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# A study of factors that discriminate between different degrees of religiousness in people

Stuart W. Omohundro

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A STUDY OF FACTORS THAT DISCRIMINATE BETWEEN  
DIFFERENT DEGREES OF RELIGIOUSNESS IN PEOPLE

BY

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A THESIS  
SUBMITTED TO THE GRADUATE FACULTY  
OF THE UNIVERSITY OF RICHMOND  
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FOR THE DEGREE OF  
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## PREFACE

The author would like to thank Dr. M. E. Carver, head of the psychology department at the University of Richmond, and his two associate professors, Dr. R. J. Filer and Professor A. E. Grigg, for the help rendered on this thesis.

Appreciation also would like to be expressed to the ministerial association and all those participating in the questionnaire and the teachers that made this questionnaire possible by giving the author a few minutes of their class time.

Special mention is also given to the six ministers in the Richmond Area that gave freely of their time in the preliminary survey of this thesis.

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## INTRODUCTION

The first question that will probably confront the reader of this paper will be, what is meant by religiousness? The next question might logically follow, can this quality, religiousness, be measured or compared between personalities or groups?

The same question has been asked of psychologists about other terms such as intelligence and emotion, either of which could be substituted in the title of this paper instead of religiousness and still not make it any clearer. The answers to this question have varied except where operational definitions have been demanded, which, of course, boil down to emotional or intellectual behavior as measured by a given test in relationship to others taking the test.

Religiousness will have to be defined in a similar manner. It will have to mean religious behavior, religious beliefs, religious attitudes, etc., as measured by any given scale, questionnaire or test mentioned throughout the paper.

A subjective approach to this topic would be very unreliable and invalid. A prejudiced author could pave his own way by choosing sub-

jective material written on this subject. He could very well write his conclusions first and select his data to fit the conclusions.

Likewise, a subjective definition of religiousness is impossible in a paper of this type. In professor Leuba's book, A Psychological Study of Religion, there is an appendix in which he has collected 48 different definitions of religion from various writers.<sup>1</sup> Who is to say which of these definitions is correct?

Another important question, which could also be applied to many other topics in psychology, is whether religiousness is an acquired trait or an inborn condition.

Merry and Merry say, "Objective evidence as is available fails to support the theory of an instinctive basis for religion. Children left to themselves do not seem to be conscious of the existence of any higher power."<sup>2</sup>

Ligon says, "There is no religious instinct, but religion is a common satisfaction for certain instinctive drives."<sup>3</sup>

The criteria of religiousness and the method of isolating discriminating factors is a topic big enough and important enough that the first chapter is devoted strictly to this subject.

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1. Robert Thouless, An Introduction to the Psychology of Religion, p. 2.
  2. Freida and Ralph Merry, The First Two Decades of Life, p. 471.
  3. Earnest Ligon, The Psychology of Christian Personality, p. 25.

The methods of analyzing religious experience are also described in the first chapter. A short abstraction of most methods used might be fairly well covered in the following quotation by Tuttle:

"In so far as objective methods of psychology can analyze religious experience three distinct aspects, at least, are revealed. These are feeling, conduct standards, and beliefs."<sup>4</sup>

The overall procedure of this paper is to analyze 30 studies done in research and to present an original study.

To get a maximum coverage of studies a number of psychological abstracts of studies were used. Only those studies, however, that were fairly conclusive and stated definite results were used.

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4. Harold Tuttle. "Religion as Motivation," Journal of Social Psychology, XV, 1942, p. 255.

## CHAPTER I

### CRITERIA OF RELIGIOUSNESS AND DISCRIMINATING FACTORS

Thirty studies have been analyzed and will be presented in the following two chapters. Every study, though differing slightly in nature from every other study, has the common element of searching for variables that affect religiousness in the personality.

From these studies a criteria of religiousness and discriminating factors has been devised. These are strictly the divisions and interpretations given by the author of this paper.

An outline of this criteria, and a detailed explanation are given below.

#### Outline of Criteria

- I. One Group Technique
  - A. Religious Trends
  - B. Repeated Study with a change in conditions
  - C. Divisions According to Religiousness
  
- II. Two-or-More Group Technique
  - A. Non Religious Groups
  - B. Religious Groups
  - C. Religious Group and Non Religious Group

### One Group Technique

#### Religious Trends:

This type of study was made of one population, and the results were analyzed for various trends running throughout the group.

The assumption here is that if a certain percentage of a population is similar according to a given quality, that quality is significant.

As an example, if enough people on a questionnaire report that they go to church to see friends, going to church might be defined as religious behavior, and the desire or need for socializing might be defined as a possible discriminating factor in this behavior between church goers and non-church goers.

Also in this type of study, inner group correlations can be taken between religious factors and non religious factors found.

As an example, a correlation might be taken between prayer and fear situations, church attendance and introversion tendencies, etc. Prayer and church attendance might be defined as religious behavior. Fear situations and introversion tendencies might be found as factors that discriminate between subjects that do and do not practice this behavior.

#### Repeated Study With a Change in Conditions:

This type of study is made of one population. The study, however, is made twice, and the conditions under which the study is made are changed to see if they have an influence on the second study.

As an example, a group might be given an attitude scale on the Bible at the beginning of a course in "Bible Knowledge," and then it could be given again at the end of the course. Religious attitudes might be defined as a factor of religiousness, and Bible training as a discriminating factor, if it showed up significantly.

In this type of study the population may be split on the second inquiry, half of the group being used as a control group. The control group, of course, would not be subjected to the change in conditions.

#### Divisions According to Religiousness:

Under this procedure, the last type of the one group approach, a single population is studied and then placed on a continuum or divided into two groups according to religiousness.

As an example, an attitude scale might be given to a group and then divided into two groups according to low and high religious attitudes. It might be found that the low group is more intelligent than the high group. If religious attitudes are defined as religiousness, intelligence might be considered a possible discriminating factor between those who score a high rating in religious attitudes and those who score low rating in religious attitudes

#### Two or More Group Technique

Half of the studies analyzed were given to two or more groups. These have been sub-divided into three types.

### Non Religious Groups:

In this type of approach a study is made of two or more groups differing in some factor outside the field of religion. These groups may differ in sex, age, occupation, intelligence, etc.

The assumption in this type of study is that if two or more different populations can be analyzed according to religious variables, any marked differences showing up can be attributed to the original difference between the groups.

As an example, a group of girls may show on an attitude scale to be significantly more religious than a group of boys taking the same scale. If religious attitudes are defined as a factor in religiousness, sex might be called a discriminating factor.

### Religious Groups:

In this type of approach a study is made of two or more religious groups differing in some factor pertaining to their religion. These groups may differ in denomination, sect, location etc.

The assumption in this type of study is that if two or more different religious groups differ significantly in some religious quality, their original religious difference might be considered a discriminating factor.

As an example, a belief scale might show that a Catholic group has a much more conservative outlook on Christianity than a Protestant group. If this conservative outlook is defined as religiousness then Catholicism might be defined as a discriminating factor.

### Religious Group and Non Religious Group:

In this type of approach two groups are analyzed that differ, in that one is more religious than the other. These may include ministers and non ministers, random subjects and atheists etc.

The first assumption is that a ministerial group is more religious than a non ministerial group, and that a random population is more religious than an atheistic population.

The second assumption is that if the more religious group shows a significantly greater difference in a quality than the less religious group, the difference in the quality might be a discriminating factor between the two groups.

As an example, if a ministerial group shows on a test to be socially more unstable than a non ministerial group, then social instability might be considered a discriminating factor between people who will become ministers and those who will not.

Religiousness in all six of the preceding categories is defined differently for each study according to the approach used by the respective authors.

An attempt has been made by the author of this paper to present a systematized method of how religiousness has been defined or analyzed by the respective authors of the individual studies.

The following procedure has been used: The studies in each of the six categories have been arranged alphabetically according to the following eleven techniques.

1. Attitude: (9 studies)
  - a. Religious attitudes as measured by surveys and scales.
2. Belief: (4 studies)
  - a. Religious belief as measured by surveys and scales.
3. Comprehensive: (2 studies)
  - a. A thorough coverage of subjects studied was used but no specific techniques were outstanding.
4. Projective Techniques: (1 study)
5. Questionnaire: (3 studies)
  - a. Only those studies that included more than one central approach in defining and analyzing religiousness.
6. Recall: (2 studies)
  - a. To find how much impression a past religious environment has.
7. Self Rating: (1 study)
8. Sociological Study: (1 study)
  - a. Analysis of sociological data.
9. Sociometric Technique: (1 study)
10. Testing Technique: (3 studies)
11. Value patterns: (3 studies)
  - a. Religiousness defined according to value patterns.

