significant at the .10 level but not at the .05 level chosen for the study. The conclusion is that no relationship exists in the sample between aggregate religiosity and attitudes towards instalment purchasing.¹

Only 41% of the sample indicated that they were in the habit of keeping careful records of family expenses. Again this proportion was distributed equivalently among the four aggregate religiosity groups and a conclusion of no relationship between aggregate religiosity and this practice, in the sample, was reached.²

Two questions were used to ascertain respondents' attitudes towards the practice of saving a part of monthly income.

Q.107 Do you think that every family should save a part of its monthly income, or not?

Q.108 (IF "YES" IN Q.107) Do you feel that this is important enough that people should save even when it means doing without something that they could really use; or should they save only when they can do it without trouble?

The response to Q.107 showed that all but 5 members of the sample

¹ See Appendix 7.

² See Appendix 7.

felt that, in a general way, saving was a good idea. Similarly, in response to another question, all but 5 stated that their family saved in some way.¹ However, when pressed in this attitude by Q.108, 48% modified their position to the extent that people should save only when they could do so without trouble. A frequency distribution table of the responses to the secondary question showed that a disproportionate number of the individuals in aggregate religiosity groups "2" and "3" adopted the modified position, while groups "1" and "4" tended to favour the "save always" response category.² The relationship was not statistically significant and no pattern was evident. Therefore it is concluded that there is no relationship between aggregate religiosity and attitudes toward saving in the sample.

It is interesting to note that many of the frequency distribution tables for political attitudes and practices by aggregate religiosity, and personal economics by aggregate religiosity demonstrate the same confusing pattern.³ In more than half of the tables for these two sections of this chapter, similarities were observed between the distributions for aggregate religiosity groups "1" and "4" and between the distributions for groups "2" and "3." This would tend to indicate that there is an intervening variable which has not been identified. It was suspected at first that this might be due to the influence of denomination,

¹See Appendix 3, Q.106.

²See Appendix 7.

³See Appendix 7.

but a series of Chi-Square tests on these variables with denomination held constant showed this not to be the case. Hence, while the existence of a third variable is suspected, its nature is unknown at present.

Religiosity and Leisure Activity. Respondents were asked in the interview to indicate their three preferences for leisure activity. The responses were recorded in nine structured categories:¹

- a. Sports - golf, curling, hunting, swimming, etc.
- b. Reading.
- c. Listening to T.V., radio, records, etc.
- d. Theatre, ballet, symphony, etc.
- e. Visiting friends, private parties, etc.
- f. Playing with the children.
- g. Hobbies, gardening, etc.
- h. Movies, dancing, night-clubs, etc.
- i. Loafing around or sleeping, etc.

In the interview schedule, a tenth category -"other"- was provided for responses which did not fit into any one of the structured categories, but was not required. The procedure used to analyze the results was similar to the method employed in the analysis of occupational characteristics by aggregate religiosity. A scoring formula by which first choices were given a value of "3," second choices "2," and third choices assigned a "1" was used to derive a cumulative ranking of the nine activity categories for each of the four aggregate religiosity categories. The Kendall coefficient of concordance was calculated on the cumulative rankings with the result that $W = .9865$. The corresponding Chi-Square value was calculated to be 31.57, which with 8 degrees of freedom, is significant at the .05 level. As the size of the coefficient indicates,

¹ See Appendix 3, Q.102.

there were no significant differences between the groups on the ranking of any one item. It is concluded that there is no difference in preferences for leisure activity in the sample between the four aggregate religiosity groups.¹

A summary of the results of the analysis of the relationship between aggregate religiosity and social orientation is found in the next chapter along with conclusions based on the observations.

II. PERSONALITY ORIENTATION AND AGGREGATE RELIGIOSITY

The fourth hypothesis predicts that a distinctive orientation towards all aspects of social life will be shared by individuals with high aggregate religiosity. In this section of the study, the hypothesis was interpreted to state that persons with high aggregate religiosity will share certain dominant interests in personality, or in other words, will share a common personality orientation. For the purposes of this study, personality orientation was considered to be the profile of values measured by the Allport-Vernon-Lindzey "Study of Values."² Religiosity in this section of the analysis is based on the recalculated values of the religiosity subscale.³

Interpreting the "Study of Values." The "Study" measures the

¹ See Appendix 7.

² Op. Cit.

³ See Appendix 5.

measures the relative dominance of the six basic interests or motives in personality. Since the test measures the relative strength of the six values and not their absolute strength, the measures of the separate values cannot be intercorrelated with each other. Thus, comparisons between the different aggregate religiosity groups must concentrate on the six values individually.

The test is designed in such a way that 40 is the average score for any single value. In the Manual for the "Study of Values" the authors suggest that only the larger deviations from this mean are significant, however, this analytical approach is intended for the interpretation of individual profiles. The method that has been adopted here would seek significant differences between the means of the four aggregate religiosity groups for each of the six values. Where significant differences are found, the conclusion will be that the particular value is more dominant in one group than in the other, and that the difference is associated with aggregate religiosity.

The Six Personality Interests. The six values measured in the "Study of Values" - theoretical, economic, aesthetic, social, political and religious - are based on Spranger's Types of Men.¹ It is Spranger's contention that men can be best understood not in terms of their achievements but by their interests and intentions. These interests may be grouped into a minimum of six groups. The study purports to contribute to the understanding of an individual personality by assessing the rela-

¹ Spranger, Op. Cit.

tive dominance of these minimum classifications of motives. A brief characterization of these values is as follows.¹

For the Theoretical man, the discovery of truth is the primary interest. He seeks only to observe and to reason, ignoring judgments regarding the beauty or utility of objects. Characterized by empirical, critical and rational interests, his chief aim in life is to order and systematize his knowledge.

The dominant interest of the Economic man is what is "useful." Originating in the satisfaction of personal needs - self preservation - this interest in the useful ultimately extends into the practical affairs of the business world - the production, marketing and consumption of goods, elaboration of credit, and the accumulation of material wealth. This practical type conforms to the common stereotype of the Canadian businessman. His economic interest frequently conflicts with other values resulting in demands for applied science rather than theory, or the acceptance of the aesthetic only where it serves commercial ends. He is likely to confuse luxury with beauty in his personal life. In his relations with other people, he will more likely be concerned with surpassing them in wealth as opposed to dominating them (political interest) or in serving them (social interest.) While in some cases it may be said that the economic man worships Mammon, it is just as likely that he has a regard for the traditional God, which he is inclined to

¹ This is paraphrased and abridged from the Manual to the Study of Values, Op. Cit., pp. 3 - 5.

view as the giver of tangible blessings.

For the Aesthetic man, the highest value lies in form and harmony, finding his chief interest lying in the appreciation of grace, symmetry, or fitness in each artistic episode of life. In a sense, the aesthetic may be considered diametrically opposed to the theoretical man; the latter being concerned with diversity, the former with the identities of experience. The aesthetic man sees economic institutions as destroying the values most important to him. Socially, he is interested in persons, but not in the welfare of persons, tending towards individualism and self-sufficiency. He may be attracted to the beautiful insignia of pomp and power, but opposes political activity if it would restrict his individuality. In religion, the aesthetic man is likely to confuse beauty with purer religious experience.

The highest value for the Social man is love of people. The "Study of Values" measures the altruistic or philanthropic aspect of this love. The social man is kind, sympathetic, and unselfish, valuing other people not as means, but rather as ends. It is very likely that he will find the theoretical, economic, or aesthetic types cold and inhuman. In contrast with the political type, he regards love as the only suitable form of human relationship. In its purest form, Spranger stated that the social type is selfless and tends to approximate closely the religious type of man.

The primary interest of the Political man is power. His activities are not necessarily found within the narrow field of formal politics, but he may be found in almost any field, usually in positions with a high

power content. Because competition and struggle play such a large part in life, many philosophers view the value of power as the most universal and fundamental of motives. Nevertheless, there are certain personalities in whom the desire for a direct expression of this value is most prominent. In such people, the goal above all else is power, influence, and renown.

Spranger calls the highest value of the Religious man unity. He is mystical, seeking to comprehend the cosmos as a whole and to relate himself to its embracing totality. Spranger defines the religious man as "one whose mental structure is permanently directed to the creation of the highest and absolutely satisfying value experience."¹ Some religious men are "immanent mystics," finding their religious experience in the affirmation of life and in active participation therein. Others are "transcendental mystics," seeking to unite themselves with a higher reality by withdrawing from life. In many religious personalities, the negation and affirmation of life alternate to yield the greatest satisfaction.

Spranger does not suggest that the six types are mutually exclusive. Any given individual does not belong to only one of these personality types but rather may belong to a mixture of types. Spranger explains the values as "ideal types," which have no real existence in the pure and exclusive form. Allport, Vernon and Lindzey have recognized this and indicate in the manual that in the majority of the pro-

¹ Ibid., p.5

files, the dominant interests are usually paired - economic interest being associated with political values, social and religious values being correlated, and, also, there is a possible pairing of theoretical and aesthetic values.¹ It was expected therefore, that high aggregate religiosity would be associated with dominant religious and social values, with low aggregate religiosity being associated with combinations of the four remaining values, particularly economic and political.

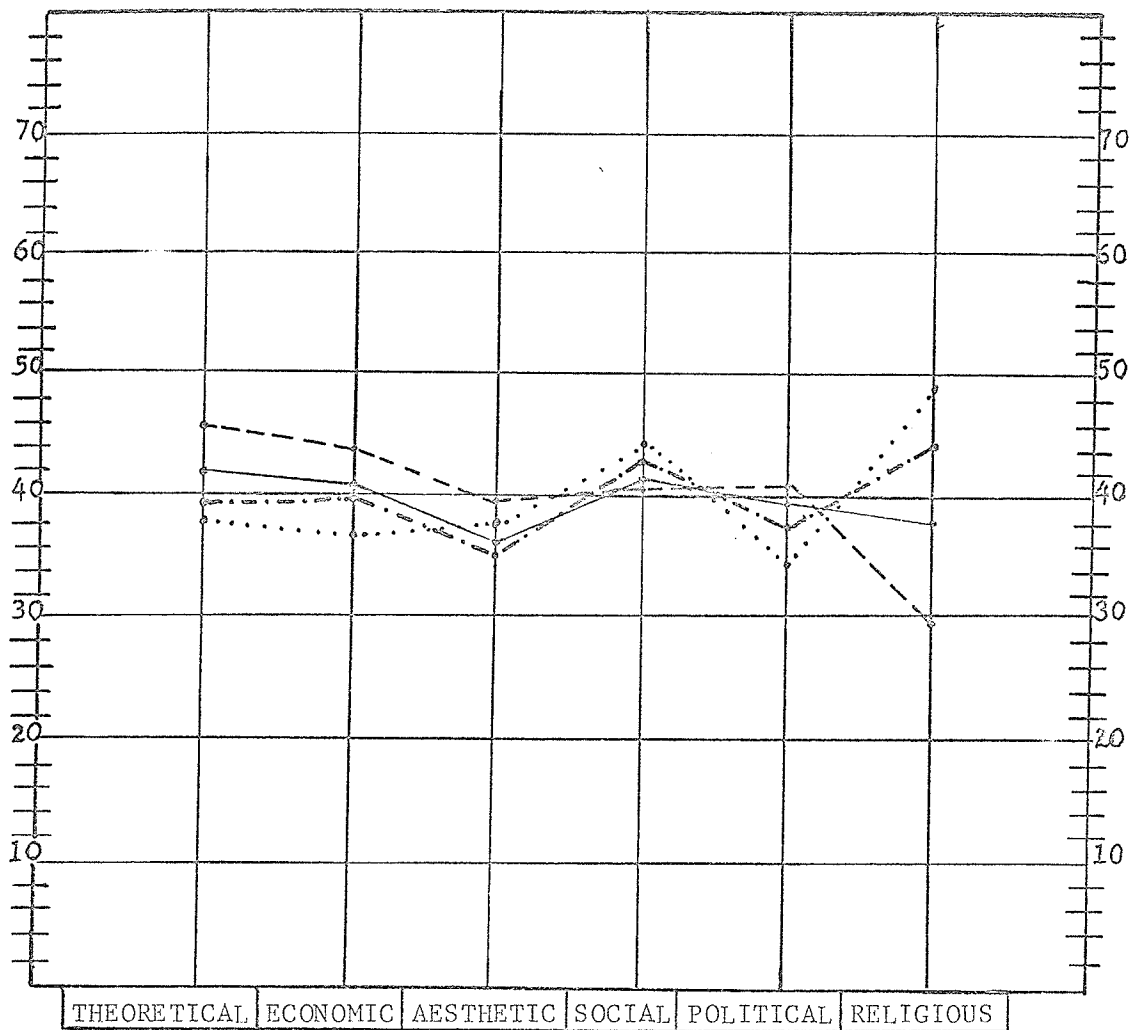
The Analysis. The primary inspection of the mean scores of each aggregate religiosity group for the six personality interests, shown in table 6:9, indicated that the expected patterns had been obtained.

Table 6:9. MEAN VALUE SCORES BY AGGREGATE RELIGIOSITY.

PERSONALITY INTEREST		RELIGIOSITY GROUP				TOTAL SAMPLE (N=184)
		"1" (N=31)	"2" (N=71)	"3" (N=45)	"4" (N=37)	
Theoretical	\bar{X}	37.42	39.66	42.33	45.38	41.06
	σ	7.85	6.46	5.66	6.66	7.16
Economic	\bar{X}	36.33	39.97	41.73	43.86	40.57
	σ	7.65	8.32	6.94	9.50	8.66
Aesthetic	\bar{X}	37.09	35.54	36.38	39.76	36.85
	σ	6.17	7.79	7.76	9.84	8.24
Social	\bar{X}	44.65	42.87	41.98	40.24	42.42
	σ	6.45	6.06	6.55	6.91	6.61
Political	\bar{X}	34.90	36.96	39.84	40.78	38.09
	σ	6.18	6.24	5.74	5.89	6.40
Religious	\bar{X}	49.61	45.08	37.73	29.97	41.01
	σ	6.10	7.49	7.01	8.27	10.05

¹Ibid., p.10

Figure 6:1. AVERAGE VALUE PROFILES FOR THE FOUR AGGREGATE RELIGIOSITY GROUPS



KEY

- Average Profile of Aggregate Religiosity Group "1"
- Average Profile of Aggregate Religiosity Group "2"
- Average Profile of Aggregate Religiosity Group "3"
- Average Profile of Aggregate Religiosity Group "4"

The scores for religious and social values tended to increase as aggregate religiosity increased. An inverse relationship existed between aggregate religiosity and theoretical, economic and political value scores. The exception to an over-all pattern were the mean scores for aesthetic values. Here it was noted that while there was an inverse relationship between aggregate religiosity and mean score from group "2" through group "4," the pattern is disrupted by the high mean value in group "1." The average profiles of the mean scores is shown in fig. 6:1.

To test the differences between the mean scores for each value, the F-ratio of the one way analysis of variance was calculated. The results of this operation are shown in table 6:10.

Table 6:10. F-RATIOS TESTING THE SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN SCORES OF THE FOUR AGGREGATE RELIGIOSITY GROUPS IN EACH OF THE SIX SETS.

PERSONALITY INTEREST	RELIGIOSITY GROUP	MEAN	STANDARD DEVIATION	"F"*
Theoretical	"1"	37.42	7.85	10.03 $p < .05$
	"2"	39.66	6.46	
	"3"	42.33	5.66	
	"4"	45.38	6.66	
Economic	"1"	36.33	7.65	5.13 $p < .05$
	"2"	39.97	8.32	
	"3"	41.73	6.94	
	"4"	43.86	9.50	
Aesthetic	"1"	37.09	7.65	
	"2"	35.54	7.79	

Table 6:10. F-RATIOS TESTING THE SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN SCORES OF THE FOUR AGGREGATE RELIGIOSITY GROUPS IN EACH OF THE SIX SETS. (Cont'd)

PERSONALITY INTEREST	RELIGIOSITY GROUP	MEAN	STANDARD DEVIATION	"F"*
Aesthetic (Cont'd)	"3"	36.38	7.76	2.28 $p > .05$
	"4"	39.76	9.84	
Social	"1"	44.65	6.45	2.78 $p < .05$
	"2"	42.87	6.06	
	"3"	41.98	6.55	
	"4"	40.24	6.91	
Political	"1"	34.90	6.18	7.26 $p < .05$
	"2"	36.96	6.24	
	"3"	39.84	5.74	
	"4"	40.78	5.89	
Religious	"1"	49.61	6.10	51.42 $p < .05$
	"2"	45.08	7.49	
	"3"	37.73	7.01	
	"4"	29.27	8.27	

* With df for the greater mean square of 3 and df for the lesser mean square of 180, the critical value of $F_{.05} = 2.67$.

