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Intrinsic Religion and Mental Health:
An Empirical Investigation

by Ernest Lloyd Sparks Nelson

This thesis was presented to the School of Graduate Studies
of the University of Ottawa in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy in
Child Clinical Psychology

Ottawa, Canada, 1981

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CURRICULUM STUDIØRUM

Ernest Lloyd Sparks Nelson, the son of Florence Emily Sparks and Ernest Abram Nelson, was born May 19, 1942, in Hamilton Ontario. He received his Bachelor of Arts from Waterloo Lutheran University in Waterloo Ontario in 1970. He completed his Masters of Arts' course work at Lakehead University, Thunder Bay, Ontario, and did his Masters-equivalent research at the University of Ottawa in 1973.

ABSTRACT

The present study empirically investigated Allport's hypothesis that intrinsic religion is conducive to mental health.

Two hundred and eleven adult male subjects were obtained on a voluntary basis from 11 church groups and 14 non-church groups from 21 cities and towns in Ontario and Western Quebec. These subjects were requested to anonymously fill out five questionnaires (the Religious Orientation Scale, the Personal Orientation Inventory, the Life Regard Index, the Tennessee Self-Concept Scale, the Revised Social Readjustment Rating Scale) plus eight Self Report Items. On the basis of their performance on the Religious Orientation Scale, the subjects were then divided into intrinsic religionists, extrinsic religionists and nonreligionists. Following this, the hypothesis was tested in six steps. The first five used multivariate discriminant function analyses, the last step used univariate F -Ratios. Step I compared intrinsics to extrinsics on measures of mental health. Step II compared intrinsics to nonreligionists on measures of mental health. Step III empirically tested Allport's rationale by comparing intrinsics to both extrinsics and nonreligionists on a combination of eight salient variables drawn from his rationale. Step IV compared poorly integrated and poorly unified intrinsics to well integrated and well unified extrinsics. Step V compared intrinsics to nonreligionists on

mental health measures holding life goals constant. Step VI compared intrinsics, extrinsics and nonreligionists on "Direction and Purpose in Life".

The results demonstrated that intrinsic religion is clearly associated with superior mental health; that Allport's rationale for this relationship is supported; that the direction of the relationship predicted by Allport is supported; and that while the research provided no evidence that the intrinsic religion actually causes the better mental health, it did provide evidence that discredited five alternative explanations regarding the cause of the relationship. Stated briefly, these were: excessive defensiveness on the part of the intrinsics; the idea that only well integrated and well unified individuals are able to develop an intrinsic faith; level of education as responsible for the better mental health associated with intrinsic religion; social class as responsible for the better mental health; and finally, that any life goal, religious or otherwise, can provide the same mental health benefits as are associated with intrinsic religion.

In addition, the results showed that intrinsic religionists consistently have higher indices of "Direction and Purpose in Life" and lower indices of stress when the number of stressors is held constant in comparison to both extrinsic religionists and nonreligionists.

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CHAPTER I
INTRODUCTION

The introduction to this research paper first outlines the purpose of the present research and then discusses the reason for undertaking this particular investigation.

STATEMENT OF PURPOSE

It is the purpose of the present study to empirically investigate Allport's hypothesis concerning intrinsic religion and mental health. He hypothesizes that intrinsic religion is conducive to mental health. A recent study, by Nelson (1980) has demonstrated a strong positive association between intrinsic religion, defined in terms of the Religious Orientation Scale, and the absence of pathology as measured by the MMPI. Her study, unfortunately, was not designed to explore the direction of the relationship between intrinsic religion and mental health (defined by her as the absence of pathology), that is, whether the intrinsic faith caused or enhanced the better mental health, or whether the better health came first and caused or contributed to the development of an intrinsic faith. For example, it could be possible that only the more mature and well developed personalities are able to develop an intrinsic religion. At this stage in our understanding of the relationship between intrinsic religion and mental health there is the Nelson study showing a highly significant positive association ($p < .005$) but one simply does not know which way it works, that is, which came first "the chicken or the egg". There is a third possibility to consider as well, and that is whether the observed relationship between intrinsic faith and mental health is caused by a third unknown concomitant variable closely related to both intrinsic faith and mental health.