Many of the studies could fall under more than one category, but an attempt has been made to use only the predominant category in each study.

The validity and reliability of each approach is as good only as are the methods and data used by the respective authors of the individual studies.

Likewise, a further analysis between these studies will be only as valid as the respective individual studies.

## CHAPTER II

### ONE GROUP TECHNIQUES

Sixteen studies are analyzed in this chapter. They are presented in the order described in chapter 1. For further clarification a brief outline in alphabetical order will precede each of the three one group techniques.

#### Religious Trends

attitude	(studies 1 and 2)
comprehensive	(studies 3 and 4)
projective techniques	(study 5)
questionnaire	(study 6)
sociological study	(study 7)
value studies	(studies 8 and 9)

#### Study 1:

A revised scale for measuring church attitudes was administered to 1180 people in the East Baton Rouge Area.

Results: The trend seemed to show that social reasons and a desire to renew faith were the primary reasons that people attend church.

Other trends apparent in influencing church attendance were strong denominational ties and a feeling that church attendance is necessary in being religious. (Bib. 26)

### Study 2:

One thousand students were given Thurstone's "Scale for Measuring Attitudes Toward the Church."

As a preliminary to this scale, each student was required to indicate his age, sex, church relations (active, nominal or none) and similar questions, making it possible for further analysis of data between groups.

Results: Church affiliation and attendance were found to correlate positively with attitudes toward the church.

By analyzing the data according to groups within the population taking the scale, results were found much like those studied in the two group section in the next chapter.

In comparisons of church attitudes, Mormons were favorable over other denominations, females were favorable over males, and non veterans were favorable over veterans.

In the unaffiliated group, the degree of antagonism toward the church was directly related to the orthodoxy of the subjects' backgrounds.

Also outstanding among the unaffiliated students was a greater relationship between their attitudes of the church and their use of tobacco, alcohol, coffee and tea. (Bib. 16)

The next two studies were made in mental hospitals. Both studies were more or less comprehensive in nature, in that no one technique or device alone was used in analyzing the cases.

The first study mentioned might be described most nearly as being like a case study. The second study was more of a cross-sectional nature.

Both of these studies are interesting when seen along side several subjective views held by prominent psychoanalysts who have had the occasion to frequently be in the presence of neurotics and psychotics.

Freund says,

Conversion is the oedipus solution of subjection to the will of the father, and that doubts about the existency of the diety may be based on the oedipus conflict-desire to abolish the father.<sup>5</sup>

Jones says,

All religion is founded upon the sense of guilt at not reaching a prescribed standard. Without this idea religion loses all meaning.<sup>6</sup>

Schroeder says,

It is the unconscious sense of guilt upon which the revivalist works and is able to induce an acceptance of his scheme of salvation.<sup>7</sup>

### Study 3:

A comprehensive study was made of 68 patients at the Kentucky State Hospital

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5. William Healy, The Structure of Meaning of Psychoanalysis, p. 346.

6. Ibid., p. 348.

7. Ibid., p. 349.

Results: 17.7% of the patients had had a long moral and religious conflict in the family and sectarian groups.

10.3% had had a bizarre or reactivating religion seeking as a last attempt to cope with reality.

For 20.5% religion had provided an ideational content for the illness.

51.5%, however, showed no religious concern whatever. (Bib. 30)

The first three results parallel very closely the theme of religion previously mentioned by the psychoanalysts, but the percentages indicate that by far these subjective opinions can not be taken verbatim.

The last percentage seems to show a much greater trend away from the relation of religion and mental disorders. This conclusion is later confirmed in study 23 which comes under the two group technique, a study more objective in nature than either of these two.

#### Study 4:

Eight theological students studied 78 male patients (mainly schizophrenics) in the Elgin State Mental Hospital for 3 summers.

The purpose of this study was to find how mental illness relates to mystical religious experience and mystical identification.

Results: The results were based subjectively on 25 years experience of the author.

His conclusions were that many of the ideas that were found in schizophrenics could be paralleled with the ideas of many of the religious leaders of the past, like Jesus. (Bib. 22)

This conclusion is enlightened by the words of Elmer Clark.

Temperament is, indeed, in discerity, since it largely determines the type of religious life which men prefer and would adopt were they entirely free from social conditions.<sup>8</sup>

### Study 5:

Sixty-three male subjects between the ages of 18 and 25, all church goers, were given anecdotes to read. Each anecdote depicted either a pleasant or unpleasant situation.

The procedure was that each student was given 6 anecdotes in random order and then asked to project himself into each of the situations.

Next the students were told to arrange the anecdotes according to three orders; according to the order they aroused emotions, according to the order that the student thought the situation was beyond his power to deal with except by praying, and, according to the order in which the student most likely would pray.

The procedure then used by the authors was to take correlations between prayer and frustration, prayer and affect, and frustration and affect. A factor analysis was then taken.

Results: The over all trend seemed to point out that prayer process of making an active response to baffling situations and not a mere escape mechanism.

Neither affect nor frustration alone were significant in determining when people will pray.

Prayer in this study was the group measure used to depict religiousness. (Bib. 20)

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8. Elmer Clark, "Non-Theological Factors in Religion," Ecumenical Review, III, July 1951, P. 353.

The next study should almost stand alone. Though it was taken of one population, and the questionnaire technique was used, it's quite different as to its content from the other studies.

The subject content has to do with atheism, and since it is the only study on this subject, a much more extensive view of it is presented than in any of the other studies.

The main reason for including this study is that in comparing it with other studies, a much more all inclusive picture is seen.

Edward Phillips says,

One might try to justify the neglect of irreligion by psychology on the grounds that religion is the positive phenomenon, whereas, atheism, as the mere absence of religion, is negative. Both religion and irreligion, however, involve interpretations of the ultimate nature of things, and as such both are equally positive.<sup>9</sup>

Whether this be true or not, atheism does seem like an important topic in the study of religion.

Johnson says,

Atheists have the same human nature that theists have and are also infected by irrationality, sentimentality and evasion. Their beliefs are subject to the same distortions of prejudice and desire.<sup>10</sup>

#### Study 6:

Six hundred questionnaires were sent by mail to a random sample of members of the American Association for the Advancement of Atheism.

Three hundred and fifty replies were received.

9. Bernard Phillips, "Psychology of Irreligion," Herbert Journal, p. 131.

10. Paul Johnson, Psychology of Religion, p. 169.

Results: When the age distribution was compared to the normal census figures, a less than chance number of atheists in the population were found under age 60 and a greater than chance distribution was found past age 60.

325 out of 350 of the replies were male.

Only 42% of the parents of these atheists were native born.

Over half of the group had lost one or both parents by the age of 20.

The education of this group showed the following trends. 24% more than would be found in a chance population had had 3 years of high school, 29% more than would be found in a chance population were high school graduates, and 39% more than would be found in a chance population had had 4 years of college.

90% of this group attended church before age 15, and only 61% after this crucial age.

90% of conversions were shown by Starbuck to occur between the years of 10-20. This study shows that only 41% of the group had become atheists by this age.

93% of this group held different faiths from their parents at one time or another.

Deism, Unitarianism and agnosticism were the most frequently trend beliefs before becoming atheistic.

77% lived in towns over 1000 in population and 53% lived in towns over 25,000. At the time of this study the United States was 50% rural.

Two thirds of this group were members of a religion that was a minority group in the section they were living, when they changed over to atheism.

At the time of becoming atheistic, 21% of the group were married, and 1/2 of the unmarried group had had sexual intercourse. 64% also reported making friends easily. The trend here seems to show that atheism is not a manifestation of repressed sexuality, a condition many psychoanalysts apply to religious conversion.

30% of the parents of this group were of a different faith.

Before becoming atheistic 64% of the group were Republicans or Democrats, and the remaining 26% (a percentage higher than random population) were non partisans. After becoming atheistic these percentages changed to 54% and 29% respectively.

The order of births into the family were as follows: 36% were oldest, 15% were youngest and 49% were born inbetween siblings. The average number of children in a family was four at this time for the United States.

The report on which religion is the most harmful was as follows: 52% said the Catholic religion was most harmful, 20% said that any Christian faith was and 10% said that all the religions were the same. (Bib. 18).

Many of these results and trends will be compared in chapter 5 with similar studies of religious groups.

#### Study 7:

This was a sociological study sponsored by the Federal Council

of Churches.

An analysis of church populations show the following two trends.  
Results: Protestants generally represent a higher social class than other religious denominations.