The analysis of variance indicated that the observed differences between the means of the aggregate religiosity groups were significant in five of the six sets. The difference between the mean scores for aesthetic values was not significant at the .05 level. The difference between the mean scores of the two denominational groups was also tested, with similar results, as shown in table 6:11.

Table 6:11. F-RATIOS TESTING THE SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN SCORES OF THE TWO DENOMINATIONAL GROUPS IN EACH OF THE SIX SETS.

PERSONALITY INTEREST	DENOMINATIONAL GROUP	MEAN	STANDARD DEVIATION	"F" *
Theoretical	"A"	41.84	6.63	7.61 $p < .05$
	"B"	38.46	7.86	
Economic	"A"	41.77	8.08	12.20 $p < .05$
	"B"	36.65	8.66	
Aesthetic	"A"	36.32	8.30	2.56 $p > .05$
	"B"	38.61	7.51	
Social	"A"	41.52	6.24	11.81 $p < .05$
	"B"	45.37	6.96	
Political	"A"	38.64	5.97	4.57 $p < .05$
	"B"	36.28	7.39	
Religious	"A"	39.91	9.85	7.52 $p < .05$
	"B"	44.63	9.63	

* With $df_1 = 1$, and $df_2 = 182$, the critical value of $F_{.05} = 3.89$.

Since denomination influenced the relationship between aggregate religiosity and the relative dominance of the six personality interests, the F-ratios testing the significance of the difference between mean scores of the four aggregate religiosity groups were recalculated with denomination held constant. The findings of these tests are shown in tables 6:12 and 6:13.

Table 6:12. F-RATIOS FOR THE MEAN SCORES OF THE AGGREGATE RELIGIOSITY GROUPS IN DENOMINATIONAL GROUP "A."

PERSONALITY INTEREST	RELIGIOSITY GROUP	MEAN	STANDARD DEVIATION	"F"*	
Theoretical	"1"	37.46	4.39	8.87	$p < .05$
	"2"	39.94	6.46		
	"3"	42.24	5.89		
	"4"	45.83	6.42		
Economic	"1"	38.77	8.70	1.51	$p > .05$
	"2"	41.10	7.41		
	"3"	41.78	7.02		
	"4"	43.86	9.65		
Aesthetic	"1"	35.23	6.62	2.75	$p < .05$
	"2"	34.37	7.31		
	"3"	36.51	7.92		
	"4"	39.40	9.91		
Social	"1"	42.69	6.81	1.13	$p > .05$
	"2"	42.48	5.80		
	"3"	41.03	5.89		
	"4"	40.26	6.97		
Political	"1"	35.53	4.72	4.15	$p < .05$
	"2"	37.17	6.25		
	"3"	40.05	5.54		
	"4"	40.31	5.66		
Religious	"1"	50.31	4.19	36.33	$p < .05$
	"2"	44.94	8.03		
	"3"	38.39	6.53		
	"4"	30.34	8.34		

* With $df_1 = 3$ and $df_2 = 137$, the critical value of $F_{.05} = 2.68$

Table 6:13 F-RATIOS FOR THE MEAN SCORES OF THE AGGREGATE RELIGIOSITY GROUPS IN DENOMINATIONAL GROUP "B."

PERSONALITY INTEREST	RELIGIOSITY GROUP	MEAN	STANDARD DEVIATION	"F"*	
Theoretical	"1"	37.39	9.76	0.56	$p > .05$
	"2"	38.88	6.56		
	"3"&"4"	41.33	5.09		
Economic	"1"	34.56	6.48	1.82	$p > .05$
	"2"	36.89	9.99		
	"3"&"4"	42.17	8.64		
Aesthetic	"1"	38.44	5.64	0.01	$p > .05$
	"2"	38.74	8.67		
	"3"&"4"	38.67	9.69		
Social	"1"	46.06	5.98	0.86	$p > .05$
	"2"	43.95	6.76		
	"3"&"4"	47.83	10.16		
Political	"1"	34.44	7.16	2.17	$p > .05$
	"2"	36.37	6.35		
	"3"&"4"	41.50	9.73		
Religious	"1"	49.11	7.26	19.78	$p < .05$
	"2"	45.47	5.91		
	"3"&"4"	28.50	9.31		

*With $df_1 = 2$ and $df_2 = 40$, the critical value of $F_{.05} = 3.23$

With denomination held constant, less of a relationship exists between aggregate religiosity and the relative dominance of the six values. The same pattern is evident, but fewer of the differences are significant at the .05 level. Within denominational group "A," the

relationship between aggregate religiosity and the relative dominance of economic and social values is no longer significant. The relationship between aggregate religiosity and the relative dominance of the theoretical, political and religious values remained significant. In addition, when denomination was held constant, the relationship between aggregate religiosity and aesthetic values was statistically significant within denominational group "A." In denominational group "B," however, the only significantly varying set of means was for the relative dominance of religious values.

The exact nature of the few observed differences is not indicated, for while the analysis of variance tests the significance of difference, it does not indicate just where that difference exists. A meaningful interpretation of the analysis of variance requires that a multiple comparison be made of pairs of means. Thus before the analysis was begun, it was decided that orthogonal comparisons would be made between all possible pairs of means in each set using the Scheffe method. The method consists of computing the F-ratio for all possible pairs of means and comparing the computed value with a value F' which is arrived at by multiplying the appropriate critical value of F by the degrees of freedom for the greater mean square. Any ratio equal to or greater than F' is then considered to be statistically significant.¹ The results of this analysis are reported in tables 6:14 and 6:15.

¹Ferguson, Op. Cit. pp. 296-297.

Table 6:14 A PRIORI ORTHOGONAL COMPARISONS BETWEEN ALL POSSIBLE PAIRS OF MEANS IN EACH OF THE SIX SETS IN DENOMINATIONAL GROUP "A." ($F'_{.05} = 8.04$)

PERSONALITY INTEREST	RELIGIOSITY GROUPS COMPARED	MEAN SCORES COMPARED	"F"	p
Theoretical	1,2	37.46, 39.94	1.70	>.05
	1,3	37.46, 42.24	6.00	>.05
	1,4	37.46, 45.83	17.66	<.05
	2,3	39.94, 42.24	3.23	>.05
	2,4	39.94, 45.83	19.30	<.05
	3,4	42.24, 45.83	6.47	>.05
Economic	1,2	38.77, 41.10	***	-
	1,3	38.77, 41.78	1.39	>.05
	1,4	38.77, 43.86	3.81	>.05
	2,3	41.10, 41.78	***	-
	2,4	41.10, 43.86	2.47	>.05
	3,4	41.78, 43.86	1.27	>.05
Aesthetic	1,2	35.23, 34.37	***	-
	1,3	35.23, 36.51	***	-
	1,4	35.23, 39.40	2.48	>.05
	2,3	34.37, 36.51	1.58	>.05
	2,4	34.37, 39.40	7.97	>.05
	3,4	36.51, 39.40	2.38	>.05
Social	1,2	42.69, 42.48	***	-
	1,3	42.69, 41.03	***	-
	1,4	42.69, 40.26	1.44	>.05
	2,3	42.48, 41.03	1.24	>.05
	2,4	42.48, 40.26	2.66	>.05
	3,4	41.03, 40.26	***	-
Political	1,2	35.53, 37.17	***	-
	1,3	35.53, 40.05	6.01	>.05
	1,4	35.53, 40.31	6.45	>.05
	2,3	37.17, 40.05	5.69	>.05
	2,4	37.17, 40.31	6.17	>.05
	3,4	40.05, 40.31	***	-
Religious	1,2	50.31, 44.94	5.43	>.05
	1,3	50.31, 38.39	25.39	<.05
	1,4	50.31, 30.34	68.44	<.05
	2,3	44.94, 38.39	17.81	<.05
	2,4	44.94, 30.34	80.73	<.05
	3,4	38.39, 30.34	22.15	<.05

*** F-ratio not computed, value less than 1.00.

Table 6:15. A PRIORI ORTHOGONAL COMPARISONS BETWEEN ALL POSSIBLE PAIRS OF MEANS IN EACH OF THE SIX SETS IN DENOMINATIONAL GROUP "B." ($F'_{.05}=6.46$)

PERSONALITY INTEREST	RELIGIOSITY GROUPS COMPARED	MEAN SCORES COMPARED	"F"	P
Theoretical	1,2	37.39, 38.88	***	-
	1,3/4	37.39, 41.33	1.11	> .05
	2,3/4	38.88, 41.33	***	-
Economic	1,2	34.56, 36.89	***	-
	1,3/4	34.56, 42.17	3.61	> .05
	2,3/4	36.89, 42.17	1.76	> .05
Aesthetic	1,2	38.44, 38.74	***	-
	1,3/4	38.44, 38.67	***	-
	2,3/4	38.74, 38.67	***	-
Social	1,2	46.06, 43.95	***	-
	1,3/4	46.06, 47.83	***	-
	2,3/4	43.95, 47.83	1.41	> .05
Political	1,2	34.44, 36.37	***	-
	1,3/4	34.44, 41.50	4.33	> .05
	2,3/4	36.37, 41.50	2.32	> .05
Religious	1,2	49.11, 45.47	2.50	> .05
	1,3/4	49.11, 28.50	39.05	< .05
	2,3/4	45.47, 28.50	26.83	< .05

*** F-ratio not computed, value less than 1.00.

The comparisons of pairs of means, coupled with the analysis of the differences between sets of means with denomination held constant, leads to one general statement about the relationship between aggregate religiosity and the relative dominance of the six personal values: there is none. This of course, is excepting religious values. A relationship does exist between denomination and the relative dominance of the six values.

As for total personality orientation, a pattern is apparent in all levels of the analysis. The relative dominance of theoretical values decreases as aggregate religiosity increases, as also do economic and political values. However, only with respect to economic values can this be called statistically significant, and then, only in denominational group "A." Social and religious values appear to be directly related to aggregate religiosity, however, the homogeneity of these findings is disturbed by the mean for social values of aggregate religiosity group "2" within denominational group "B" where the score is lower than for either group "1" or group "3/4." The relative dominance of aesthetic values does not appear to be related to aggregate religiosity.

It is concluded therefore, that with the exception of religious values, the relative dominance of personality interests is not significantly related to aggregate religiosity in the sample. Nevertheless, a non-significant, but interesting pattern is evident and it may be said that individuals in the sample with "high" aggregate religiosity tend towards dominant social and religious personality interests, while the "lows" tend towards dominant theoretical, economic and political values, sharing with the "highs" the social personality interest. But, again, these "tendencies" are not significant. The significant finding of the comparative analysis of dominant personality interests duplicates the one finding that has remained constant in the sample: some people are more religious than others, but this difference has little consequence for anything other than religious behavior.

CHAPTER VII

CONCLUSIONS

I. SUMMARY OF FINDINGS

Aggregate Religiosity. It was hypothesized that religiosity was a unitary phenomenon which could be measured by five indicators - ritual participation, doctrinal orthodoxy, devotionism, associationism, and religious evaluation. Thirty-seven items were devised as measures of these indicators. However, when a correlation matrix was cast for the purpose of testing the homogeneity of the indicators, a generally low level of association was found between them. After those items which were deemed not to differentiate the respondents had been eliminated, only thirteen statistically significant items remained.

These were:

1. The frequency with which the respondent attended religious services.
2. The percentage of the total family income which the respondent's family gave to the church.
3. Belief about the nature of God.
4. Belief that prayer is answered.
5. Belief in a life after death.

6. Belief that God expects regular worship.
7. Belief about the nature of Christ.
8. Belief about the authority of the Bible.
9. Whether the respondent asks a blessing at mealtime, or not.
10. The frequency of the respondent's private prayer.
11. Whether the respondent consciously asks God's will, or not, before making decisions.
12. The frequency with which the respondent reads the Bible.
13. The score for religious values on the Allport-Vernon-Lindzey, "Study of Values."

After the general low level of association was observed within the matrices for the separate dimensions of religiosity, and after twenty-four of the items were discarded, the concept of "dimensions" - the five indicators - was dropped. The remaining thirteen items were then used collectively as the basis for the development of an aggregate religiosity scale. The intent was to place individuals in the sample along a religiosity continuum according to relative level of aggregate religiosity, however, since the measurement did not meet the rigid requirements of an interval scale, the sample was partitioned instead into four aggregate religiosity groups. The sample broke down by aggregate religiosity group in this manner: 16.4% in aggregate religiosity group "1" or high aggregate religiosity; 35.8% in group "2" or moderately high aggregate religiosity; 28.2% moderately low, group "3;" and 19.6% of the sample were found in aggregate religiosity group "4" or low aggregate religiosity.

Aggregate Religiosity and Census-Data Variables. On the basis of the findings of other studies, it was predicted that a relationship

would exist between aggregate religiosity and the census-data variables. In the sample, however, none of the predicted relationships was found to be statistically significant here. With respect to the relationship between indicators of social class and aggregate religiosity, a pattern of inverse relationship was observed between measurements of education, income and occupation and the measurement of aggregate religiosity. There was an association between high aggregate religiosity and lower levels of income and education and "blue collar" occupations. This association was not, however, statistically significant.

Aggregate Religiosity and Denomination. A distinct and significant relationship between aggregate religiosity and denominational affiliation was found to exist in the sample. A comparatively high level of aggregate religiosity was associated with members of the Roman Catholic, Lutheran, Baptist, and Mennonite churches as well as with members of some of the smaller Protestant denominations. A comparatively lower level of aggregate religiosity was associated with members of the Anglican, Presbyterian and United churches.

Aggregate Religiosity and Social Orientation. One major hypothesis of this study was that individuals with a high level of aggregate religiosity would share a common orientation towards all aspects of social life. It was further predicted that this orientation would be independent of socio-religious group membership. The relationship between aggregate religiosity and each of thirty-eight indicators in seven areas of "social orientation" was tested, including: religious attitudes, attitudes towards moral issues, charitable and related activity,

attitudes towards occupation, personal economic activity and attitudes, political attitudes and activity, and leisure activity.

Of the thirty-eight variables tested, no statistically significant relationship with aggregate religiosity was found to be the case for thirty-one. Of the seven statistically significant relationships, three were attributed to the effects of an intervening variable, denomination, and in two more, the results were inconclusive - with denomination held constant, the relationship was found to be significant in only one of the two denominational groups.

Only two of the thirty-eight variables tested were found to be significantly related to aggregate religiosity in the sample. The "high" aggregate religiosity groups were found to be significantly less tolerant of moderate drinking than were the "low" aggregate religiosity groups, while also showing greater consideration to a "vocation of service to other people" as a desirable occupational characteristic than do the "low" aggregate religiosity groups.

Aggregate Religiosity and Personality Orientation. A strong relationship between socio-religious group membership and personality orientation - as measured by the Allport-Vernon-Lindzey "Study of Values"¹ - was found to exist in the sample. However, with denomination held constant, an almost negligible relationship was demonstrated between aggregate religiosity and the relative dominance of high personal values. A pattern of association was observed between "high" aggregate religiosity

¹
Op. Cit.

and dominant social and religious values, and between "low" aggregate religiosity and dominant theoretical, economic, political, and social values. This latter observation would tend to indicate that the pattern of dominant values varies among the "low" aggregate religiosity groups with the common factor being the subordination of aesthetic and religious values. In general, it was found that dominant social values and subordinate aesthetic values characterized all four aggregate religiosity groups. Few of these observed relationships were, however, statistically significant.

The only significant relationships between aggregate religiosity and dominant personal values were found with respect to economic and religious values. Within denominational group "A" - the group composed of Anglicans, Uniteds, Presbyterians in the sample - low aggregate religiosity was determined to be associated with dominant economic values while aggregate religiosity groups "1" and "2" scored significantly low on this personality interest. Not unexpectedly, significant differences were observed between the four aggregate religiosity groups on the relative dominance of religious values - dominant religious values being associated with the "high" aggregate religiosity groups. Considering the fact that aggregate religiosity was found to be significantly associated with denominational affiliation, it is interesting to also note here that a significant difference existed between the two denominational groups on the relative dominance of religious personality interest with denominational group "B" - Roman Catholic and other, smaller Protestant denominations - scoring this value significantly higher than did denomi-

national group "A."