Thus, the present study seeks to help clarify the nature of this positive relationship between intrinsic religion and mental health by empirically examining Allport's hypothesis that intrinsic religion is conducive to mental health.

REASON FOR UNDERTAKING THIS PARTICULAR INVESTIGATION

The area of religion and health is in need of empirical investigation because we are still basically ignorant concerning the nature of the relationship between religion and mental health. Since Freud's denunciation of religion a half a century ago (Freud, 1927, 1930), scientific research has been largely nonconclusive and fruitless (Nelson, 1980, pp. 17-21). In 1971 Becker, impressed by the barrenness of the field of research, made the following statement:

Here is a research task which lies largely in the future. Many persons have sought to establish some connections between religion and psychological health and have had only meager rewards for their efforts (p. 408).

More recently, the same concern has been expressed by Frederick C. Thorne:

The fact is that to date the real issues never have been laid on the table, and no objective studies of the effects of specific theologies have been tolerated (Thorne, 1979, p. 8).

In spite of the lack of scientific evidence concerning the relationship of religion and health, some scientists are of the opinion that religion is harmful to one's psychological health.

This opinion is succinctly expressed by Frederick C. Thorne in his article entitled "A Scientists Creed". Although he admits that scientific evidence is conspicuously lacking.(see former quote), he assumes that such evidence when found, will demonstrate that religion is devastatingly harmful. This can be seen from the following quote:

When confronted with devastatingly harmful psychological effects of religion, the true scientist cannot avoid coming to grips with the problem ... (1979, p. 8).


Again, assuming that religion, when investigated, will show a detrimental affect on health he goes on to write:

Probably organized religions could not survive if rigorous scientific studies were made of the validity of underlying concepts and the psychological consequences of believing in any religion. Every action or belief has its costs. Studies need to be made on the personal and social costs of religious teachings (1979, p. 8).

Not only does this scientist assume, without scientific evidence, that religion is detrimental but he makes the statement that "the hope for the future consists in the plea for deliverance from religion" (Thorne, 1979, p. 5).

This type of strong opinion, not based on objective fact, that religion is harmful and should be eradicated from the face of the earth makes the present investigation pertinent and

crucial to our time. Why, because we are living in a day when there are those that are of the opinion that we should throw out religion while at the same time the people of our nation are suffering from a lack of purpose and direction in life like no other time in the known history of mankind. This reality was a serious concern of the Honourable Keith C. Norton, Minister of Community and Social Services for Ontario, in a public address at Carleton University on May 8, 1979, at which time he stated that a recent survey of senior managers ranked as the nation's third greatest problem (the first two being inflation and unemployment) the need to restore a sense of purpose and direction to our society. Norton stated further (that our future has less to do with our technology, techniques and service delivery systems than with recovering a solid sense of deep commitment and fundamental aspiration (Norton, 1979, pp. 8 & 9). These statements of the Minister of Community and Social Services make the present investigation very pertinent to the needs of the community for religion has long professed to provide purpose and a solid sense of deep commitment. The question is, does it; and if it does, at what cost? Does a person have to sacrifice his mental health in order to have the purpose in life that religion promises as "A Scientist's Creed" assumes; or, does religion provide not only purpose and direction in life but sanity and soundness as a by-product, as Allport (1968, p. 151) theorizes?



The Nelson study (1980), referred to in the earlier part of this introduction, has made an excellent beginning at answering these questions. It has provided evidence that accounts for much of the nonconclusiveness of previous research into religion and mental health. It explains the firm convictions of men like Freud (1927, pp. 3-56) and Thorne (1979, p.5) who arrived at their conclusion that religion was detrimental to man from their clinical experiences with large numbers of psychiatric patients; and, it reconciles extreme positions like those of Freud and Thorne, who recommend ridding the world of religion as the solution to the evils of society, to that of G.W. Allport who maintains that religion is therapeutic and preventative and thus enhances mental health. The Nelson study clearly demonstrated that religion is associated with both psychopathology and superior mental health, and that the critical factor is how a person is oriented in his faith. She found that an indiscriminately proreligious orientation is associated with inferior mental health and pathology, an intrinsic orientation is clearly associated with superior mental health, and an extrinsic orientation falls somewhere in between the other two. The intrinsically religious group had 9.5 times fewer scores in the range of crippling psychological abnormality than any of the comparison groups, religious or nonreligious.