The church, including all denominations, is an institution representative of the middle class. (Bib. 31)

Study 8:

Two thousand five hundred replies were analyzed from a nation wide poll of high school students.

Comparisons were made between religious values and various other factors in the survey.

Results: Differences were found to exist between religious values and sex, grade, rural-urban populations, geographical locations, religious denominations, low and high income groups and parents' education. (Bib. 32).

Though the direction of each of these factors wasn't given in the abstract, each is mentioned in several other studies.

Study 9:

The "Alport-Vernon Study of Values Scores" were analyzed from 1,326 students entering the American International College for the years 1947 through 1949.

Results: The results were analyzed according to groups taken from the data.

Women were found to be significantly higher than men in religious values.

Jewish students were found to be significantly lower than Catholics and protestants in regard to religious values. (Bib. 14).

This type of study could be presented under the two or more group technique, except that the split would make it fall in two sections.

#### Repeat Studies with a Change in Conditions

attitude	(study 10)
questionnaire	(study 11)
recall	(studies 12 and 13)

#### Study 10:

An attitude scale measuring religious thinking was issued to 500 church members of various groups in Columbus Ohio.

A month after the results were in, 1/3 of the group were sent the answers to the scale that the majority of the group taking the scale had given.

1/3 of the group were sent answers to the scale that a group of experts had agreed upon.

1/3 of the group were used as controls and nothing was sent to them.

After this was done the whole population was asked to retake the scale.

The results were analyzed in three ways. They were as follows using the second study:

Results:

majority mean	4.3	
control mean	1.7	
<u>difference</u>	<u>2.6</u>	sig. (12.7 critical ratio)

expert mean	4.3	
control mean	1.5	
<u>difference</u>	<u>2.8</u>	" (11.2 " " )

majority mean	4.3	
expert mean	4.3	
<u>difference</u>	<u>0</u>	not sig.

Majority opinion and expert opinion affect religious thinking in people.

Neither of these two opinions, however, has a marked advantage or greater effect on people than the other. (Bib. 4)

Study 11:

A questionnaire of 25 religious propositions was given to 852 freshmen in 1930.

The same questionnaire was given in 1949 to 266 freshmen.

Actually these were two different groups, but they represented the same population sample.

The only change in conditions were the time lapse and the change of world conditions.

Results: An analysis of the results showed that the events and world affairs of the last two decades haven't had a significant effect on the religious thinking of freshmen. (Bib. 25)

The following two studies were administered by the same author. They are both similar in approach but different in populations questioned.

Study 12:

Four sermons were read to students in two classes.

After a two weeks lapse, the students were asked to indicate what they could recall of the sermons.

Results: Of 94 returns, 50 couldn't tell enough to be tabulated.

Of the 44 replies that could be tabulated, the material was classified according to the factors that were remembered best. The results from most to least were shock, interests, and problems of the students and theological problems that dealt with honesty and courage.

(Bib. 28)

Study 13:

This study was made of 191 people in the church congregation.

They were asked to recall the sermons that they could remember best

Results: The majority of the congregation couldn't remember any part of any sermon more than two weeks.

The retentions of parts of sermons in order were:  
word pictures, items concerning interests and problems of persons involved, shocking items and topics about religion. (Bib. 29)

Divided According to Religiousness

attitude	(studies 14 and 15)
beliefs	(study 16)

Study 14:

The attitudes of 652 students of six southern colleges were studied.

Religious attitudes were measured according to the degrees on the scale.

Intercorrelations were then taken between attitudes toward the church, attitudes toward the Jew and attitudes toward the Negro.

Results: Those who scored a better attitude toward the church also scored a better attitude toward the Negro and Jew. (Bib. 12)

Study 15:

Dredger administered the Salvation Opinionnaire "Ferguson's Primary Social Attitude No. 1 (Religionism)" to 60 subjects.

He divided these subjects into two groups with 30 in each group on the basis of religious attitudes.

Next he administered to each group the Rosengweig's Picture-Frustration Study, the Rorschach and the T.A.T.

Results: There failed to be any significant differences between religious attitudes and personality types.

He was also unable to differentiate between religious liberalism and religious conservatism. (Bib. 24)

Study 16:

An analysis of 622 Protestant undergraduate students at the University of Denver was made concerning beliefs of Christian dogma.

The subjects were divided into two groups; those who strongly accept and those who strongly reject Christian dogma.

These two groups were then given the names "believers" and "non-believers."

An inventory of Religious beliefs with 15 items and a high degree of validity and reliability was later constructed from these findings.

Results: Taken from the university standing, the mean percentile ranks were 50 and 80 respectively for "believers" and "non-believers".

Pessimism, worry and introversion were greater among male non-believers than male believers.

Believers are more optimistic and have better family relations than non-believers.

Other results were taken from the group as a whole.

Protestant students as a group tend to take a middle road position regarding Christian dogma.

Protestant church members scored significantly higher in belief than non members. More of them pray, read the Bible and attend church.

The mean score of religiousness showed a decline in the following order; freshmen, sophomores and juniors. (Bib. 3)

## CHAPTER III

## TWO OR MORE GROUP TECHNIQUE

Fourteen studies are presented in this chapter. The fifteenth study is an original study and is presented by itself in chapter 4.

## Non Religious Groups

attitude	(studies 17 and 18)
belief	(studies 19, 20 and 21)
test	(study 22)

Study 17:

A study was made of three groups of Norwegian adolescents from different environments.

The religious attitudes of these three groups were analyzed and found to be quite different.

Results: The most significant results found were between rural and urban groups. These two groups varied the most and showed much greater difference between religious attitudes than according to any other grouping. (Bib. 33)

Study 18:

A questionnaire on the development of political and religious attitudes was given to two groups of Danish College students. One group was comprised of 35 men, and the other group was comprised of 41 women.

Results: The attitudes of women were found to be much stronger toward religion than the attitudes of men.

The religious attitudes of women were found to be influenced more by parents.

Women were more apt to reason about their religious attitudes than men.

For both groups it was found that religious attitudes were formed in childhood, and in regards to the two factors leading to conversion, reason was first and dramatic incidents second. (Bib. 8)

Study 19:

Two groups differing in sex were given an attitude scale.

The following sex differences were found in beliefs.

Results: Daughters' beliefs correlated .89 with the beliefs of their father.

Sons' beliefs correlated .83 with the beliefs of their father.

The rank from most to least like their father's beliefs were found as follows:

Boys—Catholic, Lutheran, Methodist, Congregationalist, Protestant, (all not mentioned), Buddhists, Episcopal, Presbyterian, Baptist, Hebrew, Unitarian, "Don't know", atheist.

Girls—Catholic, Baptist, Methodist, Presbyterian, Lutheran, Protestants, (not mentioned), Hebrew, Buddhist, Atheist, Unitarian. (Bib. 6)

Study 20:

A questionnaire was given to 291 Harvard veterans, 123 Harvard non-veterans and 86 Radcliffe women undergraduates.

The questions pertained mainly to religious belief.

Results: Women were found to be more religious than men in both subjective experience and religious observance.

Veterans do not differ significantly from non veterans.

Trends for all three groups showed that the strongest influence upon "felt need" for religion was the students' upbringing.

Other factors affecting religious beliefs were other human beings, fear and insecurity, gratitude and aesthetic appeal.

The majority were found to have had inner experience at the point of change from puberty to adolescence.

Degree of religiousness was found in the following order, from most to least: Roman Catholic, Protestant, Jewish, and lastly those who think we need a new religion. (Bib. 1)

Study 21:

A questionnaire survey was given to 547 pre-pubescent, post-pubescent and pubescent pupils.

Results: Post-pubescent students no longer hold most of the beliefs taught to them in the pre-pubescent period. (Bib. 7)

Study 22:

The "Revised Watson Test of Religious Thinking (Form A)" was

distributed to all freshmen and seniors of a liberal arts college.

Tests were handed in by 46 seniors and 96 freshmen, approximately 68% of each class.

The test has nine parts: ideas of God, ideas of Jesus, ideas of prayer, ideas of kingdom, ideas of the church, ideas of Sunday observance and religious education, ideas of immortality, ideas of other religions, and ideas on life's purposes.

Scores were obtained by Watson's criterion, which he made up from the results of several hundred Sunday School pupils, theological students, etc.

The higher the score rating is, the more mature the religious thinking is.

Results: The seniors had a 201 mean score for the test and the freshmen had a 186 mean score. This was significant only to the .30 level of competence, but the seniors did better on eight parts out of the nine in the test.

For those seniors that had had no courses in religion a mean score of 197 was found; for those who had had one course a score of 201 was found; and for those having more than one course in religion a mean score of 205 was found.