II. CONCLUSIONS

Methodology. The major emphasis of this study - as has been indicated several times in the text - was placed on the methodological problems of how individuals may be distinguished on the basis of religious commitment. For this reason, an elaborate conceptual statement of the nature of "religiosity" was formulated embodying the notion of "dimensions" along which the different aspects of the phenomenon could be understood. The intention of the methodology in this respect was two-fold: (1) to demonstrate the existence of religiosity as a unitary phenomenon; and (2) to develop a measurement of religiosity - based on the concept of dimensions of religiosity - which could be used to distinguish individuals on the basis of religious commitment.

The Nature of Religiosity. It was intended that the unitary nature of the phenomenon be demonstrated and validated. This was to be done by first testing the homogeneity of the indicators within each of the postulated religiosity dimensions, and second, by testing for homogeneity between the aggregate measurements of each dimension. When, however, the indicators were cast into the appropriate correlation matrices, exceedingly low levels of association were observed. This observation was also held when the thirty-seven separate indicators were cast in one large correlation matrix. With non-discriminating indicators removed, certain conclusions were reached concerning the efficacy of the concept of religiosity dimensions. Associationism was found to be irrelevant to the measurement of religiosity, while devotionism and ritual

participation were found to be only partly associated with the ultimate measurement. Only doctrinal orthodoxy and religious evaluation were retained for the measurement in anything resembling their original form. Thus, after the devastation of the dimensions as postulated, the notion of dimensions of religiosity as conceived in the theoretical framework was not validated in the sample.

The conclusion reached, on the basis of the analysis, was that religiosity, as perceived conceptually, did not exist in the sample, and that the notion of dimensions of religiosity was falsified. Nevertheless, there is a distinct possibility that this conclusion was reached, not because religiosity has no existence as a unitary phenomenon, but because the method used in the attempt to validate the theory was misleading. Despite the postulated dimensions of religiosity, the method used in this study attempted to locate the various indicators on an unidimensional scale. It is now apparent that multidimensional scaling techniques will be necessary to properly test the theory. Therefore, the conclusions drawn on the results of this research have not been generalized.

The Measurement of Aggregate Religiosity. Many of the conclusions that have been drawn from this research are negatively phrased, and superficially, this negativeness which contradicts the findings of a considerable amount of previous research might be attributed to the faulty measurement of aggregate religiosity. The basic question here is: Has the central problem of the study been solved, that is, has a valid measurement been developed which meaningfully distinguishes individuals on the basis of religious commitment?

The measurement of aggregate religiosity which was developed in this study may be questioned on several points. First there is the problem of the "meaningfulness" of the measurement. As a concept, religiosity was understood along five dimensions involving a wide variety of related phenomena. The ultimate measurement, however, was derived in a "salvage operation" after the concept had been discarded. Does the measurement, therefore, which was put together as an aggregate of only those indicators which showed unidimensional homogeneity, remain meaningful after the conceptual basis has been rejected?

The method of construction of the aggregate measurement may also be questioned. Despite the assumption that all weights are positive, the fact that the "final score" is based on a proportion introduced a de facto negative weight to the scoring method. Thus, two individuals both scoring on the same seven indicators may receive different aggregate religiosity scores if one responded on all thirteen indicators while the other responded on only ten.

The contention that a meaningful measurement has been developed is most seriously placed in doubt with the assumption that all weights are equivalent. Whether or not any two individuals' aggregate religiosity is the same or different depends entirely upon the assumptions made as to the relative weight to be accorded each of the thirteen indicators. The fact that the indicators intercorrelate and are thus assumed to be homogeneous does not provide sufficient justification for the assumption that all weights are equal. The assumption, therefore, is doubtful, and if false, the scale is positively misleading.

At worst then, the measurement of aggregate religiosity could possibly not distinguish individuals on the basis of religious commitment at all. Certainly, the measurement does not present a meaningful solution to this fundamental problem. At best, the method of measuring aggregate religiosity only replicates previous methods which used nominal and ordinal levels of measurement. The crucial question then is: Does the measurement do what it purports to do; does it distinguish individuals on the basis of differential religiosity?

The host of essentially negative conclusions derived from the analysis of the relationship between aggregate religiosity and social and personality orientations, where positive association had been predicted, suggests that the sample has not been differentiated on the basis of religious commitment. However, upon reconsideration, it was found that the negativeness of the conclusions does not flatly contradict previous studies, as was supposed. Lenski, for example, demonstrated the relationship between certain indicators of religiosity and respondents' political, economic, and family values, in what was the most ambitious study in this area to date. However, Lenski emphasized the patterning of relationships instead of tests of statistical significance rather than "overlook a particular relationship on the grounds that it is not statistically significant, when in fact it may be socially quite significant."¹ Further, in his statistical tests, Lenski made use of the uncommon .10 level of significance, while the more rigorous .05 level was employed in this study.² Had this more permissive level been used

¹Lenski, Op. Cit., p. 333.

²Ibid., p. 338.

here, more positive findings would have resulted. In addition, many of the predictions concerning the relationships between aggregate religiosity and variables such as age and sex were based on the teachings and writings of Prof. Pickering involving analysis of frequency-distributions without tests of statistical significance. After the findings of this study began to contradict Pickering's findings, his studies were reviewed and it was found that his conclusions were based solely on subjective interpretation of patterns of frequency distribution. The negativeness of the results of research in the area of individual and his religion has also been noted by C.Y. Glock.¹ Therefore, it is concluded that the essentially negative conclusions of this research do not in themselves support the conclusion that the aggregate measurement of religiosity fails to distinguish the members of the sample on the basis of religious commitment.

Two of the positive findings of this study suggest that the aggregate measurement does in fact measure religiosity. First, a significant relationship was found between aggregate religiosity and socio-religious group membership. This is one of the relationships which was predicted on the basis of Lenski's findings. Lenski showed great variation between denominational groups on his religiosity indicators, and it is probable that, if the aggregate measurement developed in this study did not measure religiosity, this relationship would not have been ob-

¹Glock, "The Sociology of Religion," Op. Cit., p. 167-168, 170-173; and "On the Study of Religious Commitment," Op. Cit., pp. S106 - S108.

served in this analysis.¹ Second, in comparisons of all possible sets of mean scores for personality values which was carried out in the analysis, the only significant differences between the mean scores for the four aggregate religiosity groups was that with respect to religious values. Put another way, while significant differences were observed between the mean scores for the four aggregate religiosity groups in religious values, significant similarities were observed in the mean scores for the other five values. This suggests that the sample has in fact been differentiated on the basis of religiosity, but that little real difference exists in the social and personality orientations of the four aggregate religiosity groups.

It is concluded that the measurement developed for this study is a valid measurement, that the aggregate religiosity measurement does distinguish individuals in the sample on the basis of religious commitment. However, the scale is not the "meaningful" measurement that Glock would like to see developed.² The limitations of this measurement are four: (1) if the weights for each of the indicators are not equal, as assumed, the scale is potentially misleading; (2) since the effect of both positive and negative weights is introduced in the scoring method, the measurement is potentially ambiguous; (3) the measurement attempts to represent a multidimensional phenomenon on a unidimensional scale, thus distorting the concept of religiosity; and (4) the aggregate reli-

¹Lenski, Op. Cit., p. 362.

²Glock, "The Sociology of Religion," Op. Cit.; and "On the Study of Religious Commitment," Op. Cit.

giosity measurement does not account for all the expressions - dimensions - of religious commitment and thus is incomplete. However, despite these limitations, the method does crudely distinguish levels of religiosity, and in this respect is no worse than previous measurements mentioned in Chapter II of the study.

Aggregate Religiosity as a Dependent Variable. It was predicted that census-data variables would be associated with the measurement of aggregate religiosity in the sample. They did not, and this hypothesis was rejected. However, in several instances - most notably with the three indicators of social class; education, income and occupation - a distinct, but not significant, pattern of relationship was observed. As the sampling plan was designed to partially hold these variables constant, this result was not surprising. It was predicted that age and sex would be significantly associated with aggregate religiosity since these variables were not held constant; however, this was found not to be the case.

On the basis of the non-significant patterns observed, it was concluded that significant relationships would exist between aggregate religiosity and marital status, education, income and occupation. The second hypothesis of this study - aggregate religiosity as the dependent variable, will be significantly influenced by age, sex, marital status, occupation, education, and income - was therefore rejected only as it pertains to this sample.

Aggregate religiosity and denomination were found to be significantly related, as expected, and this may be the most enduring substantive finding of the study. It was demonstrated that aggregated religio-

sity was virtually unrelated to secular activity in the sample, but in the few cases where significant relationships were observed, denomination was found to be a significant intervening variable. With denomination held constant, the relationship between aggregate religiosity and the indicator of social or personality orientation was found not to be statistically significant.

The third hypothesis of this study - aggregate religiosity, as the dependent variable will be significantly influenced by the independent variable, denomination (socio-religious group membership) - was accepted. One of the basic questions posed at the outset of this study was: What are the basic causes of differential religious commitment? In a word, and on the basis of this study, the answer would seem to be "denomination." Aggregate religiosity appears to be a function of denomination. Future research will have to carefully analyze the nature of the differences between denominations, therefore, if an understanding of just what causes an individual to be religious is to be gained.

Aggregate Religiosity and Social and Personality Orientations.

The fourth hypothesis predicted that relationships would exist between aggregate religiosity and aspects of social and personality orientation, and that a distinctive orientation towards all aspects of life would be associated with a high level of aggregate religiosity. The few differences observed are hardly enough to substantiate the first part of this hypothesis and together hardly constitute an "orientation." The fourth hypothesis - aggregate religiosity, as the independent variable, will

significantly influence the nature and type of social and personality orientations ... (and) a common type of social and personality orientation will be associated with high aggregate religiosity - is rejected.

However, since the measurement of aggregate religiosity is open to serious question, the results have not been generalized, but rather, pertain to this sample only. The virtually unanimous nature of the substantive findings suggest that real differences simply do not exist - either in the sample, or as is probable, in the population from which the sample was drawn. If the hypothesis had been correct, greater differences would have been observed, despite the crude nature of the aggregate religiosity measurement.¹

III. RECOMMENDATIONS FOR FUTURE STUDY

Three fundamental problems were put forward early in this study:

(1) How may individuals be meaningfully distinguished on the basis of religious commitment? (2) What are the sources of differential commitment? And (3) what are the consequences of different levels of commitment for social behavior?² While these problems have not been satisfactorily

¹It is this conclusion that is most disturbing to my own understanding of the sociology of religion, for it denies a basic proposition that religion has consequences in the secular spheres of social life. Prof. Pickering once maintained that the only difference between a person who goes to church and one who does not, is that one goes to church. On the basis of the findings of this study, I would have to concede him the point - reluctantly.

²See: Glock, "The Sociology of Religion," Op. Cit., p. 167. Also, Stark & Glock, American Piety: The Nature of Religious Commitment, Op. Cit., to be followed by volumes on the sources and consequences of religious commitment.

solved by this study, insights have been gained as to the direction in which the ultimate answers may lie.

The first problem is to describe the nature of religiosity and to specify its dimensions in full. As was previously suggested, multi-dimensional scaling methods used in conjunction with Glock's theoretical position will probably prove to be the most practical approach.¹ Only after religiosity as a social phenomenon is fully understood may meaningful approaches be made to the subsidiary problem of distinguishing individuals on the basis of religious commitment.

Secondly, future research should then focus on the next problem: What are the causes of differential religious commitment? The particular emphasis here should be placed on the differences between denominations and on the relationship between denominational affiliation and religiosity.

Finally, more extensive and sophisticated research should be conducted into the consequences of differential religious commitment for personality and social behavior. Such a study should meticulously examine as much of the area of social values, attitudes and behavior as is possible, in order to ascertain whether real differences exist which could be attributed to the influence of religiosity, and to specify fully the nature of such differences.

Only in this way will sociology move closer to an understanding of the individual and his religion.

¹ See: Glock, "On the Study of Religious Commitment," Op. Cit.

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A P P E N D I C E S

Appendix 1: CENSUS VARIABLES: A COMPARISON OF SAMPLE STATISTICS
AND APPROPRIATE PARAMETERS.¹

Breakdown by Age and Sex.

AGE	SEX			
	MALE		FEMALE	
	SAMPLE	POPULATION	SAMPLE	POPULATION
20-24*	n=0	n=108	n=1	n=74
25-34*	n=6	n=256	n=14	n=272
35-44	17.2% n=28	17.1% n=388	17.2% n=28	20.5% n=354
45-54	16.5% n=27	15.6% n=355	14.7% n=24	15.6% n=354
55-64	14.7% n=24	8.2% n=186	8.1% n=13	7.9% n=179
65-69	3.1% n=5	2.2% n=51	2.4% n=4	2.7% n=63
Over 70	3.7% n=6	4.4% n=102	2.4% n=4	4.9% n=114
TOTALS	55.2% n=90	47.5% n=1082	44.8% n=73	52.5% n=1166

* Census figures for this age group include a large number of single persons living at home, who were not eligible for the sample. Therefore, this group has been omitted from the percent breakdown.

Breakdown by Marital Status.

MARITAL STATUS	SAMPLE	POPULATION
Married	94.0% n=173	93.3% n=2454
Other	6.0% n=11	6.7% n=175
TOTALS	100.0% n=184	100.0% n=2629

1. The parameters are derived from the 1961 Census of Canada, Bulletin CT-17, Population and Housing Characteristics by Census Tracts - Winnipeg. The data from the 1966 census was unavailable at the time this was written. The figures quoted are for census tract #64, which encompasses about 67% of the survey area. Tract #65 includes the remainder of Fort Garry which differs from the sample area. See map, p. 30a.

Breakdown by Birthplace.

PLACE OF BIRTH	SAMPLE	POPULATION
In Canada	82.5% n=149	82.8% n=4218
Outside Canada	17.5% n=32	17.2% n=898
TOTALS	100.0% n=181*	100.0% n=5216

* Three respondents did not state place of birth.

Breakdown by Education.

LEVEL OF EDUCATION	SAMPLE	POPULATION
Elementary	2.7% n=5	10.8% n=307
High School - 1-2 years	8.7% n=16	14.2% n=421
- 3-5 years	65.8% n=121	51.9% n=1514
University	22.8% n=42	23.1% n=680
	100.0% n=184	100.0% n=2922

Breakdown by Occupation.

SAMPLE OCCUPATIONAL GROUPING	CENSUS OCCUPATIONAL GROUPING	SAMPLE	POPULATION
Blishen Classes 1-2 -	Managerial; Professional and Technical.	54.3% n=62	52.8% n=716
Blishen Classes 3-4 -	Clerical; Sales; Service and Recreation.	27.2% n=31	26.8% n=363
Blishen Classes 5-7 -	Transport and Communication; Primary; Craftsmen; Labourers.	18.5% n=20	20.4% n=278
	TOTALS	100.0% n=114	100.0% n=1357

Breakdown by Denomination.

DENOMINATION	SAMPLE	POPULATION
Anglican	26.5% n=47	32.7% n=1638
Baptist	2.2% n=4	2.0% n=99
Lutheran	3.4% n=6	4.3% n=218
Presbyterian	1.7% n=3	1.7% n=86
Roman Catholic	10.1% n=18	8.7% n=431
United	47.7% n=85	44.5% n=2216
Others	8.4% n=15	6.1% n=304
<hr/>		
TOTALS	100.0% n=178*	100.0% n=4992

* Six respondents claim no denominational preference.

Appendix 2: PREVIOUS DENOMINATIONAL AFFILIATION OF RESPONDENTS
AND SPOUSES WHO HAVE CHANGED DENOMINATION, AND DE-
NOMINATION OF SPOUSE, FATHER, AND MOTHER BY DENOM-
INATION OF RESPONDENT.

Previous Denomination of Respondents who have Changed.