This indicates a slight influence of religious courses on religious thinking, but other factors in the college curriculum must have been present. (Bib. 10)

### Religious Groups

attitude	(studies 23 and 24)
questionnaire	(study 25)
sociometric technique	(study 26)
test	(studies 27 and 28)
value patterns	(study 29)

#### Study 23:

Thurstone's "Measurement of Social Attitudes" was given to 104 patients at New York State Psychiatric Institute and Hospital.

The scale is comprised of six parts on attitudes toward the church, Sunday observance, evolution, birth control, crime and God.

The ratings on the scale are from 0 to 11 with 11 being the most favorable.

The patients were divided into 4 groups—Catholics, Protestants, Jews and non believers.

Results: The psychotic religious groups closely resemble normal religious groups in attitude toward the church. In order of favorability of attitudes they were Catholic, Protestant, Jewish and non believers.

When 45 of these cases were also given the "Bernreuter Personality Inventory," and 45 other cases were given the Maller "Character Sketches" the Correlations with the Thurstone scale were minus .35 and minus .13 respectively. The conclusion was that there is no relationship between favorable attitudes and normality.

When the groups were divided according to psychotic symptoms there wasn't as much variation as there was between religious groups.

The conclusion was that psychoses doesn't alter the pre-psychotic religious state much. (Bib. 9)

#### Study 24:

Different denominations were given attitude scales on religiousness and humanitarianism in the Minneapolis Area.

Their ages ranged from 15 to 17.

Results: The scores on the religious attitude scales varied directly with the conservatism of the denominational group.

Humanitarianism was not found as a factor correlating with religion positively. In fact it was found to vary inversely with religiousness. (Bib. 27)

#### Study 25:

A questionnaire was given to 577 students at the University of Hawaii. The students represented many different religions.

This questionnaire was originated at Harvard but was modified for this study.

Results: The degree of religiousness was found in the order of Catholicism most, protestantism next and those failing to make a choice least.

Religious choice was found to be affected more by religious preference than by religious background.

Students from homes of mixed religions were found to have more than an average need for religious orientation.

Other results found in the group as a whole or according to other inner group divisions were:

For the majority of the students religion has had a marked or moderate influence in their upbringing.

For most of the students a religious awakening was found to occur rather gradual and not as a sudden conversion. The age that this occurred most frequently was around 16.

Women were found to be more religious than men, and veterans reported that their war experiences made them more religious.

(Bib. 19)

#### Study 26:

This was a sociometric study of six denominations where each student reported a certain number of friendship choices. Various unaffiliated members were studied also.

Results: None of the religious denominations studied showed an advantage over any other in developing individuals who win friends in college.

Students with no church affiliation received statistically more friendship choices.

A trend for church and non-church ingroup preferences in friendship was apparent. (Bib. 2)

#### Study 27:

An authoritarian-equalitarian scale was given to 963 people of various denominations in the Philadelphia area.

This scale correlated .63 with the "California Facism Scale."

Results: Catholic, protestant and Jews were authoritarian in their order.

The religious differences in the scale were found to be due to the ethnic background of protestants and Catholics. (Bib. 23)

Study 28:

A modified form of the "Bogardus Test of Social Distance" was given to 926 students of various religions entering American International College in 1947 and 1948.

Results: No significant differences in prejudice were found between Jewish, Protestant or Catholic students. (Bib. 13)

Study 29:

Twelve different religious groups comprised of 314 young people from various parts of the United States were studied according to their evaluation of certain topics and ranked according to their value patterns.

The topics evaluated were excitement, wealth, society, political power, comfort, social service, home life, friendship, personal values, improvement and intellectual activity.

Results: There were statistical correlations between various values and various religions.

The important findings, however, were the common elements ranked by the different groups.

The values ranked high by all the religions were social service, home life and friendship.

The items valued low by all the religions were wealth, excitement, formal society life and political power.

It was not apparent, however, whether these common elements existed within religious experience or not. (Bib. 21)

#### Religious and Non Religious Group

#### self rating technique (study 30)

This was the only experiment found that used a ministerial and non ministerial group for study.

Though it is like the original study in this way, it differs in all other respects.

#### Study 30:

The "Heidfreden Scale of Introversi~~on~~-Extroversi~~on~~ and Inferiority Complexes" was given to 80 Roman Catholic divinity students.

The results were compared with the self ratings on the same scale of students, university faculty members and business men.

93 items were rated according to minus, minus minus, zero, plus and plus plus.

When the results are tabulated, the higher and more positive the score is, the more of the given trait measured is apparent.

Results: Seminary Students are more subject to inferiority attitudes than people in general.

Introversi~~on~~ is also much more marked in theology students than in the general population.

Older theological students were found to have less inferiority attitudes than beginning students, but the same as college freshmen.

(Bib. 15)

## CHAPTER IV

### A BACKGROUND COMPARISON OF MINISTERIAL AND NON-MINISTERIAL STUDENTS AT A SOUTHERN ACADEMIC UNIVERSITY

#### Preliminary Survey;

Before any plans were made or any action was taken for this study, a preliminary survey was made for the purpose of organizing ideas on how to find factors discriminating between degrees of religiousness in people.

Six ministers, five Baptists and one Presbyterian, were interviewed personally by the author in the Richmond area.

The average length of each interview was two hours, and the primary purpose was to get their views on the subject at hand.

The second purpose was to find out the background of actual ministers in the field. This was done by asking leading questions in regard to family background, home raising, neighborhood and school, history of religious life and self evaluation.

Actually the information received in regards to this second purpose

proved more useful than the opinions of the ministers.

#### Experimental Procedure:

The data received from these six ministers was used solely as a reservoir from which questions were made up and printed in the form of a questionnaire.

As a result most of the questions in the questionnaire have to do with the five points analyzed from the backgrounds of these six ministers.

The students taking the questionnaire came from two main sources: Namely class rooms and one ministerial meeting.

Thirty of the ministerial students were given the questionnaire at their weekly meeting. The other ten were reached through class rooms, while random subjects were being tested for the non-ministerial group.

If the meeting procedure hadn't been used, the majority of the ministerial subjects questioned would have been reached in the class rooms questioned.

The non-ministerial students came from advanced classes in psychology and philosophy.

Forty-two ministerial and fifty-five non-ministerial students, were questioned in all.\*

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\*Forty-four ministerial students and forty-two non-ministerial students were first questioned and four students and two students were eliminated respectfully from each group in a random order to give an even forty in each group. Realizing this as a statistical procedure not done, an attempted correction has been made by testing an additional two ministerial students and fifteen non-ministerial students, making a final total of forty-two and fifty-five respectively for each group.

Twenty-seven girls were eliminated from the group.

The questionnaire took an average length of 20 minutes to complete, and many of the returns were incomplete in one or two items, where carelessness was the possible answer.

Any of the tables showing groups of less than the respective group members are the results taken from the number of each group answering that given question. Most of the questions, however, were answered by all the students in each group.

All of the data was collected in a period of four days.

The data was then analyzed according to the percentage of each group or the mean of each group bearing any given quality asked for in the questionnaire.

The percentages of each group were then analyzed statistically for significance.

The three procedures used were Chi-square, The Test for the Significance between Proportions and The Test for the Significance between Means.<sup>11</sup>

The hypothesis of the questionnaire approach was that if a statistical difference in some background factor or trait could be found between a group of ministerial and non-ministerial students, the difference would be a possible discriminating factor between those students most likely to go into the ministry and those students most likely not to go into the ministry.

The assumption is made in conjunction with the title of this paper that a group of ministerial students rank higher in religiousness than a group of non-ministerial students.

<sup>11</sup>. John Freund, Modern Elementary Statistic, pp. 206-211; 215-219; 291-302.

A copy of the questionnaire is given below.

NAME	RELIGIOUS PREFERENCE	SEX
GRADE	MAJOR	AGE
ARE YOU A MINISTERIAL STUDENT		

-EXPLANATION-

Either check the correct answer or write in the correct answer or both.