CHANGE TO	CHANGE FROM	N.	%
United	Anglican	11	19.7
	Roman Catholic	1	1.7
	Lutheran	2	3.5
	Baptist	2	3.5
	Presbyterian	6	10.6
	Church of Christ, Disciples	1	1.7
	Other	2	3.5
Anglican	United	8	14.2
	Roman Catholic	2	3.5
	Baptist	2	3.5
	Presbyterian	3	5.3
	Methodist	1	1.7
	None	1	1.7
Roman Catholic	Anglican	2	3.5
	None	1	1.7
Lutheran	Mennonite	1	1.7
Baptist	Greek Orthodox	1	1.7
Other:			
Pentacostal	United	2	3.5
	Methodist	1	1.7
Ch. Science	United	1	1.7
Gr. Orthodox	Roman Catholic	1	1.7
Indep. Church	Presbyterian	1	1.7
None	United	3	5.3
	Roman Catholic	1	1.7
	Presbyterian	1	1.7
TOTALS		57	100.0

Previous Denomination of Spouses who have Changed.

CHANGE TO	CHANGE FROM	N.	%
United	Anglican	2	4.5
	Roman Catholic	1	2.3
	Baptist	3	6.8
	Presbyterian	4	9.1
	Church of Christ, Disciples	1	2.3
	None	1	2.3
Anglican	United	6	13.5
	Roman Catholic	1	2.3
	Lutheran	1	2.3
	Presbyterian	3	6.8
	Moral Re-Armament	2	4.5
Roman Catholic	United	2	4.5
	Lutheran	1	2.3
Lutheran	Anglican	1	2.3
	Roman Catholic	1	2.3
Baptist	United	1	2.3
	Anglican	1	2.3
	Mennonite	1	2.3
Presbyterian	Roman Catholic	1	2.3
Other:			
Pentacostal	United	2	4.5
Morman	United	1	2.3
Unitarian	United	1	2.3
Indep. Church	Baptist	1	2.3
None	United	2	4.5
	Roman Catholic	2	4.5
TOTALS		44	100.0

Denomination of Spouse by Denomination of Respondent.

DENOMINATION OF RESPONDENT	DENOMINATION OF SPOUSE	N.	%
United	United	65	35.3
	Anglican	7	3.5
	Roman Catholic	4	2.2
	Baptist	1	0.6
	Presbyterian	1	0.6
	Mormon	1	0.6
	None	1	0.6
Anglican	Anglican	38	20.6
	United	7	3.5
	Roman Catholic	1	0.6
Roman Catholic	Roman Catholic	10	5.4
	United	3	1.6
	Lutheran	1	0.6
	Baptist	1	0.6
	Presbyterian	1	0.6
	Uk. Orthodox	1	0.6
Lutheran	Lutheran	6	3.2
Baptist	Baptist	4	2.2
Presbyterian	Presbyterian	1	0.6
	Anglican	1	0.6
Mennonite	Mennonite	8	4.4
Other: Pentacostal Gr. Orthodox Unitarian Indep. Church Ch. Science	Pentacostal	2	1.0
	Gr. Orthodox	1	0.6
	Unitarian	1	0.6
	United	1	0.6
	Indep. Church	1	0.6
	None	1	0.6
None	None	3	1.6
	United	1	0.6
	Lutheran	1	0.6
	Presbyterian	1	0.6
NOT APPLICABLE	8	4.4
TOTALS		184	100.0

Denomination of Father by Denomination of Respondent.

DENOMINATION OF RESPONDENT	DENOMINATION OF FATHER	N.	%
United	United	41	22.3
	Anglican	11	6.0
	Roman Catholic	1	0.6
	Lutheran	1	0.6
	Baptist	1	0.6
	Presbyterian	21	11.4
	None	4	2.2
Anglican	Anglican	24	13.1
	United	7	3.5
	Roman Catholic	2	1.0
	Baptist	3	1.6
	Presbyterian	6	3.2
	Methodist	1	0.6
	None	4	2.2
Roman Catholic	Roman Catholic	14	7.6
	Anglican	2	1.0
	Lutheran	1	0.6
Lutheran	Lutheran	4	2.2
	Baptist	1	0.6
	Mennonite	1	0.6
Baptist	Baptist	3	1.6
	Gr. Orthodox	1	0.6
Presbyterian	Presbyterian	2	1.0
	Baptist	1	0.6
Mennonite	Mennonite	8	4.4
Other: Pentacostal Unitarian Gr. Orthodox Indep. Church Ch. Science	United	1	0.6
	Baptist	1	0.6
	United	1	0.6
	Roman Catholic	1	0.6
	Roman Catholic	1	0.6
	Presbyterian	1	0.6
	None	1	0.6
None	None	2	1.0
	United	2	1.0
	Presbyterian	1	0.6
	Jewish	1	0.6
NOT APPLICABLE	6	6.2
TOTALS		184	100.0

Denomination of Mother by Denomination of Respondent.

DENOMINATION OF RESPONDENT	DENOMINATION OF MOTHER	N.	%
United	United	45	24.3
	Anglican	15	8.1
	Roman Catholic	3	1.6
	Lutheran	4	2.2
	Presbyterian	17	9.1
	None	1	0.6
Anglican	Anglican	26	14.0
	United	8	4.4
	Roman Catholic	2	1.0
	Lutheran	1	0.6
	Baptist	1	0.6
	Presbyterian	6	3.2
	Ch. Science	2	1.0
Roman Catholic	Roman Catholic	15	8.1
	Anglican	2	1.0
	Presbyterian	1	0.6
Lutheran	Lutheran	4	2.2
	Roman Catholic	1	0.6
	Mennonite	1	0.6
Baptist	Baptist	3	1.6
	Gr. Orthodox	1	0.6
Presbyterian	Presbyterian	3	1.6
Mennonite	Mennonite	8	4.4
Other: Pentacostal Unitarian Ch. Science Gr. Orthodox Indep. Church	United	2	1.0
	Unitarian	1	0.6
	Baptist	1	0.6
	Ch. Science	1	0.6
	Roman Catholic	1	0.6
	Presbyterian	1	0.6
None	None	1	0.6
	United	2	1.0
	Roman Catholic	1	0.6
	Baptist	1	0.6
	Presbyterian	1	0.6
NOT APPLICABLE	1	0.6
TOTALS		184	100.0

Appendix 3: THE INTERVIEW SCHEDULE.

The form of the interview schedule used in the survey ran to 26 pages in order to accommodate the precoding and to facilitate the transfer of the data to punch-cards. In order to reduce the length of this appendix, therefore, the content, but not the form, of the schedule is reproduced here.

There are many things about an individual that help to make him a particular person and influence the way he will act, such as, for example, whether he is married or single, how old he is, his education, his income, etc. My first questions are designed to determine these variables.

1. Sex . (by observation) ... (Male; Female)
2. What is your marital status? ... (Married; Single; Widow(er); Separated; Divorced; No Response)
3. How much education do you have? ... (Some Elementary; Elementary; Some Junior High School; Junior High School; Some High School; Junior Matriculation; Senior Matriculation; Some Post Secondary; Bachelor's Degree; Post Graduate)
4. How long have you lived at this address? ... (Up to 5 years; 6 - 10 years; 11 - 15 years; 16 - 20 years; 21 - 25 years; Over 25 Years; No Response)
5. Do you own this home or are you renting? ... (Own; Rent; No Response)
6. What is your occupation at the present time and what sort of business is it in? ... (Specify _____; -Blisshen Class 1; Class 2; Class 3; Class 4; Class 5; Class 6; Class 7; Retired or Unemployed; Housewife; No Response)
7. Do you work for yourself or are you employed by someone else? ... (Self-employed; Employed by other; No Response; Not Applicable)

IF RESPONDENT NOW A HOUSEWIFE, ASK Q.8 AND Q.9. IF NOT, PROCEED TO Q. 10.

8. Have you ever held a full time job outside the home? ... (Yes; No; No Response; N/A)

9. (IF YES TO Q.8) What type of work did you do and what sort of business was it in? ... (Blisshen Class 1; Class 2; Class 3; Class 4; Class 5; Class 6; Class 7; N/A)

RESUME QUESTIONS FOR ALL RESPONDENTS.

10. Were you born in Canada ... (Yes; No; Don't know)
11. Was your father born in Canada? ... (Yes; No; Don't know)
12. Was your mother born in Canada? ... (Yes; No; Don't know)
13. How old are you at this present time? (exact age: _____) ... (21 - 30; 31 - 40; 41 - 50; 51-60; 61 - 70; Over 70; No Response)
14. What was the total income of your family in 1966, considering all sources such as rents, profits, wages, commissions, interest, and so on? ... (Up to \$5,999; \$6 - 8,999; \$9 - 11,999; \$12 - 14,999; \$15 - 17,999; \$18 - 20,999; \$21 - 23,999; \$24 - 26,999; \$27 - 29,999; Over \$30,000)
15. What was the income of the head-of-the-house in 1966? ... (Up to \$5,999; \$6 - 8,999; \$9 - 11,999; \$12 - 14,999; \$15 - 17,999; \$18 - 20,999; \$21 - \$23,999; \$24 - \$26,999; \$27 - 29,999; Over \$30,000)
16. What is the approximate value which you would place on your house? ... (Up to \$15,000; \$16 - 20,000; \$21- 25,000; \$26 - 30,000; \$31 - 35,000; \$36 - 40,000; \$41 - 45,000; \$46 - 50,000; Over \$50,000)

Now, Mr. (Mrs., Miss) _____, I would like to ask you some questions about your religious background.

17. First, to which religious denomination do you officially belong (whether or not you attend,) if any? ... (United; Anglican; Roman Catholic; Lutheran; Baptist; Presbyterian; Other (specify _____); None; No Response)
18. Have you always been a (name denomination)? ... (Yes; No; No Response)
19. (IF NO TO Q. 18) What was your denominational preference previously? ... (United; Anglican; Roman Catholic; Lutheran; Baptist; Presbyterian; Other (specify: _____); None: N/A)
20. What was the main reason that you made this change?
21. Approximately when did you make this change? ... (Within the past year; 1 - 5 years ago; 6 - 10 years ago; 11 - 15 years ago; 16 - 20 years ago; 21 - 25 years ago; More than 25 years ago; N/A)

22. What was the specific denominational preference of your father (or male guardian) while you were growing up? ... (United; Anglican; Roman Catholic; Lutheran; Baptist; Presbyterian; Other (specify: _____); None; N/A)
23. What was the specific denominational preference of your mother (or female guardian) while you were growing up? ... (United; Anglican; Roman Catholic; Lutheran; Baptist; Presbyterian; Other (specify: _____); None; N/A)
24. How often, if ever, have you attended religious services in the past year? ... (Once a week or more; 2 - 3 times a month; Once a month; More than 6 times; 6 times or less; Not at all; No response)
25. Is the church which you usually attend in Fort Garry, or is it outside this municipality? ... (Within Fort Garry; Outside Fort Garry; Do not attend; No response)
26. Are you a member of that congregation or parish? ... (Yes; No; Don't know; N/A)
27. How long have you been attending services there? ... (Less than one year; 1 - 2 years; 3 - 5 years; 6 - 10 years; 11 - 20 years; More than 20 years; N/A)
28. Which of the following is the main reason that you go to church? ... (Because I've always gone; To meet my friends; Family expects it; To worship God or pray; God expects it of me; To hear the sermon; To learn to be a better person; It makes me feel better; Other (specify: _____); N/A)
29. Do you take part in any of the activities or organizations of your church other than attending services? ... (Yes; No; N/A)
- IF YES TO Q. 29, ASK Q. 30 to Q. 36; IF NO PROCEED DIRECTLY TO Q. 37.
30. Do you participate in any of the administrative activities, such as the Vestry or the Official Board? ... (Yes; No; N/A)
31. Do you participate in any study activities, such as an adult study group? ... (Yes; No; N/A)
32. Do you teach Sunday School or engage in any other teaching activities? ... (Yes; No; N/A)
33. Are you a leader in any mid-week youth work? ... (Yes; No; N/A)
34. Do you take part in any of the social activities, such as a couples'

club? ... (Yes; No; N/A)

176

35. Do you belong to a men's organization? women's auxiliary? ...
(Yes; No; N/A)
36. How often have you done these things in the past year? ... (Once
a week or more; 2 - 3 times a month; Once a month; More than
six times; 6 times or less; n/a)

ASK Q. 37 to Q. 43 ONLY IF RESPONDENT IS MARRIED: IF RESPONDENT IS NOT
MARRIED, PROCEED DIRECTLY TO Q. 50.

37. To which religious denomination does your wife (husband) offici-
cially belong (whether or not (s)he attends.) ... (United; Angli-
can; Roman Catholic; Lutheran; Baptist; Presbyterian; Other
(specify: _____); None; N/A)
38. Has your wife (husband) always been a (name denomination)? ...
(Yes; No; Don't know; N/A)
39. (IF NO TO Q. 38) What was his (her) denominational preference
previously? ... (United; Anglican; Roman Catholic; Lutheran;
Baptist; Presbyterian; Other (specify: _____); None; N/A)
40. Why did (s)he change?
41. When approximately did (s)he make this change? ... (Within the
past year; 1 - 5 years ago; 6 - 10 years ago; 11 - 15 years ago;
16 - 20 years ago; 21 - 25 years ago; More than 25 years ago;
Don't know; N/A)
42. All things being considered, would you say that you and your wife
(husband) see eye-to-eye on religious matters, or not? ... (Yes;
No; N/A)
43. Do you have any children? ... (Yes; No; N/A)

ASK Q. 44 TO Q. 49 ONLY IF RESPONDENT HAS CHILDREN: IF RESPONDENT DOES
NOT HAVE CHILDREN, PROCEED DIRECTLY TO Q. 50.

44. How many children do you and your wife (husband) have? ... (1;
2; 3; 4; 5; 6; 7; 8; 9 or more; N/A)
45. Do you feel that a twelve year old boy should be allowed to de-
cide for himself whether or not to attend church or Sunday school,
or should his parents make this decision for him? ... (Decide for
self; Parents decide; Don't know; N/A)
46. Do you encourage your children to pray, or not? ... (Yes; No; N/A)

47. Do you usually ask a blessing at mealtimes in your family? ...
(Yes; No; N/A)
48. Do you have religious discussions with your children? ... (Yes;
No; N/A)
49. Do you have family worship and/or Bible reading in your home?
... (Yes; No; N/A)

RESUME QUESTIONS FOR ALL RESPONDENTS

50. Some people wonder whether there is a God or not; how do you
feel? Do you believe that there is a God, or not? ... (Believe;
Do not believe; Do not know)

ASK Q. 51 TO Q. 60 ONLY IF RESPONDENT "BELIEVES" OR "DOES NOT KNOW":
IF RESPONDENT "DOES NOT BELIEVE," PROCEED DIRECTLY TO Q. 61.

51. Do you think that God is like a heavenly Father who is concerned
about you, or do you have some other belief? ... (Father; Some
other belief; N/A)
52. Do you believe that God answers people's prayers, or not? ...
(Yes; No; Don't know; N/A)
53. (IF YES TO Q. 52) Do you believe that God will always give people
what they ask for? ... (Yes; No; Don't know; N/A)
54. How often do you pray? ... (2 times a day or more; Once a day;
Several times a week; Once a week; 2 - 3 times a month; Once
a month or less; Never; N/A)
55. Do you believe that there will be some sort of life after death?
... (Yes; No; Don't know; N/A)
56. (IF YES TO Q. 55) Do you believe that there will be a judgment
of your present life in the life after death? ... (Yes; No;
Don't know; N/A)
57. Do you believe that, when they are able, God expects people to
worship him in their churches every week? ... (Yes; No; Don't
know; N/A)
58. Do you feel that your occupation - that is, the work which you do -
is as important in the sight of God as is the work of the clergy?
... (Yes; No; Don't know; N/A)
59. What do you believe about Jesus? Do you believe that He was God's
son, sent into the world to save sinful men; or would you say that

He was simply a good man and teacher; or do you have some other belief? ... (God's Son; Good man; Other belief; N/A)

60. When you have decisions to make in your everyday life, do you ask yourself what God would want you to do? ... (Often; Sometimes; Never; N/A)

RESUME QUESTIONS FOR ALL RESPONDENTS

61. At the present time, which of the following people or things have the greatest influence on your religious beliefs? ... (Friends; Teachers; Husband, wife or children; Parents; Minister or priest; Books; Television or radio; Other (specify: _____); No response)
62. When you were younger, which of the same list of people or things had the greatest influence on your religious beliefs? ... (Friends; Teachers; Husband, wife or children; Parents; Minister or priest; Books; Television or radio; Other (Specify: _____); No response)
63. Here are four statements which have been made about the Bible and I would like you to tell me which is closest to your own view.
- The Bible is God's word and all that it says is true.
 - The Bible was written by men inspired by God, and its basic religious and ethical statements are true, but, because the writers were men, it contains some human errors.
 - The Bible is a valuable book because it was written by wise and good men, but God had nothing to do with it.
 - The Bible was written by men who lived a long time ago and is of little use today.
64. How often have you read the Bible in the past year? ... (Twice a day or more; Once a day; Several times a week; Once a week; 2 - 3 times a month; Once a month; More than six times; Six times or less; Not at all; No response)
65. (IF NOT AT ALL TO Q. 64) Have you read the Bible at all since your childhood? ... (Yes; No; Don't remember; N/A)
66. Would you say that you talk about religion with the people where you work? ... (Often; Sometimes; Never; No response; N/a)
67. (IF EVER IN Q. 66) Have these talks about religion with the people where you work had any effect on your personal religious beliefs? ... (Yes; No; Don't Know: N/A)
68. Do you ever talk about religion with your neighbors? ... (Often;

Sometimes; Never; No response)

69. (IF EVER IN Q. 68) Have these talks had any effect upon your personal religious beliefs? ... (Yes; No; Don't know; N/A)
70. Thinking of those relatives whom you feel really close to, what proportion of them are the same denomination as yourself? ...
(All of them; Nearly all of them; More than half of them;
About half of them; Less than half but more than a few; Only a few of them; None of them; Don't know; N/A)
71. What proportion of your closest friends are the same denomination as yourself? ... (All of them; Nearly all of them; More than half of them; About half; Less than half but more than a few; Only a few of them; None of them; Don't know; N/A)
72. As a general rule, do you think that it is most desirable for Protestants (Catholics) to marry other Protestants (Catholics); or do you not consider this important? ... (Desirable; Not important; Don't know)
73. (IF RESPONDENT IS PROTESTANT AND INDICATED "DESIRABLE" IN Q. 72) Would you say that it was desirable for people of the same denomination to marry? ... (Desirable; Not important; Don't know; N/A)
74. If for some reason you decided to convert to Catholicism (Protestantism) tomorrow, do you think that any of your friends or relatives would try to discourage you? ... (Yes; No; Don't know; N/A)
75. Would you like to see your own denomination unite with any other denomination? ... (Yes; No; Don't know N/A)
76. (IF YES IN Q. 75) Which major denomination would you most like to see it unite with? ... (United; Anglican; Roman Catholic; Lutheran; Baptist; Presbyterian; Other (specify: _____); Don't know; All; N/A)
77. (IF YES IN Q. 75) Is there any major denomination which you would not like to see it unite with, and if so, which denomination is that? ... (United; Anglican; Roman Catholic; Lutheran; Baptist; Presbyterian; Other (specify: _____); Don't know; None; N/A)
78. Do you feel that there are any disagreements between what science teaches on the one hand and what your church teaches on the other? ... (Yes; No; Don't know: N/A)

79. (IF YES TO Q. 78) Would you say that these disagreements are very serious; somewhat serious; or not very serious?
80. All told, how much would you estimate that your family gave to the church last year? ... (Nothing; \$1 - 50; \$51 - 125; \$126 - 250; \$251 - 375; \$376 - 500; \$501 - 750; Over \$750; Don't know.)
81. How do you feel about gambling? From the moral standpoint, would you say that is is: always wrong to gamble; usually wrong; sometimes wrong; never wrong to gamble?
82. (IF ALWAYS OR USUALLY IN Q. 81) Do you feel that the government should have laws against gambling? ... (Yes; No; Don't know; N/A)
83. From the moral standpoint, would you say that moderate drinking is: always wrong; usually wrong; sometimes wrong; or never wrong?
84. (IF ALWAYS OR USUALLY IN Q. 83) Do you think that the government should have laws against drinking? ... (Yes; No; Don't know; N/A)
85. (IF SOMETIMES OR NEVER IN Q. 83) What about heavy drinking; from the moral standpoint, is it: always wrong; usually wrong; sometimes wrong; or never wrong?
86. From the moral standpoint, would you say that birth control is: always wrong; usually wrong; sometimes wrong; never wrong?
87. (IF ALWAYS OR USUALLY IN Q. 86) Should the government legislate against this practice? ... (Yes; No; Don't know; N/A)
88. Again, from the moral standpoint, do you feel that abortion is: always wrong; usually wrong; sometimes wrong; or never wrong?
89. (IF ALWAYS OR USUALLY IN Q. 88) Do you think that the government should have laws against this? ... (Yes; No; Don't know; N/A)
90. Finally, from the moral standpoint, how do you feel about divorce? Is it: always wrong; usually wrong; sometimes wrong; or never wrong?
91. (IF ALWAYS OR USUALLY IN Q. 90) And should the government have laws to greatly restrict this? ... (Yes; No; Don't know; N/A)
92. Do you think that the churches should take a public stand on such issues of External Affairs as Canada's position with respect to

the war in Viet Nam or the recognition of Mainland China? ...
(Yes; No; Don't know)

93. Do you think that the churches should take a public stand on such domestic issues in the area of social legislation as medicare, education, or anti-poverty measures? ... (Yes; No; Don't know)
94. Do you think that religious leaders ought to take a stand for or against some candidate for public office? ... (Yes; No; Don't know)
95. Which party did you vote for in the last Federal election? ...
(Liberal; Progressive Conservative; New Democratic; Social Credit; Don't know; Did not vote; No response)
96. Which party did you vote for in the last Provincial election? ...
(Liberal; Progressive Conservative; New Democratic; Social Credit; Don't know; Did not vote; No response)
97. Did you vote in the last municipal election? ... (Yes; No; Don't know)
98. Do you belong to a political party, and if so, which one is that? ...
(Do not belong; Liberal; Progressive Conservative; New Democratic; Social Credit; Other (specify: _____); No response)
99. Can you recall any ways in which your political opinions have been influenced by your religious beliefs? ... (Yes; No; Don't know)
100. (IF YES IN Q. 99) In what ways specifically?
101. In your opinion, does Canada give too much in foreign aid, about the right amount, or too little? ... (Too much; About right; Too little; Don't know)
102. When you wish to relax in the evening or on weekends, what kinds of pastimes do you usually pursue? I would like you to tell me your three favorite pastimes in the order of your preference - first choice, second choice, and then your third choice. ...
(Sports - golf, curling, hunting, swimming, etc.; Reading; Listening to the television, radio, records, etc.; Theatre, ballet, symphony, etc.; Visiting friends, private parties, etc.; Playing with the children; Hobbies, gardening, etc.; Movies, dancing, night-clubs, etc.; Loafing around or sleeping; Other (specify: _____);)

103. Now I am going to give you ten cards on which are listed things which people consider important in selecting a job, and I would like you to arrange these cards so that the one which you consider the most important is on the top, the second most important second, and so on until you come to the last card which you consider to be the least important. Please understand that we are asking you to tell us which characteristics you consider important, NOT those which you find in your present occupation.
- A chance to add to the sum of man's knowledge.
 - The work is important and gives a feeling of accomplishment.
 - A high income.
 - Short working hours with plenty of free time to enjoy the really beautiful things in life.
 - A vocation of service to other people.
 - A chance to employ my mental capacities to the full.
 - Something practical.
 - A chance for advancement to a position of authority.
 - A chance for individualism and creativity.
 - The opportunity for dealing with people face-to-face.
104. Changing the subject a little, do you think that it is a good idea to purchase things (other than major items such as a home or a car) on the installment plan, or not? ... (Yes; No; Don't know)
105. Some people tell us that they keep careful records of how much they spend on everything, while others tell us that they don't. Do you do this in your family? ... (Yes; No; Don't know)
106. Do you have a savings account, own savings bonds, or save in any other way? ... (Yes; No; Don't know)
107. Do you feel that every family should save a part of its monthly income, or not? ... (Yes; No; Don't know)
108. (IF YES IN Q. 107) Do you feel that this is important enough that people should save even when it means doing without something that they could really use; or should they save only when they can do it without trouble? ... (Save always; Save only without trouble; Don't know; N/A)
109. While we're on the subject of money, when you do into a big department store where clerks are busy, they sometimes make mistakes figuring your change. When you get a few cents more change than you are supposed to, do you think its worth the bother to return the few cents involved? ... (Yes; No; Don't know)
110. If you were driving in another province and got a ticket for parking just a few minutes overtime while getting your lunch, would

you bother to pay the fine? ... (Yes; No; Don't know)

111. (IF YES IN Q. 110) Would you pay it even if you were in a big hurry and you knew that the police in that town would not bother you if you did not pay the fine? ... (Yes; No; Don't know; N/A)
112. Some people say that the government should do more than it has with respect to the treatment and rehabilitation of juvenile and adult offenders, while others feel that it is already doing too much. At the present time, would you say that the government is doing: too much; about enough; or too little in this matter?
113. What about censorship of movies and books? Do you feel that the government is doing: too much; about enough; or too little?
114. With respect to such problems as medi-care, better housing for the poor, unemployment, education, and so on, would you say that, at the present time, the government is doing: too much; about enough; or too little?
115. (IF TOO LITTLE IN Q. 114) Would you favour the government taking over the big industries in the country such as the remainder of the transportation, steel, mining, and pulp and paper in order to finance these projects, or would you not be in favour of this? ... (In favour; Not in favour; Don't know; N/A)
116. Of course the government is not the only institution interested in the welfare of Canadians. There are a number of social service agencies, many of which are represented in Winnipeg through the United Way. After the past two appeals, you will of course be familiar with the "fair share" concept of giving. Do you feel that this is a reasonable request on the part of the charities? ... (Yes; No; Don't know)
117. Were you a fair-share giver in the last campaign? ... (Yes; No; Don't know; N/A)
118. Some people say that the churches are too much involved in social service and social welfare programs, while others say that they are not involved enough. How do you feel about this? In your opinion, are the churches involved: too much; about enough; or too little?
119. Do you give any of your time to any social service agencies such as, for example, the Volunteer Bureau? ... (Yes; No; Don't know)
120. (IF YES IN Q. 119) Which agencies do you work with?

121. (IF YES IN Q. 119) Approximately how much of your time do you spend in volunteer work in any given month? ... (1 - 5 hours; 6 - 10 hours; 11 - 15 hours; 16 - 20 hours; 21 - 25 hours; Over 25 hours; Don't know; N/A)
122. All told, how much would you estimate that your family gave to charities last year? ... (Nothing; \$1 - 50; \$51-125; \$126 - 250; \$251 - 375; \$376 - 500; \$501 - 625; \$626 - 750; Over \$750; Don't know.)
123. Have you ever run for public office of any kind? ... (Yes; No; Don't know)
124. Are you a member of any service organization(s) such as, for example, the Kiwanis or Lions Club? ... (Yes; No; Don't know)
125. (IF YES IN Q. 124) Which one(s) do you belong to?
126. Are you a member of any fraternal organizations such as the Masons or Knights of Columbus? ... (Yes; No; Don't know)
127. (IF YES IN Q. 126) Which one(s) do you belong to?

Q. 128 TO Q. 133: "STUDY OF VALUES" SCORES

128. "Study" score for Theoretical Values.
129. "Study" score for Economic Values.
130. "Study" score for Aesthetic Values.
131. "Study" score for Social Values.
132. "Study" score for Political Values.
133. "Study" score for Religious Values.

RESPONDENT'S OPINION (Filled-in by Respondent after completing the "Study of Values.")

134. Do you feel that you were adequately prepared by your church to face the religious, social and moral problems, and the intellectual challenges to your faith, before you became an adult? (Please comment in the space provided.)
135. It is said that the churches of the present day have failed to come to grips with the twentieth century. Would you agree with this statement? (Please comment in the space provided.)

136. Are there any further comments which you would like to make about religion, society, and the world in general? (Please comment in the space provided)

Appendix 4: A LIST OF THE HYPOTHESIZED INDICATORS OF RELIGIOSITY AND TABLES OF CORRELATION MATRICES OF INDICATORS OF THE FIRST FOUR DIMENSIONS, OF THE FULL CORRELATION MATRIX, AND OF STATISTICALLY SIGNIFICANT COEFFICIENTS.

Hypothesised Indicators of Religiosity.

RELIGIOSITY DIMENSION	ITEM NO.	ITEM	ITEM LOCATION
Ritual Partici- pation	1	Frequency of attendance at church services.	Q. 24
	2	Participation in church activities.	Q. 29
	3	Frequency of participation in church activities	Q. 41
	4	Percentage of income given to the church.	Q. 14 & Q. 80
Associa- tionism	5	Respondent has a denominational preference.	Q. 17
	6	Respondent has always had the same denominational preference.	Q. 18
	7	Home church within survey area.	Q. 25
	8	R. is a member of his church.	Q. 26
	9	Length of attendance at that church.	Q. 27
	10	Respondent of same denominational affiliation as father.	Q. 17 & Q. 22
	11	Respondent of same denominational affiliation as mother.	Q. 17 & Q. 23
	12	Respondent of same denominational affiliation as spouse.	Q. 17 & Q. 37
	13	Respondent and spouse see eye-to-eye on religious matters.	Q. 42
	14	Respondent talks about religion with co-workers.	Q. 66
	15	Respondent talks about religion with neighbors.	Q. 68

RELIGIOSITY DIMENSION	ITEM NO.	ITEM	ITEM LOCATION
Associa- tionism (Cont'd)	16	Proportion of relatives having the same denominational affiliation.	Q. 70
	17	Proportion of friends having the same denominational affiliation.	Q. 71
	18	Friends and/or relatives would discourage conversion.	Q. 74
Orthodoxy	19	Belief in God.	Q. 50
	20	Belief about God.	Q. 51
	21	Belief that prayers are answered.	Q. 52
	22	Belief that prayers are not always answered affirmatively.	Q. 53
	23	Belief in life after death.	Q. 55
	24	Belief in judgment.	Q. 56
	25	Belief that God expects worship.	Q. 57
	26	Belief that all occupations are equivalent in the eyes of God.	Q. 58
	27	Belief about the nature of Jesus.	Q. 59
	28	Belief about the authority of the Bible.	Q. 63
Devotion- alism	29	Control of child's religious attendance.	Q. 45
	30	Encourage child to pray.	Q. 46
	31	Ask blessing at mealtimes.	Q. 47
	32	Have religious discussions with children.	Q. 48
	33	Have family worship and/or Bible reading.	Q. 49
	34	Frequency of prayer.	Q. 54

RELIGIOSITY DIMENSION	ITEM NO.	ITEM	ITEM LOCATION
Devotion- alism (Cont'd)	35	Consciously ask God's will when making decisions.	Q. 60
	36	Frequency of reading the Bible	Q. 64
Religious Evaluation	37	"Study of Values:" score for Re- ligious values.	Q.133

Correlation Matrix: Ritual Participation

ITEM NO.	KEY TO SYMBOLS		
	r - Pearson's Coefficient		
	R - Point Biserial Coefficient		
	ϕ - Fourfold Point (Phi) Coefficient		
	* * * - Coefficient not calculated. (Unequal distribution)		

2.	R=.53 n=155		
3.	r=.19 n=71	R=.23 n=67	
4.	r=.42 n=159	R=.27 n=147	r=.18 n=71

ITEM NO.:	1	2	3
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Correlation Matrix: Doctrinal Orthodoxy

ITEM NO.									
20.	ϕ =.05 n=139								
21.	* * *	ϕ =.64 n=162							
22.	* * *	* * *	* * *						
23.	* * *	ϕ =.37 n=139	ϕ =.37 n=134	* * *					
24.	* * *	ϕ =.62 n=99	ϕ =.56 n=98	* * *	* * *				
25.	* * *	ϕ =.37 n=158	ϕ =.28 n=147	* * *	ϕ =.31 n=127	ϕ =.29 n=93			
26.	* * *	ϕ =.09 n=155	ϕ =.08 n=145	* * *	ϕ =.10 n=122	ϕ =.02 n=87	ϕ =.03 n=140		
27.	* * *	R=.47 n=161	R=.45 n=151	* * *	R=.35 n=129	R=.46 n=92	R=.39 n=146	R=.04 n=146	
28.	* * *	R=.51 n=174	R=.55 n=163	* * *	R=.40 n=138	R=.36 n=98	R=.38 n=158	R=.15 n=157	r=.42 n=162
ITEM NO.:	19	20	21	22	23	24	25	26	27