1. Are there any ministers in your family or among your near relatives?  
YES \_\_\_\_\_ NO \_\_\_\_\_ WHO \_\_\_\_\_
2. What are the occupations of your parents?  
MOTHER \_\_\_\_\_ FATHER \_\_\_\_\_
3. How many brothers and sisters do you have?  
BROTHERS \_\_\_\_\_ SISTERS \_\_\_\_\_
4. What number were you born into the family?  
FIRST \_\_\_\_\_ LAST \_\_\_\_\_ WHEN \_\_\_\_\_
5. Who is the dominant personality in the family?  
MOTHER \_\_\_\_\_ FATHER \_\_\_\_\_
6. What are the religions of your parents?  
MOTHER \_\_\_\_\_ FATHER \_\_\_\_\_
7. What were the ages of your parents when you were born?  
MOTHER \_\_\_\_\_ FATHER \_\_\_\_\_
8. Through what grade in school did your parents go? Degrees?  
MOTHER \_\_\_\_\_ FATHER \_\_\_\_\_
9. What is the average number of times per month your parents attend  
MOTHER \_\_\_\_\_ FATHER \_\_\_\_\_
10. Was your going to church stressed in your pre-college life? By your parents?  
YES \_\_\_\_\_ No \_\_\_\_\_
11. Is it a custom in your family to have a blessing before meals?  
YES \_\_\_\_\_ NO \_\_\_\_\_
12. Were you trained as a child to pray upon retiring?  
YES \_\_\_\_\_ NO \_\_\_\_\_
13. Was physical punishment a part of your raising?  
YES \_\_\_\_\_ NO \_\_\_\_\_

14. What type of neighborhood were you raised in?  
 FARM \_\_\_\_\_ CITY \_\_\_\_\_ OTHERWISE \_\_\_\_\_
15. What type of school did you attend before entering college?  
 PUBLIC \_\_\_\_\_ PRIVATE \_\_\_\_\_
16. How many times did you and your family move before you entered college?  
 NUMBER \_\_\_\_\_
17. Have you ever changed your religion?  
 YES \_\_\_\_\_ NO \_\_\_\_\_  
 HOW MANY TIMES \_\_\_\_\_  
 WHAT AGE \_\_\_\_\_  
 FROM WHAT TO WHAT \_\_\_\_\_
18. Have you had a conversion experience? If so what type and at what age?  
 YES \_\_\_\_\_ NO \_\_\_\_\_  
 INSTANTANEOUS EXPERIENCE \_\_\_\_\_ GROWING EXPERIENCE \_\_\_\_\_  
 AGE \_\_\_\_\_
19. Which jobs have you participated in previous to college?  
 SUNDAY SCHOOL TEACHER \_\_\_\_\_  
 YOUTH LEADER \_\_\_\_\_  
 OFFICE IN SUNDAY SCHOOL \_\_\_\_\_
20. What profession or occupation have you decided upon?  
 CHOICE \_\_\_\_\_  
 AGE YOU MADE DECISION \_\_\_\_\_

Did any person have a major influence in your deciding upon your profession or occupation?

YES \_\_\_\_\_ NO \_\_\_\_\_  
 WHO \_\_\_\_\_

Give one to three outstanding reasons why you decided upon going into the previously named occupation?

1.

2.

3.

What is your hobby or are your hobbies?

1.

2.

3.

24. What three forms of recreation are you most interested in?
- 1.
  - 2.
  - 3.
25. What do you consider your three outstanding abilities?
- 1.
  - 2.
  - 3.
26. Do you think the world outlook for the next ten years is favorable or unfavorable
- |                  |                    |
|------------------|--------------------|
| TOWARD WAR _____ | TOWARD PEACE _____ |
| DON'T KNOW _____ |                    |

The controls used were as follows:

After the questionnaire was given, all female copies were discarded.

Over 90% of the students in both groups answering the questions on the test were protestant.

The grade range was 4 years ranging from freshmen to seniors.

#### Results:

The answers at the heading of the questionnaire were very indecisive since the majority of the students didn't answer them.

1. The first question on ministers in the family background was significant to less than the .02 level.

Not showing up in these statistics, however, is the fact that more ministerial students have more than one relation as a minister than non ministerial students. (see table A-part 2)

2. The occupations of the parents were too vague to analyze.

An attempt was made to analyze the occupations of the parents of the students according to IQ as shown by the "Army General Classification Test,"<sup>12</sup> but most of the occupations given weren't on this classification list.

Classification according to occupational dictionaries was also impossible since the data received wasn't technical enough.

According to the first procedure tried, however, the trend seemed to show that the parents of non ministerial students are in occupations that are ranked as having higher mean IQs than the parents of the ministerial Group.

3. Ministerial students definitely come from larger families than non ministerial students according to the results of this survey.

The data was significant to less than .02. (See Table B).

4. A significant difference was found in order of births into the family.

A greater percentage of ministerial students report being born inbetween other siblings than non ministerial students.

5. There was no significant difference between the dominant personalities of mothers and fathers as reported by the two groups.

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12. Roger Bellows, Psychology of Personnel in Business and Industry, pp. 138 and 139, quoting, "Army General Classification Test," Examiner Manual for the S.R.A. Army General Classification Test, Science Research Associates, Chicago, Illinois, April 9, 1942.

TABLE A

Part 1: Table showing reported number of ministerial and non ministerial students having relations in the ministry.

	42 Ministerial Students		55 Non Ministerial Students	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
No. of students having relations in the ministry	16	38	9	16.3
No. of students not having relations in the ministry	26	62	46	83.7

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Part 2: Table showing relations of ministerial and non ministerial students reported they were or are ministers:

<u>Relationship</u>	<u>No. for 42 Ministerial Students</u>	<u>No. for 55 non Ministerial Students</u>
<u>Brother</u>	<u>5</u>	<u>—</u>
<u>Father</u>	<u>2</u>	<u>2</u>
<u>Grandfather</u>	<u>2</u>	<u>5</u>
<u>Brother-in-law</u>	<u>3</u>	<u>—</u>
<u>Uncle or Aunt</u>	<u>5</u>	<u>2</u>
<u>First Cousin</u>	<u>1</u>	<u>1</u>
<u>Total</u>	<u>18</u>	<u>10</u>

6. There was no significant difference when the number of reported differences in religion between parents was tabulated for the ministerial and non ministerial group.

There were 6 reported differences among ministerial parents and 6 reported differences among non ministerial parents. The percentage differences are 14.2% and 10% respectively. This is interesting when compared to the 30% difference found in study 6 for the parents of atheists.

There was a significant difference, however, when the reported religions of the students were analyzed as to their being different from both parents.

Six ministerial students out of only 23 answering enough data to make comparisons report a difference in religion from both parents.

Only two reported differences in 36 cases were found in the non ministerial group.

This is significant to less than .02.

7. The reported mean ages of the parents of the ministerial and non-ministerial students were very similar and insignificant when compared for differences.

8. The reported educational difference between ministerial students' parents and non ministerial students' parents is quite marked.

The difference is significant to much less than the .01 level under any type of comparison. (See Table D)

9. The difference between the number of reported times ministerial students' parents and non ministerial students' parents attend church is insignificant.

TABLE B

Table showing the reported number of brothers, sisters, total siblings, mean number of siblings and standard deviation from the mean number of siblings—for ministerial students and non-ministerial students.

	<u>No. for 42 Ministerial Students</u>	<u>No. for 55 non Ministerial Students</u>
<u>Brothers</u>	<u>53</u>	<u>51</u>
<u>Sisters</u>	<u>50</u>	<u>35</u>
<u>Total Siblings</u>	<u>103</u>	<u>86</u>
<u>Mean No. Siblings</u>	<u>2.4</u>	<u>1.5</u>
<u>Standard Deviation</u>	<u>2.18</u>	<u>1.3</u>

TABLE D

Table showing the education reported of the parents of 42 ministerial students and 52 non-ministerial students.

Education	Parents of 42 Ministerial Students		Parents of 52 Non Ministerial Students		<u>% Dif.</u>
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	
College Degree or Better	<u>6</u>	<u>7.1</u>	<u>31</u>	<u>28.4</u>	<u>21.3</u>
High School Degree or Better	<u>28</u>	<u>33.3</u>	<u>77</u>	<u>70.6</u>	<u>37.3</u>
Sixth Grade or Better	<u>50</u>	<u>71.4</u>	<u>94</u>	<u>86.2</u>	<u>14.8</u>
Under Sixth Grade	<u>32</u>	<u>38</u>	<u>11</u>	<u>10</u>	<u>28</u>

The question was misinterpreted by too many students, and the results included all types of church visits instead of just Sunday services.

10-13 Questions 10 through 13 were of the "yes-no" variety, and all were significant with the exception of question 12 concerning childhood training in praying upon retiring. A greater percentage of ministerial students report that going to church was stressed in their childhood than do non ministerial students.

This is significant to less than .05.

A greater percentage of ministerial students report that having the blessing before meals was a part of their childhood training than do non ministerial students.

This is significant to less than .02.

A greater percentage of ministerial students report that physical punishment was a part of their childhood training than do non ministerial students.