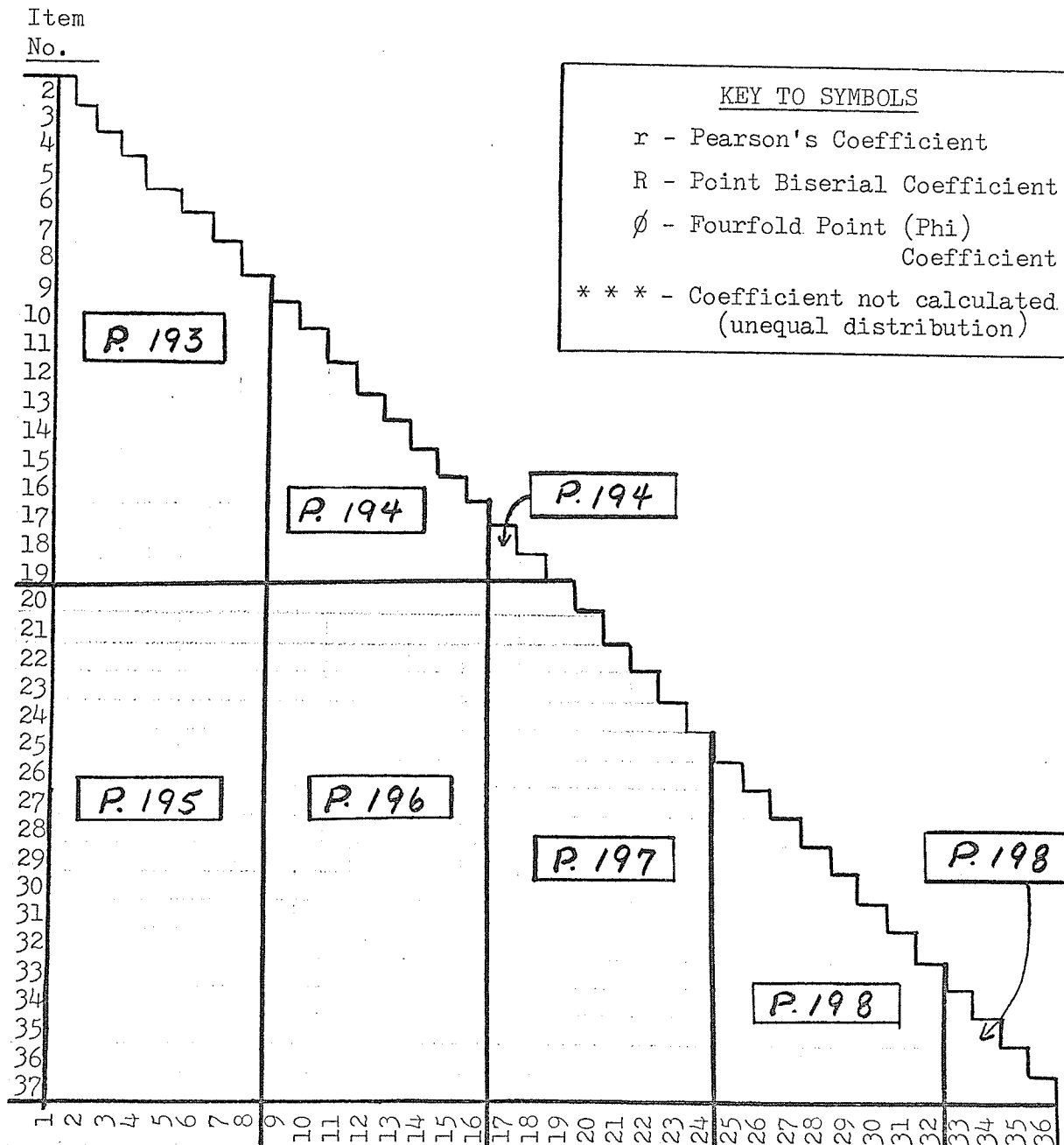
ITEM NO.	5	6	7	8	9	10	11	12	13	14	15	16	17
6.	* * *												
7.	* * *	$\phi = .06$ n=151											
8.	* * *	$\phi = .00$	$\phi = .07$ n=153										
9.	* * *	R=.08 n=152	R=.17 n=150	R=.00									
10.	* * *	$\phi = .56$ n=171	$\phi = .07$ n=147	$\phi = .05$ n=153	R=.07 n=140								
11.	* * *	$\phi = .68$ n=176	$\phi = .09$ n=152	$\phi = .04$ n=159	R=.11 n=151	$\phi = .72$ n=172							
12.	* * *	$\phi = .17$ n=169	$\phi = .07$ n=147	$\phi = .18$ n=153	R=.13 n=146	$\phi = .03$ n=178	$\phi = .06$ n=172						
13.	* * *	$\phi = .02$ n=172	$\phi = .16$ n=148	$\phi = .18$ n=154	R=.00	$\phi = .07$ n=169	$\phi = .08$ n=168	$\phi = .23$ n=170					
14.	* * *	R=.07 n=125	R=.17 n=101	R=.00	r=.13 n=100	R=.01 n=107	R=.01 n=118	R=.14 n=117	R=.06 n=121				
15.	* * *	R=.15 n=182	R=.16 n=153	R=.10 n=161	r=.05 n=152	R=.04 n=162	R=.16 n=175	R=.04 n=168	R=.04 n=173	r=.20 n=124			
16.	* * *	R=.34 n=180	R=.04 n=154	R=.07 n=161	r=.01 n=152	R=.29 n=161	R=.36 n=174	R=.01 n=168	R=.00	r=.01 n=123	r=.07 n=180		
17.	* * *	R=.04 n=174	R=.08 n=151	R=.16 n=158	r=.06 n=149	R=.09 n=156	R=.05 n=168	R=.05 n=162	R=.13 n=167	r=.13 n=117	r=.09 n=174	r=.09 n=174	
18.	* * *	$\phi = .07$ n=176	$\phi = .04$ n=147	$\phi = .01$ n=155	R=.20 n=146	$\phi = .09$ n=171	$\phi = .09$ n=169	$\phi = .11$ n=171	$\phi = .05$ n=165	R=.06 n=121	R=.16 n=177	R=.09 n=174	R=.04 n=168
ITEM NO.:	5	6	7	8	9	10	11	12	13	14	15	16	17

Correlation Matrix: Devotionalism.

ITEM NO.							
30.	$\phi=.14$ n=132						
31.	$\phi=.18$ n=159	$\phi=.27$ n=140					
32.	$\phi=.01$ n=136	$\phi=.23$ n=139	$\phi=.40$ n=143				
33.	$\phi=.01$ n=156	$\phi=.21$ n=139	$\phi=.18$ n=166	$\phi=.28$ n=154			
34.	R=.07 n=151	R=.38 n=130	R=.36 n=159	R=.20 n=134	R=.27 n=157		
35.	R=.15 n=149	R=.26 n=127	R=.09 n=156	R=.14 n=131	R=.32 n=154	r=.36 n=170	
36.	R=.06 n=160	R=.16 n=138	R=.29 n=168	R=.27 n=142	R=.44 n=166	r=.46 n=174	r=.37 n=183
ITEM NO.:	29	30	31	32	33	34	35

Full Correlation Matrix

Since the matrix is too large to fit on one page, it has been broken up over the next six pages. The figure below shows the location of each segment of the matrix, and the way in which the segments fit together to form the whole.



ITEM NO.								
2.	R=.53 n=155							
3.	r=.19 n=71	R=.23 n=67						
4.	r=.42 n=159	R=.27 n=147	r=.18 n=71					
5.	R=.24 n=184	* * *	* * *	* * *				
6.	R=.03 n=183	ϕ =.18 n=156	R=.12 n=71	R=.12 n=158	* * *			
7.	R=.04 n=154	ϕ =.04 n=151	R=.10 n=71	R=.29 n=147	* * *	ϕ =.06 n=151		
8.	R=.61 n=162	ϕ =.36 n=153	* * *	R=.24 n=150	* * *	ϕ =.00	ϕ =.07 n=153	
9.	r=.09 n=153	R=.12 n=151	r=.13 n=71	r=.07 n=147	* * *	R=.08 n=152	R=.17 n=150	R=.00
10.	R=.10 n=163	ϕ =.19 n=148	R=.16 n=64	R=.12 n=144	* * *	ϕ =.56 n=171	ϕ =.07 n=147	ϕ =.05 n=153
11.	R=.11 n=176	ϕ =.12 n=153	R=.15 n=64	R=.15 n=156	* * *	ϕ =.68 n=176	ϕ =.09 n=152	ϕ =.04 n=159
12.	R=.02 n=169	ϕ =.16 n=148	R=.11 n=67	R=.12 n=150	* * *	ϕ =.17 n=169	ϕ =.07 n=147	ϕ =.18 n=153
13.	R=.22 n=174	ϕ =.02 n=149	R=.01 n=68	R=.20 n=151	* * *	ϕ =.02 n=172	ϕ =.16 n=148	ϕ =.18 n=154
14.	r=.03 n=125	R=.10 n=101	r=.06 n=38	r=.02 n=106	* * *	R=.07 n=125	R=.17 n=101	R=.00
15.	r=.24 n=183	R=.13 n=154	r=.08 n=70	r=.17 n=158	* * *	R=.15 n=182	R=.16 n=153	R=.10 n=161
16.	r=.16 n=181	R=.01 n=154	r=.16 n=71	r=.01 n=159	* * *	R=.34 n=180	R=.04 n=154	R=.07 n=161
17.	r=.01 n=175	R=.01 n=151	r=.10 n=69	r=.18 n=164	* * *	R=.04 n=174	R=.08 n=151	R=.16 n=158
18.	R=.13 n=177	ϕ =.05 n=146	R=.06 n=68	R=.03 n=152	* * *	ϕ =.07 n=176	ϕ =.04 n=147	ϕ =.01 n=155
19.	R=.18 n=167	* * *	* * *	* * *	* * *	* * *	* * *	* * *
ITEM NO.:	1	2	3	4	5	6	7	8

ITEM NO.								
10.	R=.07 n=140							
11.	R=.11 n=151	ϕ =.72 n=172						
12.	R=.13 n=146	ϕ =.03 n=178	ϕ =.06 n=172					
13.	R=.00	ϕ =.07 n=169	ϕ =.08 n=168	ϕ =.23 n=170				
14.	r=.13 n=100	R=.01 n=107	R=.01 n=118	R=.14 n=117	R=.06 n=121			
15.	r=.05 n=152	R=.04 n=162	R=.16 n=175	R=.04 n=168	R=.04 n=173	r=.20 n=124		
16.	r=.01 n=152	R=.29 n=161	R=.36 n=174	R=.01 n=168	R=.00	r=.01 n=123	r=.07 n=180	
17.	r=.06 n=149	R=.09 n=156	R=.05 n=168	R=.05 n=162	R=.13 n=167	r=.13 n=117	r=.09 n=174	r=.09 n=174
18.	R=.20 n=146	ϕ =.09 n=171	ϕ =.09 n=169	ϕ =.11 n=171	ϕ =.05 n=165	R=.06 n=121	R=.16 n=177	R=.09 n=174
19.	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
ITEM NO.:	9	10	11	12	13	14	15	16

ITEM NO.		
18.	R=.04 n=168	
19.	R=.05 n=161	ϕ =.09 n=169
ITEM NO.:	17	18

ITEM
NO.

20.	R=.37 n=174	ϕ =.11 n=150	R=.20 n=70	R=.14 n=152	* * *	* * *	ϕ =.03 n=151	ϕ =.19 n=158
21.	R=.45 n=163	ϕ =.21 n=140	R=.22 n=65	R=.30 n=141	* * *	ϕ =.08 n=163	ϕ =.00	ϕ =.23 n=147
22.	R=.03 n=127	* * *	* * *	* * *	* * *	* * *	* * *	* * *
23.	R=.37 n=138	ϕ =.30 n=110	R=.14 n=50	R=.19 n=120	* * *	ϕ =.05 n=138	ϕ =.03 n=119	ϕ =.28 n=126
24.	R=.37 n=138	ϕ =.05 n=86	R=.39 n=43	R=.12 n=88	* * *	ϕ =.01 n=98	ϕ =.10 n=88	ϕ =.04 n=91
25.	R=.31 n=158	ϕ =.17 n=139	R=.28 n=65	R=.32 n=139	* * *	ϕ =.04 n=158	ϕ =.02 n=136	ϕ =.29 n=144
26.	R=.01 n=157	ϕ =.13 n=148	R=.04 n=67	R=.01 n=138	* * *	ϕ =.04 n=157	ϕ =.20 n=137	ϕ =.12 n=143
27.	r=.30 n=162	R=.14 n=142	r=.10 n=66	r=.17 n=142	* * *	R=.03 n=161	R=.01 n=141	R=.14 n=148
28.	r=.27 n=184	R=.02 n=155	r=.24 n=71	r=.15 n=159	* * *	R=.02 n=183	R=.01 n=154	R=.10 n=162
29.	R=.07 n=161	ϕ =.11 n=138	R=.09 n=68	R=.08 n=143	* * *	ϕ =.09 n=160	ϕ =.03 n=139	ϕ =.11 n=144
30.	R=.34 n=139	ϕ =.04 n=121	R=.02 n=57	R=.24 n=125	* * *	ϕ =.13 n=138	ϕ =.01 n=122	ϕ =.13 n=127
31.	R=.46 n=169	ϕ =.27 n=145	R=.23 n=69	R=.25 n=149	* * *	ϕ =.01 n=168	ϕ =.09 n=144	ϕ =.36 n=151
32.	R=.33 n=143	ϕ =.29 n=124	R=.06 n=58	R=.22 n=127	* * *	ϕ =.13 n=144	ϕ =.04 n=124	ϕ =.17 n=129
33.	R=.23 n=167	ϕ =.17 n=144	R=.16 n=68	R=.37 n=149	* * *	ϕ =.05 n=166	ϕ =.69 n=144	ϕ =.11 n=155
34.	r=.54 n=174	R=.28 n=152	r=.29 n=70	r=.34 n=152	* * *	R=.03 n=173	R=.03 n=151	R=.32 n=158
35.	r=.26 n=171	R=.13 n=150	r=.09 n=70	r=.27 n=149	* * *	R=.07 n=170	R=.05 n=149	R=.14 n=155
36.	r=.39 n=183	R=.33 n=154	r=.34 n=71	r=.41 n=158	* * *	R=.07 n=182	R=.26 n=153	R=.21 n=161
37.	r=.49 n=184	R=.35 n=155	r=.07 n=71	r=.28 n=159	* * *	R=.07 n=183	R=.06 n=154	R=.24 n=162

ITEM
NO.:

1

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ITEM NO.								
20.	R=.12 n=149	ϕ =.07 n=173	ϕ =.05 n=168	ϕ =.14 n=162	ϕ =.06 n=165	R=.10 n=117	R=.05 n=173	R=.02 n=171
21.	R=.04 n=138	ϕ =.13 n=152	ϕ =.19 n=156	ϕ =.09 n=151	ϕ =.10 n=153	R=.14 n=111	R=.11 n=163	R=.07 n=160
22.	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
23.	R=.10 n=118	ϕ =.04 n=131	ϕ =.05 n=134	ϕ =.08 n=127	ϕ =.09 n=131	R=.03 n=93	R=.18 n=137	R=.11 n=135
24.	R=.31 n=87	ϕ =.14 n=93	ϕ =.08 n=96	ϕ =.10 n=96	ϕ =.02 n=93	R=.05 n=72	R=.04 n=97	R=.03 n=98
25.	R=.04 n=135	ϕ =.08 n=148	ϕ =.05 n=152	ϕ =.13 n=146	ϕ =.04 n=149	R=.03 n=108	R=.08 n=156	R=.07 n=155
26.	R=.18 n=134	ϕ =.03 n=147	ϕ =.07 n=150	ϕ =.04 n=147	ϕ =.07 n=149	R=.13 n=108	R=.03 n=156	R=.03 n=155
27.	r=.07 n=140	R=.07 n=147	R=.08 n=157	R=.07 n=151	R=.05 n=153	r=.00	r=.04 n=162	r=.04 n=162
28.	r=.18 n=153	R=.04 n=163	R=.01 n=176	R=.08 n=169	R=.11 n=174	r=.12 n=125	r=.18 n=183	r=.18 n=183
29.	R=.01 n=137	ϕ =.01 n=150	ϕ =.06 n=145	ϕ =.03 n=140	ϕ =.00 n=153	R=.11 n=107	R=.14 n=160	R=.01 n=158
30.	R=.11 n=120	ϕ =.07 n=133	ϕ =.02 n=135	ϕ =.14 n=139	ϕ =.02 n=138	R=.13 n=96	R=.12 n=138	R=.10 n=137
31.	R=.20 n=144	ϕ =.01 n=158	ϕ =.03 n=164	ϕ =.10 n=149	ϕ =.20 n=163	R=.14 n=115	R=.17 n=168	R=.07 n=166
32.	R=.11 n=123	ϕ =.03 n=137	ϕ =.11 n=140	ϕ =.14 n=138	ϕ =.08 n=142	R=.18 n=100	R=.19 n=142	R=.12 n=141
33.	R=.04 n=143	ϕ =.06 n=158	ϕ =.10 n=162	ϕ =.10 n=158	ϕ =.17 n=161	* * *	R=.12 n=166	R=.02 n=165
34.	r=.14 n=149	R=.05 n=156	R=.05 n=167	R=.09 n=161	R=.12 n=165	r=.02 n=118	r=.13 n=173	r=.13 n=173
35.	r=.08 n=147	R=.11 n=153	R=.14 n=164	R=.11 n=158	R=.03 n=162	r=.06 n=115	r=.14 n=170	r=.14 n=170
36.	r=.01 n=152	R=.10 n=162	R=.16 n=175	R=.11 n=168	R=.06 n=173	r=.07 n=125	r=.12 n=182	r=.12 n=182
37.	r=.14 n=153	R=.15 n=163	R=.09 n=176	R=.08 n=169	R=.11 n=174	r=.06 n=125	r=.21 n=183	r=.21 n=183
ITEM NO.:	9	10	11	12	13	14	15	16