This is significant to less than .01.

14. The rural-urban discrimination was significant to less than .05.

This is recorded as significant since several other studies found rural-urban differences.

30% of ministerial students reported coming from rural areas where as only 12.7% of non ministerial students reported coming from the country.

15. The percentage of ministerial students and non ministerial students reporting having attended private schools was small and insignificant in regards to any discrimination between the two groups.

TABLE E

Table showing % "yes" and "no" answers for questions 10-13 as answered by ministerial students and non-ministerial students.

Questions 10-13	Ministerial Students		Non Ministerial Students		% Dif.
	<u>% yes</u>	<u>% no</u>	<u>% yes</u>	<u>% no</u>	
Church Going Stressed By Parents	<u>95.5</u>	<u>4.5</u>	<u>78.2</u>	<u>21.8</u>	<u>17.3</u>
Blessing Before Meals in Family	<u>86.5</u>	<u>13.5</u>	<u>63.7</u>	<u>36.3</u>	<u>22.8</u>
Trained to Pray upon Retiring	<u>86.5</u>	<u>13.5</u>	<u>87.3</u>	<u>12.7</u>	<u>.8</u>
Physical Punishment Stressed in Family	<u>88.1</u>	<u>11.9</u>	<u>58.2</u>	<u>41.8</u>	<u>29.7</u>

16. There was no significant difference between the reported number of times that ministerial and non ministerial moved before entering college.

17. Ten ministerial students reported they had changed their religion once, and only four non ministerial students reported changing their religion once. This difference was significant to less than .02.

None reported changing their religion more than once.

An interesting trend among the ministerial students was that four out of the five reported change in religion were to the Baptist faith.

The age of the change in all cases reported was 17 or over. This might possibly indicate that ministerial association, being predominantly Baptist, could have been a factor influencing this change. This would apply of course only to those making this change after entering college.

18. Statistics weren't taken on the first part of question 18 since all of the ministerial students had had a conversion experience, and less than half of the non ministerial students had had one. This is an obvious difference.

Statistics were taken, however, on the ratios of reported instantaneous or sudden conversions to growing experiences, and there was no significant difference between the two groups.

There was no significant difference between the reported ages for conversion between ministerial students and non-ministerial students.

19. From their reports ministerial students participated significantly more in Sunday School previous to college than did non ministerial students. The statistical significance was less than .01. (See Table F)

TABLE F

Table showing reported participation in Sunday School previous to college for 42 ministerial and 55 non ministerial students.

Sunday School Position	Ministerial Students		Non Ministerial Students		% Dif.
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	
Sunday School Teacher	<u>30</u>	<u>71.4</u>	<u>11</u>	<u>20</u>	<u>51.4</u>
Youth Leader	<u>29</u>	<u>69</u>	<u>17</u>	<u>30.9</u>	<u>38.1</u>
Office in Sunday School	<u>29</u>	<u>69</u>	<u>14</u>	<u>25.4</u>	<u>43.6</u>
All Offices	<u>16</u>	<u>38</u>	<u>3</u>	<u>3.6</u>	<u>34.4</u>
None	<u>2</u>	<u>4.7</u>	<u>27</u>	<u>49</u>	<u>44.3</u>

20. There was no way to compare the choice of future professions or occupations the students intended to go into, the main reason for this being that many of the non ministerial students hadn't made an occupational choice yet.

The mean age reported for making this decision was around 19 for both groups.

This age enlightens question 19 in that it is seen that the majority of ministerial students had participated excessively in Sunday School before making the decision of going into the ministry.

21. Though 17 ministerial students reported having been influenced by some person in their choice of a profession, and 10 non ministerial students reported having been influenced, the difference was insignificant.

The fact that many non ministerial students hadn't reported making any occupational choice yet probably influenced the results of this question also.

22-25. Questions 22 through 25 were invalid. All four questions were mistaken for each other, and overlap was found in nearly all cases.

26. The non ministerial group showed a more optimistic outlook for the world than the ministerial group, but the difference wasn't significant.

## CHAPTER V

### SUMMARY OF DISCRIMINATING FACTORS AND CONCLUSIONS

The summary in this chapter is divided into two parts.

The first part is a summary of the results found in the 30 research studies.

Only the results that were found in more than one study, not including the original study, are included.

The factors found to discriminate between degrees of religiousness in people are arranged according to their frequency of occurrence throughout the 30 studies.

The second part is a review of the significant factors found in the original study.

The first part of this chapter will be preceded by a brief outline for clarification.

## Summary of 30 Research Studies (part-1)

<u>Discriminating Factors</u>	<u>Studies</u>
Church Denomination	2, 6, 8, 9, 19, 20, 23, 23, 25, 29
Sex	2, 6, 8, 9, 18, 20, 25
Parents and Background	6, 16, 18, 19, 20, 25
Age	6, 18, 20, 21, 25
Education	6, 8, 16, (22)
Other People	1, 10, 20
Location (rural-urban)	6, 8, 17
Church Affiliation	2, 16

Church denomination by far is the most powerful factor discriminating between types and degrees of religiousness found in people.

Thurstone's Scale showed that Mormons have more favorable church attitudes than other denominations. (Study-2)

In (Study-6) it was found that 2/3 of atheists, representing a lack of religiousness, were members of a religious denomination that represented a minority group in comparison with other denominations in their town, when they made the change to atheism.

In (Study-8) a difference in religious denomination reflected itself in differences in religious values as reported by 2,500 high school students.

From 1,328 students entering American International College, the "Alport-Vernon Study of Values Scores" shows that Jewish students scored significantly lower than Catholics and Protestant students in regards to religious values. (Study-9).

In (Study-19) it was found that the beliefs of boys and girls were influenced tremendously by their fathers' beliefs. The religious denom-

inations, from most to least, influencing this relationship are as follows:

Boys-Catholic, Lutheran, Methodist, Congregationalist, Protestant,  
(all not mentioned), Buddhists, Episcopal, Presbyterian,  
Baptist, Hebrew, Unitarian, "Don't know", atheists.

Girls-Catholic, Baptist, Methodist, Presbyterian, Lutheran, Protestants,  
(not mentioned), Hebrew, Buddhists, atheists, Unitarian.

At Harvard a questionnaire showed that denominations affected the degree of religiousness of its students. Going from most to least religious, the results were as follows:

Roman Catholic; Protestants; Judaism; and lastly those who think we need a new religion. (Study-20).

Thurstone's "Measurement of Social Attitudes," when given to 104 patients at New York State Psychiatric Institute and Hospital, showed that the religious groups closely resemble normal religious groups in attitudes toward religion.

Going from most religious to least religious, the results were as follows: Catholic; Protestant; Jewish; and non-believers. (Study-23)

Different denominations in the Minneapolis area found that religious attitudes varied directly with the conservatism of the different denominational groups. (Study-24)

From a questionnaire given at the University of Hawaii, the degrees of religiousness from most to least were found in the following order for the following religions:

Catholics; Protestants; and those failing to make a choice. (Study-25)

In (Study-29) statistical correlations were found between various values and various religions.

Conclusions as drawn from the preceding 10 studies:

1. Denomination is a factor discriminating between values, beliefs, attitudes and degrees of religiousness in the people.
2. The degrees of religiousness as reported from most studies, from most religious to least religious, are found in the following order: Catholic; Protestant; Jewish; and non members.

Sex:

In (Study-2) females were found to score higher in church attitudes than males.

Out of 350 replies received from members of the American Association for the Advancement of Atheism, 325 were sent in by males. (Study-8)

From a nation wide poll of 2,500 high school students, differences were found to exist between religious values and sex. (Study-8)

Women were found to be significantly higher than men in religious values, when 1,378 students at the American International College were given the "Alport-Vernon Study of Values." (Study-9)

The attitudes of female Danish college students were found to be much stronger toward religion than the attitudes of male Danish students. (Study-18)

Radcliff women were found to be more religious than Harvard men in both subjective experience and religious observance. (Study-20)

Female students at the University of Hawaii were found to be more religious than men. (Study-25)

Conclusions as drawn from the preceding seven studies:

1. Sex is a factor discriminating between religious values, beliefs,

attitudes and behavior.

2. Females as shown in most studies are more religious than men in all respects.

#### Parental Influence and Home Background:

In (Study-6) atheists show quite different results in regards to parental influence and home background than do random samples of the population.

First, over half of the atheistic group reported having lost one or both parents by the age of 20.

Next, 93% of this group held different religions from their parents at one time or another.

Last, 30% of this group had parents of a split faith. (Study-6)

"Believers" at the University of Denver were found to have better family relations than "non-believers." (Study-16)

The religious attitudes of Danish women were found to be influenced highly by parents. (Study-18)

Daughters' beliefs were found to correlate .89, and sons' beliefs .83 with the beliefs of their fathers. (Study-19)

For both Harvard and Radcliffe students, the strongest influencing factor upon "felt need" for religion was the students' upbringing. (Study-20)

At the University of Hawai it was found that the majority of the students' religions had had a marked or moderate influence in their upbringing. (Study-25)

Conclusions as drawn from the preceding six studies:

1. Parental influence and home background are factors that discriminate between degree of religiousness in people.
2. Religiousness correlates more closely than "lack of religiousness" with parents and home background.

#### Age:

Again for Atheists, results on age show a marked difference from other populations.

First, as compared with a random population, atheism seems most popular after age 60.

Next, at the crucial age of 15 when most conversions are experienced in a random population, atheists had taken a drop from 90% to 61% respectively in church attendance.

Last, only 41% of the atheistic group had become atheists by the age of 20, whereas in contrast, as shown by Starbuck, 90% of conversions had occurred by this age for ordinary populations. (Study-6)

In the Danish study attitudes toward religion for both males and females were found to have been formed in childhood. (Study-18)

At Harvard and Radcliffe the majority of students were found to have had an inner religious experience at about the point of change from puberty to adolescence. (Study-21)

For students at the University of Hawii, most conversions were found to occur at around age 16.

Conclusions drawn from the preceding five studies:

1. Age is a factor discriminating between the degree and type of religiousness in the personality.
2. The puberty-adolescent period is the crucial age where most children who become religious are converted.

Since the studies presented don't back up the last statement too decisively, two quotations on the subject will help strengthen the conclusion.

William James said,

Conversion is in its essence a normal adolescent phenomenon, incidental to the passage from the child's small universe to the wider intellectual and spiritual life of maturity.<sup>13</sup>

Dr. Plant, director of the Essex County Juvenile Clinic in Newark, New Jersey, for 24 years, said,

From early adolescence on the church gives a great many children a sense of belongingness which has greater continuity and certainty for the individual than anything provided by his parents.<sup>14</sup>

#### Education:

The trend for the education of atheists was found to be the reverse for that found in most religious studies.

It was shown in (Study-6) to vary as follows: 24% more than would be found in a chance population had had 3 years of high school, 29% more than would be found in a chance population were high school

13. William James, The Varieties of Religious Experience, p. 26.

14. James Plant, The Envelops, p. 26.

graduates and 39% more than would be found in a chance population had had 4 years of college.

In (Study-8) differences were found to exist between religious values and grade.

At the University of Denver "believers" were averaged at the 50 percentile rank in their respective classes, and "non-believers" were averaged at the 80 percentile rank. (Study-16)

When the "Revised Watson Test of Religious Thinking (Form A)" was given to freshmen and seniors at a liberal arts college, seniors scored higher.

Conclusions drawn from the preceding four studies.

1. Education is a discriminating factor between degrees of religiousness in people.

#### Other People:

The trend for the people in the East Baton Area is to attend church primarily for social reasons. (Study-1)

In Columbus, Ohio it was found that both majority opinions and opinions of experts influenced the religious thinking of various church members residing in the area. (Study-10)

It was found at Harvard and Radcliffe that one of the factors influencing the religious beliefs of students was "other people."

Conclusions drawn from the preceding three studies:

1. "Other people" influence religious beliefs and religious thinking of most people.

2. The direction of the influence is dependent on the situation.

#### Location (urban-rural):

77% of atheists lived in towns over 1000 in population when the population of the United States was still 50% rural. (Study-6)

Differences in religious values were found to exist between rural and urban populations, as determined from 2,000 replies of high school students. (Study-8)

The most significant difference in religious attitudes was found between rural and urban groups in a study of Norwegian adolescents. (Study-17)

#### Conclusions drawn from the preceding three studies:

1. There is a discrimination between rural and urban areas for the degree and kind of religiousness found in the respective two populations.

#### Church Affiliation:

This is distinguished from the title-head "Church Denominations," in that it means church members as compared with non church members.

The results of 1000 students, as measured by Thurstone's scale, show that Church affiliation and attendance correlate with church attitudes positively. (Study-2)

At the University of Denver it was found that Protestant church members scored significantly higher in belief than non members. More Protestant students pray, read the Bible and attend church than do non church students. (Study-16)

Conclusions drawn from the preceding two studies.

1. Church affiliation is a discriminating factor between differences in religious attitudes and behavior.
2. Church affiliation correlates positively with religious attitudes and behavior.

#### Summary of Significant Items Found in the Original Study (Part-2)

1. Having more ministers in the family background is a discriminating factor between students preparing for the ministry and students not preparing for the ministry; ministerial students report more ministers among their relatives.

This is statistically significant to less than the .02 level.

2. Family size is a discriminating factor between ministerial and non ministerial students; ministerial students report coming from larger families.

This is significant to less than the .02 level.

3. The reported order of birth into the family is significantly different between ministerial students and non ministerial students.

More ministerial students report being born in between other siblings than non ministerial students, but this is probably due to the fact that ministerial students come from larger families.

The difference, however, is significant to less than .02.

4. More ministerial students report having different religious faiths

from that of their parents than non-ministerial students.

The difference is significant to less than .02.

5. The reported education of ministerial students' parents is significantly higher than the reported education of non-ministerial students' parents.

This educational difference is a discriminating factor between the two groups tested.

It is significant to less than the .01 level.

6. A discrimination was found between ministerial students and non-ministerial students in regards parental stress on going to church during pre-college life.

Ministerial students report having been encouraged more along these lines.

The difference was significant to less than .05.

7. A greater percentage of ministerial students report that having the blessing before meals was a part of their family routine than do non-ministerial students.

The difference was significant to less than .02.

8. Physical punishment was reported by a greater percentage of ministerial students than non-ministerial students to have been a part of their childhood raising.

The difference was great enough to be considered a discriminating factor.

It is significant to less than the .01 level.

9. More ministerial students report coming from rural areas than non-ministerial students.

The difference was large enough to warrant a rural-urban discrimination.

The difference was significant to less than .05.

10. More ministerial students report they have changed their religion than non-ministerial students.

The difference was significant to less than .02.

11. Ministerial students report greater pre-college Sunday school participation than non-ministerial students.

The difference is large enough to be considered a discriminating factor.

This is significant to less than the .01 level.

Both the research studies and the original study indicate that there are factors discriminating between degrees of religiousness among people.

The summarized frequency of discriminating factors taken from the research studies may be due to the nature of the studies and not to the actual discriminating factors in the groups studied.

The validity and reliability of the 30 research studies are as good only, as the validity and reliability of each of the studies made.

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### VITA

Born in Hangchow, China, March 16, 1931. Left China at the age of six months to spend the next twenty years in California. Lived in Hollywood for five years and then moved to Glendale where grade school, junior high and high school were completed. Graduated from Glendale High School in June, 1949. Spent one year at Glendale City College. Moved to East Orange, New Jersey. Transferred college credits to the University of Richmond in Richmond, Virginia. Joined Phi Gamma Delta, a social fraternity, during the sophomore year. Spent the junior and senior years at the University of Richmond School of Business Administration. Received a B.S. in business administration with a concentration in management, August 1953.

APPENDIX<sup>15</sup>

Chi-square Criterion

<u><math>n_{ij}(e_{ij})</math></u>	<u><math>n_{ij}(e_{ij})</math></u>	<u><math>n_{ij}(e_{ij})</math></u>	<u><math>n_i</math></u>
<u><math>n_{ij}(e_{ij})</math></u>	<u><math>n_{ij}(e_{ij})</math></u>	<u><math>n_{ij}(e_{ij})</math></u>	<u><math>n_i</math></u>
<u><math>n_j</math></u>	<u><math>n_j</math></u>	<u><math>n_j</math></u>	<u><math>n</math></u>

$i$  = row  
 $j$  = column  
 $n_i$  = row total  
 $n_j$  = column total  
 $n$  = row and column total  
 $n_{ij}$  = cell frequency

$$e_{ij} = \frac{(n_j)(n_i)}{n} = \text{expected cell freq.}$$

$$\chi^2 = \sum \frac{(n_{ij} - e_{ij})^2}{e_{ij}} = \text{chi-square}$$

$a$  = number of rows  
 $b$  = number of columns  
 $df = (a-1)(b-1) = \text{degrees of freedom}$

CR = critical ratio of  $\chi^2$  for  $df$ .