ITEM NO.								
20.	R=.02 n=166	ϕ =.08 n=167	ϕ =.05 n=139					
21.	R=.04 n=155	ϕ =.13 n=157	* * *	ϕ =.64 n=162				
22.	R=.13 n=123	* * *	* * *	* * *	* * *			
23.	R=.08 n=132	ϕ =.01 n=134	* * *	ϕ =.37 n=139	ϕ =.37 n=134	* * *		
24.	R=.15 n=95	ϕ =.07 n=96	* * *	ϕ =.62 n=99	ϕ =.56 n=98	* * *	* * *	
25.	R=.17 n=151	ϕ =.06 n=152	* * *	ϕ =.37 n=158	ϕ =.28 n=147	* * *	ϕ =.31 n=127	ϕ =.29 n=93
26.	R=.06 n=151	ϕ =.05 n=149	* * *	ϕ =.09 n=155	ϕ =.08 n=145	* * *	ϕ =.10 n=122	ϕ =.02 n=87
27.	r=.09 n=153	R=.04 n=156	* * *	R=.47 n=161	R=.45 n=151	* * *	R=.35 n=129	R=.46 n=92
28.	r=.03 n=175	R=.09 n=177	* * *	R=.51 n=174	R=.55 n=163	* * *	R=.40 n=138	R=.36 n=98
29.	R=.01 n=154	ϕ =.14 n=154	* * *	ϕ =.07 n=150	ϕ =.13 n=140	* * *	ϕ =.16 n=128	ϕ =.09 n=82
30.	R=.02 n=134	ϕ =.22 n=135	* * *	ϕ =.15 n=131	ϕ =.27 n=125	* * *	ϕ =.19 n=105	ϕ =.10 n=76
31.	R=.03 n=162	ϕ =.21 n=163	* * *	ϕ =.27 n=159	ϕ =.29 n=147	* * *	ϕ =.36 n=125	ϕ =.15 n=87
32.	R=.18 n=138	ϕ =.04 n=139	* * *	ϕ =.07 n=135	ϕ =.13 n=124	* * *	ϕ =.20 n=113	ϕ =.04 n=77
33.	R=.11 n=161	ϕ =.10 n=161	* * *	ϕ =.12 n=157	ϕ =.09 n=145	* * *	ϕ =.10 n=123	ϕ =.24 n=87
34.	r=.03 n=165	R=.12 n=168	* * *	R=.38 n=173	R=.55 n=162	* * *	R=.41 n=123	R=.35 n=97
35.	r=.19 n=168	R=.13 n=164	* * *	R=.24 n=170	R=.27 n=159	* * *	R=.23 n=135	R=.27 n=96
36.	r=.06 n=172	R=.12 n=177	* * *	R=.25 n=173	R=.23 n=162	* * *	R=.25 n=137	R=.26 n=97
37.	r=.21 n=173	R=.10 n=177	* * *	R=.48 n=171	R=.52 n=163	* * *	R=.39 n=138	R=.33 n=98

ITEM
No.:

17

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24

ITEM NO.								
26.	$\phi=.03$ n=140							
27.	R=.39 n=146	R=.04 n=146						
28.	R=.38 n=158	R=.15 n=157	r=.42 n=162					
29.	$\phi=.05$ n=134	$\phi=.16$ n=138	R=.12 n=141	R=.22 n=161				
30.	$\phi=.15$ n=119	$\phi=.04$ n=119	R=.16 n=123	R=.30 n=129	$\phi=.14$ n=132			
31.	$\phi=.25$ n=143	$\phi=.10$ n=144	R=.18 n=148	R=.32 n=169	$\phi=.18$ n=159	$\phi=.27$ n=140		
32.	$\phi=.18$ n=121	$\phi=.05$ n=123	R=.06 n=126	R=.15 n=143	$\phi=.01$ n=136	$\phi=.23$ n=139	$\phi=.40$ n=143	
33.	$\phi=.16$ n=142	$\phi=.06$ n=143	R=.08 n=146	R=.22 n=167	$\phi=.01$ n=156	$\phi=.21$ n=139	$\phi=.18$ n=166	$\phi=.28$ n=154
34.	R=.34 n=157	R=.02 n=156	r=.43 n=161	r=.33 n=174	R=.07 n=151	R=.38 n=130	R=.36 n=159	R=.20 n=134
35.	R=.33 n=154	R=.12 n=153	r=.25 n=158	r=.24 n=171	R=.15 n=149	R=.26 n=127	R=.09 n=156	R=.14 n=131
36.	R=.22 n=157	R=.02 n=156	r=.17 n=161	r=.35 n=183	R=.06 n=160	R=.16 n=138	R=.29 n=168	R=.27 n=142
37.	R=.34 n=158	R=.06 n=157	r=.47 n=162	r=.50 n=184	R=.18 n=161	R=.23 n=139	R=.43 n=169	R=.20 n=143

ITEM NO.:	25	26	27	28	29	30	31	32
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ITEM NO.				
34.	R=.27 n=157			
35.	R=.32 n=154	r=.36 n=170		
36.	R=.44 n=166	r=.46 n=174	r=.37 n=170	
37.	R=.21 n=167	r=.55 n=174	r=.40 n=171	r=.44 n=183

ITEM NO.:	33	34	35	36
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Statistically Significant Coefficients

The levels of significance are indicated in the spaces corresponding to the location of the coefficients in the previous table. Only coefficients significant beyond the .10 level or better are indicated.

ITEM NO.												
2.	.001											
3.												
4.	.001	.001										
5.	.001											
6.		.05										
7.				.001								
8.	.001	.001		.01								
9.							.05					
10.		.05				.001						
11.				.10		.001				.001		
12.		.10				.05		.05				
13.	.01			.02			.10	.05				.001
14.							.10					
15.	.01			.05		.05	.10				.05	
16.	.05					.001				.001	.001	
17.				.05				.05				
18.	.10								.02			
19.	.02											
20.	.001		.10	.10				.05				.10
21.	.001	.05	.10	.001				.01		.05		
22.												
23.	.001	.01		.05				.01				
24.	.001		.01						.05			
25.	.001	.05	.05	.001				.05				
26.							.05		.05			
27.	.001			.05				.10				
28.	.001		.05	.05					.05			
29.												
30.	.001			.01								
31.	.001	.01	.10	.01				.001	.02			
32.	.001	.01		.02				.10				
33.	.01	.05		.001			.001					
34.	.001	.001	.02	.001				.001	.10			
35.	.001			.001				.10			.10	
36.	.001	.001	.01	.001			.01	.01			.05	
37.	.001	.001		.001				.01	.10	.10		
ITEM NO.:	1	2	3	4	5	6	7	8	9	10	11	12

(continued over ...)

Statistically Significant Coefficients. (Cont'd)

ITEM NO.														
14.														
15.		.05												
16.														
17.														
18.			.05											
19.														
20.														
21.								.001						
22.														
23.			.05					.001	.001					
24.								.001	.001		.10			
25.					.05			.001	.001		.001	.01		
26.														
27.								.001	.001		.001	.001		
28.			.02	.02			.001	.001	.001		.001	.001		
29.			.10			.10	.10				.10			
30.						.05	.001	.10	.01		.10			
31.	.05		.05			.01	.05	.001	.001		.001			
32.		.10	.05		.05						.05			
33.	.05												.05	
34.			.10	.10				.001	.001		.001	.001		
35.			.10	.10	.02	.10		.01	.001		.01	.01		
36.				.10			.05	.001	.01		.01	.02		
37.			.01	.01	.01		.001	.001	.001		.001	.01		
ITEM NO.:	13	14	15	16	17	18	19	20	21	22	23	24		

ITEM NO.														
26.														
27.	.001													
28.	.001	.10	.001											
29.				.01										
30.	.10		.10	.001										
31.	.01		.05	.001	.05	.01								
32.	.10			.10		.01	.001							
33.	.10			.01		.05	.05	.001						
34.	.001		.001	.001		.001	.001	.05	.001					
35.	.001		.01	.01	.10	.01			.001	.001				
36.	.01		.05	.001		.10	.001	.001	.001	.001	.001			
37.	.001		.001	.001	.05	.01	.001	.02	.01	.001	.001	.001		
ITEM NO.:	25	26	27	28	29	30	31	32	33	34	35	36		

Appendix 5: TABLES SHOWING THE DISTRIBUTION OF THE SUBSCALE SCORES IN THE SAMPLE, AND A COMPARISON OF SCORES AND RELIGIOSITY GROUPS FROM THE GENERAL SCALE AND THE SUBSCALE.

Distribution of Subscale Scores in the Sample.

p ($\bar{X}=0.578; \sigma=0.2796$)	z' ($\bar{X}=50; \sigma=15$)	N	%
1.000	72.81	16	8.7
.917	68.25	9	4.9
.910	67.93	6	3.2
.833	63.81	14	7.7
.819	63.02	6	3.2
.800	61.97	2	1.0
.750	59.29	10	5.5
.728	58.13	9	4.9
.667	54.75	8	4.4
.637	53.20	6	3.2
.625	52.54	1	0.6
.600	51.16	5	2.7
.583	50.27	10	5.5
.546	48.29	6	3.2
.500	45.77	11	6.0
.455	43.32	9	4.9
.417	41.29	10	5.5
.400	40.38	2	1.0
.364	38.43	4	2.2
.333	36.79	1	0.6
.300	35.02	2	1.0
.273	33.64	3	1.6
.250	32.31	8	4.4
.200	29.59	4	2.2
.182	28.57	4	2.2
.167	27.84	3	1.6
.100	24.19	1	0.6
.091	23.71	5	2.7
.083	23.22	4	2.2
.000	18.82	5	2.7
TOTALS:		184	100.1*

* Error due to rounding.

Comparison of Scores from the General Scale and the Subscale.

GENERAL SCALE SCORE:	SUBSCALE SCORE:	N	%	GENERAL SCALE SCORE:	SUBSCALE SCORE:	N	%
72.48	72.81	16	8.7	46.14	51.16	1	0.6
68.42	68.25	7	3.8		48.29	3	1.6
	63.81	1	0.6		43.32	3	1.6
68.10	67.93	6	3.2	44.13	45.77	6	3.2
64.37	68.25	2	1.0		41.29	2	1.0
	63.81	12	6.5	43.82	45.77	2	1.0
63.68	63.02	5	2.7		40.38	2	1.0
		1	0.6	43.19	45.77	1	0.6
62.90	61.97	2	1.0	41.76	43.32	6	3.2
60.32	63.81	1	0.6		38.43	1	0.6
	59.29	6	3.2	40.08	41.29	8	4.4
59.31	63.02	1	0.6	38.97	35.02	1	0.6
	58.13	5	2.7	37.34	38.43	3	1.6
56.25	59.29	3	1.6		33.64	1	0.6
	54.75	7	3.8	36.03	36.79	1	0.6
54.93	58.13	4	2.2		32.31	1	0.6
	53.20	3	1.6	32.97	33.64	2	1.0
53.30	51.16	3	1.6		28.57	1	0.6
52.20	54.75	1	0.6	31.97	35.02	1	0.6
	50.27	4	2.2		32.31	7	3.8
50.51	53.20	3	1.6	29.34	29.59	1	0.6
	48.29	3	1.6	28.59	29.59	3	1.6
49.10	52.54	1	0.6		28.57	3	1.6
48.51	51.16	1	0.6	27.92	27.84	3	1.6
	45.77	1	0.6	24.60	24.19	1	0.6
48.14	50.27	6	3.2	24.17	23.71	5	2.7
	45.77	1	0.6	22.57	23.22	4	2.2
				19.80	18.82	5	2.7
TOTALS						184	100.0

$$r = .9878$$

Comparison of Grouping from the General Scale and the Subscale

GENERAL SCALE GROUP	SUBSCALE GROUP	N	%	SUBSCALE GROUP	GENERAL SCALE GROUP	N	%
1	1	29	15.8	1	1	29	15.8
	2	1	0.6		2	2	1.0
2	1	2	1.0	2	1	1	0.6
	2	61	33.2		2	61	33.2
	3	3	1.6		3	9	4.9
3	2	9	4.9	3	2	3	1.6
	3	41	22.3		3	41	22.3
	4	2	1.0		4	1	0.6
4	3	1	0.6	4	3	2	1.0
	4	35	19.0		4	35	19.0
TOTALS		184	100.0	TOTALS		184	100.0

$$r = .9395$$

Appendix 6: TABLES SHOWING DISTRIBUTION OF RELIGIOSITY GROUPS BY DENOMINATION AND DENOMINATIONAL GROUPS; DISTRIBUTION OF RELIGIOSITY INDICATORS BY DENOMINATIONAL GROUP.

Denomination by Religiosity.

RELIGIOSITY GROUP	DENOMINATION									TOTALS
	UNITED	ANGLICAN	ROMAN CATHOLIC	LUTHERAN	BAPTIST	PRESBYTERIAN	MENNONITE	OTHER	NONE	
"1"	9	5	5	3	1	0	4	3	0	30
"2"	32	14	10	3	2	1	4	0	0	66
"3"	28	14	2	0	0	2	0	4	2	52
"4"	16	14	1	0	1	0	0	0	4	36
TOTALS	85	47	18	6	4	3	8	7	6	184

Denominational Group "A" by Religiosity.

RELIGIOSITY GROUP	DENOMINATION		TOTALS
	UNITED; PRESBYTERIAN;	NO PREF. ANGLICAN	
"1"	9	5	14
"2"	33	14	47
"3"	32	14	46
"4"	20	14	34
TOTALS	94	47	141
$\chi^2 = 1.42; df = 3; p > .05$			

Denominational Group "B" by Religiosity.

RELIGIOSITY GROUP	DENOMINATION			TOTALS
	ROMAN CATHOLIC	LUTHERAN & BAPTIST	MENNONITE & OTHERS	
"1"	5	4	7	16
"2"	10	5	4	19
"3" & "4"	3	1	4	8
TOTALS	16	19	8	43
$\chi^2 = 3.35; df = 4; p > .05$				

Denominational Group by Religiosity

RELIGIOSITY GROUP	DENOMINATIONAL GROUP		TOTALS
	"A"	"B"	
"1"	14	16	30
"2"	47	19	66
"3"	46	6	52
"4"	34	2	36
TOTALS:	141	43	184
$\chi^2 = 26.60; df = 3; p < .05$			

DENOMINATIONAL GROUP BY RELIGIOSITY INDICATORS

Indicator 1: FREQUENCY OF ATTENDANCE AT RELIGIOUS SERVICES.

FREQUENCY	DENOMINATIONAL GROUP		TOTALS
	"A"	"B"	
Once a week or more	24	29	53
Two to three times a month	23	5	28
Once a month	14	1	15
Six times or more	8	1	9
Less than six times	37	5	42
Not at all	35	2	37
TOTALS:	141	43	184
$\chi^2=42.70; df=5; p<.05$			

Indicator 2: PERCENTAGE OF INCOME GIVEN TO THE CHURCH.