APPENDIX

Chi-square Criterion for Ministers among Relations

	Number Having	Number not Having	Row Totals
Ministerial	<u>16(10.8)</u>	<u>26(31.2)</u>	<u>42</u>
Non Ministerial	<u>9(11.2)</u>	<u>46(41.8)</u>	<u>55</u>
Column Totals	<u>25</u>	<u>72</u>	<u>97</u>

---


$$e_{ij} = \frac{25 \times 42}{97} = 10.8$$

---


$$\chi^2 = \frac{(16-10.8)^2}{10.8} + \frac{(9-11.2)^2}{11.2} + \frac{(26-31.2)^2}{31.2} + \frac{(46-41.8)^2}{41.8} = > 5.412 \text{ (table)}$$

---


$$df = (2-1)(2-1) = 1$$

---


$$CR = < .02$$

APPENDIX

Chi-square Criterion for Blessing Before Meals

	Yes	No	Row Totals
Ministerial	<u>36 (30.7)</u>	<u>6 (11.3)</u>	<u>42</u>
Non Ministerial	<u>35 (40.3)</u>	<u>20 (11.7)</u>	<u>55</u>
Column Totals	<u>71</u>	<u>26</u>	<u>97</u>

---


$$e_{ij} = \frac{71 \times 42}{97} = 30.7$$

---


$$\chi^2 = \frac{(36-30.7)^2}{30.7} + \frac{(35-40.3)^2}{40.3} + \frac{(6-11.3)^2}{11.3} + \frac{(20-11.7)^2}{11.7} = 5.99$$

---


$$df = (2-1)(2-1) = 1$$

---


$$CR = < .02$$

APPENDIX

Chi-square Criterion for Physical Punishment

	Number Having	Number not Having	Row Totals
Ministerial	<u>37 (29.8)</u>	<u>5 (12.2)</u>	<u>42</u>
Non Ministerial	<u>32 (39.2)</u>	<u>23 (15.8)</u>	<u>55</u>
Column Totals	<u>69</u>	<u>28</u>	<u>97</u>

---


$$e_{ij} = \frac{69 \times 42}{97} = 29.8$$

---


$$\chi^2 = \frac{(37-29.8)^2}{29.8} + \frac{(32-39.2)^2}{39.2} + \frac{(5-12.2)^2}{12.2} + \frac{(23-15.8)^2}{15.8} = > 6.635 \text{ (table)}$$

---


$$df = (2-1)(2-1) = 1$$

---

CR = better than .01

APPENDIX

Chi-square Criterion for Participation in Sunday School

	0 or 1 Position	2 or 3 Positions	Row Totals
Ministerial	<u>10 (22.9)</u>	<u>32 (19.1)</u>	<u>42</u>
Non Ministerial	<u>43 (30.1)</u>	<u>12 (24.9)</u>	<u>55</u>
Column Totals	<u>53</u>	<u>44</u>	<u>97</u>

---


$$e_{ij} = \frac{53 \times 42}{97} = 22.9$$

---


$$\chi^2 = \frac{(10-22.9)^2}{22.9} + \frac{(43-20.1)^2}{20.1} + \frac{(32-19.1)^2}{19.1} + \frac{(12-24.9)^2}{24.9} = 6.635 \text{ (table)}$$

---


$$df = (2-1)(2-1) = 1$$

---


$$CR = < .01$$

APPENDIX

Chi-square Criterion for Rural-Urban

	Rural	Urban	Row Totals
Ministerial	<u>12 (8.1)</u>	<u>29 (32.9)</u>	<u>41</u>
Non Ministerial	<u>7 (10.9)</u>	<u>48 (44.1)</u>	<u>55</u>
Column Totals	<u>19</u>	<u>77</u>	<u>96</u>

---


$$e_{ij} = \frac{19 \times 41}{96} = 8.1$$

---


$$\chi^2 = \frac{(12-8.1)^2}{8.1} + \frac{(7-10.9)^2}{10.9} + \frac{(29-32.9)^2}{32.9} + \frac{(48-44.1)^2}{44.1} = 4.06$$

---


$$df = (2-1)(2-1) = 1$$

---


$$CR = < .05$$

APPENDIX

Chi-square Criterion for Education of Parents

	College Degree & Better	High Degr. to Col. Degr.	6th grade to High degr.	Under 6th Grade	Row Totals
Men.	<u>6 (17.8)</u>	<u>22 (29.5)</u>	<u>24 (24.7)</u>	<u>32 (19.3)</u>	<u>84</u>
Non Men.	<u>35 (23.2)</u>	<u>46 (38.5)</u>	<u>16 (22.6)</u>	<u>12 (24.7)</u>	<u>109</u>
Col. Tot.	<u>41</u>	<u>68</u>	<u>40</u>	<u>44</u>	<u>193</u>

$$e_{ij} = \frac{41 \times 84}{193} = 17.8 \quad \frac{68 \times 84}{193} = 29.5 \quad \frac{40 \times 84}{193} = 17.4$$

$$\chi^2 = \frac{(6-17.8)^2}{17.8} + \frac{(35-23.2)^2}{23.2} + \frac{(22-29.5)^2}{29.5} + \frac{(46-38.5)^2}{38.5} + \frac{(24-24.7)^2}{24.7} + \frac{(16-22.6)^2}{22.6} + \frac{(32-19.3)^2}{19.3} + \frac{(12-24.7)^2}{24.7} = 11.34 \text{ (table)}$$

$$df = (4-1)(2-1) = 3$$

$$CR = < .01$$

## APPENDIX

### Testing the Significance of the Difference between two proportions

$n_1$  and  $n_2$  = population samples  
 $p_1$  and  $p_2$  = assumed populations  
 $x_1$  and  $x_2$  = portions of  $n_1$  and  $n_2$

$f_{n1}$  and  $f_{n2}$   $\frac{x_1}{n_1}$  and  $\frac{x_2}{n_2}$  respect.

$$m = p_1 - p_2 = 0$$

---

$$p = \frac{x_1 - x_2}{n_1 - n_2}$$

$$\sigma_{f_{n1} - f_{n2}} = \sqrt{p(1-p) \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}$$

---

$$Z = \frac{f_{n1} - f_{n2}}{\sigma_{f_{n1} - f_{n2}}}$$

APPENDIX

Religion Different from Parents

$$\begin{aligned}n_1 &= 23 \text{ (ministerial)} \\n_2 &= 36 \text{ (non-ministerial)}\end{aligned}$$

$$\begin{aligned}x_1 &= 6 \\x_2 &= 2\end{aligned}$$

$$\begin{aligned}f_{n1} &= \frac{6}{23} & f_{n2} &= \frac{2}{36}\end{aligned}$$

---

$$p = \frac{6 + 2}{23 + 36} = .14$$

---

$$\sigma_{f_{n1}-f_{n2}} = \sqrt{(.14)(.86)\left(\frac{1}{23} + \frac{1}{36}\right)} = .091$$

---

$$Z = \frac{.260 - .055}{.091} = .02 \text{ level}$$

APPENDIX

Number Changing Religions

$$n_1 = 42 \text{ (ministerial)}$$

$$n_2 = 55 \text{ (non-ministerial)}$$

$$x_1 = 10$$

$$x_2 = 4$$

$$f_{n1} = \frac{10}{42}$$

$$f_{n2} = \frac{4}{55}$$

---

$$p = \frac{10 + 4}{42 + 55} = .14$$

---

$$s_{f_{n1} - n_2} = \sqrt{(.14)(.86)(.04)} = .069$$

---

$$z = \frac{.238 - .072}{.069} = < .02$$

## APPENDIX

### Test for the Significance of Two Means

$n_1$  and  $n_2$  = samples  
 $\bar{x}_1$  and  $\bar{x}_2$  = sample means  
 $s_1$  and  $s_2$  = sample standard deviations  
 $m_1$  and  $m_2$  = population means

---

$$m = m_1 - m_2 = 0$$

$$\sigma_{\bar{x}_1 - \bar{x}_2} = \sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$$

---

$$Z = \frac{\bar{x}_1 - \bar{x}_2}{\sigma_{\bar{x}_1 - \bar{x}_2}}$$

APPENDIX

Brothers and Sisters in the Family

Ministerial

$n_1 = 42$   
 $\bar{x}_1 =$   
 $s_1 =$

Non-ministerial

$n_2 = 55$   
 $\bar{x}_2 =$   
 $s_2 =$

---

$$s_{x_1-x_2} = \sqrt{\frac{(2.18)^2}{42} + \frac{(1.3)^2}{55}} = .37$$

---

$$z = \frac{2.4-1.5}{.37} = < .02$$