	DENOMINATIONAL GROUP	
	"A"	"B"
Mean Percentage	1.5705	2.9857
Standard deviation	1.92	2.47
F=	15.42	$p<.05$

Indicator 3: BELIEF ABOUT THE NATURE OF GOD.

	DENOMINATIONAL GROUP		TOTALS
	"A"	"B"	
Father	75	37	112
Other belief	58	4	62
TOTALS	133	41	174
$\chi^2=14.54 df=1; p<.05$			

Indicator 4: BELIEF THAT PRAYER IS ANSWERED.

	DENOMINATIONAL GROUP		TOTALS
	"A"	"B"	
Believe	89	36	125
Do not believe	36	2	38
TOTALS	125	38	163
$\chi^2 = 7.76; df = 1; p < .05$			

Indicator 5: BELIEF IN LIFE AFTER DEATH

	DENOMINATIONAL GROUP		TOTALS
	"A"	"B"	
Believe	70	33	103
Do not believe	30	4	34
TOTALS	100	37	137
$\chi^2 = 4.25; df = 1; p < .05$			

Indicator 6: BELIEF THAT GOD EXPECTS REGULAR WORSHIP

	DENOMINATIONAL GROUP		TOTALS
	"A"	"B"	
Believe	39	20	59
Do not believe	87	14	101
TOTALS	126	34	160
$\chi^2 = 7.78; df = 1; p < .05$			

Indicator 7: BELIEF ABOUT THE NATURE OF CHRIST.

	DENOMINATIONAL GROUP		TOTALS
	"A"	"B"	
Son of God	66	35	101
Good man; Other belief	56	5	61
TOTALS	122	40	162
$\chi^2 = 12.92; df = 1; p < .05$			

Indicator 8: BELIEF ABOUT THE AUTHORITY OF THE BIBLE.

	DENOMINATIONAL GROUP		TOTALS
	"A"	"B"	
The word of God; all that it says is true	11	17	28
Inspired by God but contains some human error	95	20	115
Good book but God had nothing to do with it	30	3	33
Written a long time ago -- little value today	4	3	7
TOTALS:	140	43	183
$\chi^2 = 29.26; df = 3; p < .05$			

Indicator 9: ASK BLESSING AT MEALTIME.

	DENOMINATIONAL GROUP		TOTALS
	"A"	"B"	
Yes	49	27	76
No	80	14	94
TOTALS	129	41	170
$\chi^2 = 8.68; df = 1; p < .05$			

Indicator 10: FREQUENCY OF PERSONAL PRAYER.

	DENOMINATIONAL GROUP		TOTALS
	"A"	"B"	
Two to three times a day	14	18	32
Once a day	31	18	49
Several Times a Week	17	0	17
Once a week	14	1	15
Two to three times a month	11	1	12
Once a month or less	23	3	26
Never	23	0	23
TOTALS	133	41	174
$\chi^2 = 42.19$; df= 6; $p < .05$			

Indicator 11: CONSCIOUSLY ASK GOD'S WILL BEFORE MAKING DECISIONS.

	DENOMINATIONAL GROUP		TOTALS
	"A"	"B"	
Often	24	12	36
Sometimes	36	11	47
Never	74	16	90
TOTALS	134	39	173
$\chi^2 = 3.63$; df= 2; $p < .20$			

Indicator 12: FREQUENCY OF READING THE BIBLE.

	DENOMINATIONAL GROUP		TOTALS
	"A"	"B"	
Once a day or more	5	8	13
Once a week to once a day	13	7	20
Once a month to once a week	21	3	24
Once a year to once a month	34	13	47
Not at all in past year	67	12	79
TOTALS	140	43	183
$\chi^2 = 16.77; df = 4; p < .05$			

Indicator 13: SCORE FOR "RELIGIOUS VALUES."

	DENOMINATIONAL GROUP	
	"A",	"B"
Mean Score	39.91	44.63
Standard deviation	9.85	9.63
F=	7.52	p < .05

Appendix 7: TABLES OF NON-SIGNIFICANT RELATIONSHIPS BETWEEN RELIGIOSITY AND AREAS OF SOCIAL ORIENTATION TO ACCOMPANY CHAPTER VI.

1. Religiosity and Religious Attitudes.

Q.72 As a general rule, do you think that it is most desirable for Protestant (Catholics) to marry other Protestants (Catholics); or do you not consider this important?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Desirable	23	41	29	17	110
Not important	6	23	21	17	67
TOTALS:	29	64	50	34	177
$\chi^2 = 6.23; \text{ df} = 3; p > .05$					

Q. 73 (Protestants only, if "Desirable" in Q.72) Would you say that it was desirable for people of the same denomination to marry?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Desirable	14	14	16	8	52
Not important	4	17	13	7	41
TOTALS	18	31	29	15	93
$\chi^2 = 4.11; \text{ df} = 3; p > .05$					

Q.75 Would you like to see your own denomination unite with any other denomination?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Yes	21	48	39	25	133
No	9	14	11	2	36
TOTALS	30	62	50	27	169
$\chi^2 = 4.89; \text{ df} = 3; p > .05$					

Q. 78 Do you feel that there are any disagreements between what science teaches on the one hand and what your church teaches on the other?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Yes	15	36	31	24	106
No	15	28	21	11	75
TOTALS:	30	64	52	35	181
$\chi^2=2.53$; $df=3$; $p>.05$					

Q. 79 (If "Yes" to Q. 78) Would you say that these disagreements are very serious, somewhat serious, or not very serious?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Very	6	5	9	9	29
Somewhat	4	15	7	7	33
Not Very	5	16	15	8	44
TOTALS	15	36	31	24	106
$\chi^2=7.43$; $df=6$; $p>.05$					

Q. 92 Do you think that the churches should take a public stand on issues of External Affairs as Canada's position with respect to the war in Viet Nam or the recognition of Mainland China?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Yes	14	32	17	13	76
No	15	32	32	20	99
TOTALS	29	64	49	33	175
$\chi^2=3.15$; $df=3$; $p>.05$					

- Q. 93 Do you think that the churches should take a public stand on such issues of domestic legislation as medi-care, education, or anti-poverty measures?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Yes	16	33	27	19	95
No	10	31	22	13	76
TOTALS	26	64	49	32	171
$\chi^2 = 1.01$; $df = 3$; $p > .05$					

- Q. 94 Do you think that religious leaders ought to take a stand for or against some candidate for public office?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Yes	7	11	7	7	32
No	20	52	44	28	144
TOTALS	27	63	51	35	176
$\chi^2 = 1.89$; $df = 3$; $p > .05$					

- Q. 118 Some people say that the churches are too much involved in social service and social welfare programs, while others say that they are not involved enough. How do you feel about this? In your opinion are the churches involved too much, about enough, or too little?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Too much/about enough	13	25	23	11	72
Too little	16	33	23	15	87
TOTALS	29	58	46	26	159
$\chi^2 = 0.64$; $df = 3$; $p > .05$					

2. Religiosity and Moral Issues.

Q. 81 How do you feel about gambling? From the moral standpoint, would you say that it is always wrong to gamble, usually wrong, sometimes wrong, or never wrong?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Always	10	12	8	2	32
Usually	7	10	8	9	34
Sometimes	12	40	29	19	100
Never	1	4	7	6	18
TOTALS	30	66	52	36	184
$\chi^2 = 15.69; df = 9; p > .05$					

Q. 85 What about heavy drinking; from the moral standpoint, is it always, usually, sometimes, or never wrong?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Always	16	47	33	25	121
Usually/sometimes/never	4	14	13	11	42
TOTALS	20	61	46	36	163
$\chi^2 = 1.12; df = 3; p > .05$					

Q. 86 From the moral standpoint, would you say that birth control is always, usually, sometimes, or never wrong?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Always/usually	5	3	3	0	11
Sometimes	13	30	19	8	70
Never	11	30	28	28	97
TOTALS	29	63	50	36	178
$\chi^2 = 17.59; df = 6; p < .05$					

Q. 86 - With denomination held constant.

RESPONSE	DENOMINATIONAL GROUP							
	"A"					"B"		
	RELIGIOSITY GROUP				TOTALS	RELIGIOSITY GROUP		
	"1"	"2"	"3"	"4"		"1"	"2"	"3"&"4"
Always/Usually/ Sometimes	5	19	19	8	51	13	14	3
Never	8	26	25	26	85	3	4	5
TOTALS	13	45	44	34	136	16	18	8
$\chi^2 = 3.92$; $df = 3$; $p > .05$					$\chi^2 = 5.56$; $df = 2$; $p > .05$			

Q. 88 Again, from the moral standpoint, do you feel that abortion is always wrong, usually wrong, sometimes wrong, never wrong?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Always/usually	12	27	20	9	68
Sometimes/never	17	37	32	26	112
TOTALS	29	64	52	35	180
$\chi^2 = 2.83$; $df = 3$; $p > .05$					

3. Religiosity and Charitable and Related Activity.

Q. 116 Of course the government is not the only institution interested in the welfare of Canadians. There is a multitude of social service agencies, many of which are represented in Winnipeg through the United Way. After the past two appeals, you will of course be familiar with the "fair-share" concept of giving. Do you feel that this is a reasonable request on the part of the charities?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Yes	23	56	41	28	148
No	6	5	9	7	27
TOTALS	29	61	50	35	175
$\chi^2 = 3.85$; $df = 3$; $p > .05$					

Q. 117 Were you a "fair-share" giver in the last campaign?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Yes	20	52	38	28	138
No	10	7	13	8	38
TOTALS	30	59	51	36	176
$\chi^2 = 6.13; df = 3; p > .05$					

Q. 119 Do you give any of your time to any social service agencies such as, for example, the Volunteer Bureau?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Yes	5	22	11	8	46
No	25	44	41	28	138
TOTALS	30	66	52	36	184
$\chi^2 = 4.11; df = 3; p > .05$					

Q. 122 All told, how much would you estimate that your family gave to charities last year?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
\$1 - 50	10	22	23	12	67
\$51 - 125	9	22	13	11	55
\$126 - 250	4	10	10	8	32
\$251 - 375	6	12	5	5	28
TOTALS	29	66	51	36	182
$\chi^2 = 4.82; df = 9; p > .05$					

4. Religiosity and Occupation.

Q. 103 Ranking of occupational characteristics.

OCCUPATIONAL CHARACTERISTIC	RANKING OF RELIGIOSITY GROUP			
	"1"	"2"	"3"	"4"
A chance to add to the sum of man's knowledge.	6	5	6	5
The work is important and gives a feeling of accomplishment.	1	1	1	1
A high income.	9	9	7	8
Short working hours with plenty of free time to enjoy the really beautiful things in life.	10	10	10	10
A vocation of service to other people.	2	2	5	7
A chance to employ my mental capacities to the full.	3	3	2	2
Something practical.	7	7	8	6
A chance for advancement to a position of authority.	8	8	9	9
A chance for individualism and creativity.	5	6	3	3
The opportunity for dealing with people face-to-face.	4	4	4	4
W=.0915; $\chi^2 = 32.45$; df= 9; $p < .05$				

5. Religiosity and Politics.

Q. 96 Which party did you vote for in the last Provincial election?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Liberal	11	10	13	11	45
Progressive Conservative	14	49	33	19	115
New Democratic	3	4	4	4	15
TOTALS	28	63	50	34	175
$\chi^2 = 8.79$; df= 6; $p > .05$					

Q. 97 Did you vote in the last municipal election?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Yes	21	51	41	19	132
No	6	13	11	15	45
TOTALS	27	64	52	34	177
$\chi^2 = 8.17; df = 3; p < .05$					

Q. 97 - Denomination held constant.

RESPONSE	DENOMINATIONAL GROUP							
	"A"					"B"		
	RELIGIOSITY GROUP				TOTALS	RELIGIOSITY GROUP		
	"1"	"2"	"3"	"4"		"1"	"2"	"3"&"4"
Yes	10	38	38	19	105	11	13	3
No	4	7	8	13	32	2	5	5
TOTALS	14	45	46	31	137	13	18	8
$\chi^2 = 6.40; df = 3; p > .05$					$\chi^2 = 5.15; df = 2; p > .05$			

Q. 98 Do you belong to a political party?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Yes	7	19	12	6	45
No	22	42	31	27	122
TOTALS	29	61	44	33	167
$\chi^2 = 1.96; df = 3; p > .05$					

Q. 101 In your opinion, does Canada give too much in foreign aid, about the right amount, or too little?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Too much	1	6	4	1	12
About enough	8	24	25	16	73
Too little	15	24	14	13	66
TOTALS	24	54	43	30	151
$\chi^2 = 7.50; df = 6; p > .05$					

Q. 112 Some people say that the government should do more than it has with respect to the treatment and rehabilitation of juvenile and adult offenders, while others feel that it is already doing too much. At the present time, would you say that the government is doing too much, about enough or too little?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Too much	2	4	6	3	15
About enough	5	8	9	6	28
Too little	23	48	35	25	131
TOTALS	30	60	50	34	174
$\chi^2 = 1.94; df = 6; p > .05$					

Q. 113 What about the censorship of movies and books? Do you feel that the government is doing too much, about enough, or too little?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Too much	4	9	12	10	35
About enough	7	28	24	18	77
Too little	17	23	15	5	60
TOTALS	28	60	51	33	172
$\chi^2 = 16.07; df = 6; p < .05$					

Q. 113 - Denomination held constant.

RESPONSE	DENOMINATIONAL GROUP							
	"A"					"B"		
	RELIGIOSITY GROUP				TOTALS	RELIGIOSITY GROUP		TOTALS
	"1"	"2"	"3"	"4"		"1"	"2"	"3" & "4"
Too Much	2	8	9	10	29	2	1	3
About Enough	3	20	22	17	62	4	8	3
Too Little	7	15	14	4	40	10	8	2
TOTALS	12	43	45	31	131	16	17	8
$\chi^2 = 10.06; df = 6; p > .05$					$\chi^2 = 6.33; df = 4; p > .05$			

Q. 114 With respect to such problems as medi-care, better housing for the poor, unemployment, education, and so on, would you say that the government is at present doing too much, about enough, or too little?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Too much	6	9	4	2	21
About enough	11	25	27	19	82
Too little	11	30	20	14	75
TOTALS	28	64	51	35	178
$\chi^2 = 6.72; df = 6; p > .05$					

6. Religiosity and Personal Economics

221

Q. 104 Do you think that it is a good idea to purchase things (other than major items such as a home or a car) on the installment plan, or not?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Yes	9	15	20	5	49
No	19	49	31	29	128
TOTALS	28	64	51	34	177
$\chi^2 = 7.08; df = 3; p > .05$					

Q. 105 Some people tell us that they keep careful records of how much they spend on everything, while others tell us that they don't. Do you do this in your family?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Yes	15	27	16	16	74
No	14	39	25	20	98
TOTALS	29	66	41	36	172
$\chi^2 = 3.49; df = 3; p > .05$					

Q. 107 Do you think that every family should save a part of its monthly income, or not?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Yes	30	63	51	32	176
No	0	2	1	2	5
TOTALS	30	65	52	34	181
χ^2 - Not Calculated					

Q. 108 (If "Yes" to Q. 107) Do you feel that this is important enough that people should save even when it means doing without something that they could really use; or should they save only when they can do so without trouble?

RESPONSE	RELIGIOSITY GROUP				TOTALS
	"1"	"2"	"3"	"4"	
Save always	19	27	24	21	91
Save without trouble	11	36	27	11	85
TOTALS	30	63	51	32	176
$\chi^2 = 6.60 \quad df = 3; \quad p > .05$					

7. Religiosity and Leisure Activity

Q. 102 Ranking of leisure activities in order of group preference.

ACTIVITY	RANKING OF RELIGIOSITY GROUP			
	"1"	"2"	"3"	"4"
Sports (golf, curling, hunting, swimming, etc.)	4	1	1	2
Reading	1	2	2	1
Listening to T.V., radio, records, etc.	3	3	3	3
Theatre, ballet, symphony, etc.	6	9	8	9
Visiting friends, private parties, etc.	2	4	4	4
Playing with the children.	7	6	6	8
Hobbies, gardening, etc.	5	5	5	5
Movies, dancing, night-clubs, etc.	9	8	9	7
Sleeping, loafing around.	8	7	7	6
$W = .9865; \quad \chi^2 = 31.57; \quad df = 8; \quad p < .05$				