While the Nelson study makes no attempt to determine whether or not religion does in fact provide direction and purpose, it does demonstrate that at least one form of religion, i.e., intrinsic religion, does not jeopardize one's mental health. In fact, if it does anything to one's psychological health, it enhances it.

Unfortunately, her study was not designed to establish cause and consequently it is not known whether the intrinsic faith caused or facilitated the better mental health or whether the superior health preceded the development of the intrinsic faith. Perhaps, as suggested earlier, a healthy, well developed personality is a prerequisite for the development of an intrinsic faith. If this is the case, it would seriously limit the use of intrinsic religion as an answer to society's need for direction and purpose in life for it would be available only to those select individuals who already have exceptionally well developed personalities, and it would not be accessible to the less fortunate majority who need it most.

Not knowing the direction of the relationships between religion and mental health, yet knowing that one orientation in religion is strongly associated with mental health whereas another orientation is associated with psychopathology presents a danger

in recommending religion as an answer to humanity's need for direction and purpose for there may well be a cost involved in embracing religion (at least one form) and that price may be one's mental health. On the other hand, it may be that religion not only provides purpose in life but sanity and soundness as a by-product as Allport theorizes.

The present research will make a contribution to knowledge to the degree to which it can advance our understanding of the relationship between Intrinsic Religion and Mental Health from personal assumptions and private hunches to publicly demonstrable statements.

CHAPTER II
REVIEW OF LITERATURE

This chapter presents the review of the literature leading up to the present investigation. Its primary emphasis is on the study which was forerunner to the present one. It does not seek to provide a comprehensive review of the literature for this is already available in the Nelson (1980) paper.

The review of the literature is presented under the following headings:

Opposing Religious Views of Outstanding
Psychologists Inspire Scientific Research

Two Types of Religionists

Extrinsic-Intrinsic Religion and Prejudice

Intrinsic-Extrinsic Religion and Mental Health

OPPOSING RELIGIOUS VIEWS OF OUTSTANDING
PSYCHOLOGISTS INSPIRE SCIENTIFIC RESEARCH

Freud's denunciation of religion in the early part of this century inspired scientific research in the area of religion. During the last five years of his life, Freud was described by his close friend and biographer, Ernest Jones, as being preoccupied with religious concerns so as to devote to them all of his intellectual interest. He considered religion to be "perhaps the most important item in the psychical inventory of a civilization" (Freud, 1927, p. 14). While he considered it to be a critical factor affecting civilization, he maintained the effect was negative. He was so convinced of this that he devoted an entire book (Freud, 1927) to the cause of convincing the world of its need to denounce religion and to educate to reality which in turn, he said, would probably make life tolerable for all and civilization no longer oppressive to anyone. Specifically, he construed religion as an attempt to resolve the father-child conflict, a means of abolishing the terrors of fate and a psychic rationalization for the inevitables of nature. Freud affirmed that religion was an outgrowth of insecurity and that to protect himself from the ultimate threat of nature. Religion for Freud was an illusion, a wish-world, and the universal obsessional neurosis of humanity (Freud 1927, pp. 3-56). He described it as "mass-delusion" and "psychical infantilism" (Freud, 1930, p. 85), something "patently infantile and foreign

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to reality" (Freud, 1930, p. 74), and, a neurotic defense which cannot achieve its end (Freud, 1933, pp. 158-182).

Freud's outspoken opinions about religion "evoked more controversy and condemnation than any other of his writings except perhaps those on sexuality" (Jones, 1957, p. 349). His outright rejection of religion offended the lay (Jones, pp. 360-362), shook the scientific community, and incited psychologists towards theoretical discussion of the effects of religion on man. One must keep in mind that one of the "most respected and most loved" (Allport, 1968, p. 298) forerunners of Freud, William James, the great psychologist/philosopher, theorized that religion had the very opposite effect. Although James was not in a professing sense, a religious man, nevertheless, he argued repeatedly and extravagantly for the pragmatic legitimacy of religious faith. "Every sort of energy and endurance, of courage and capacity for handling life's evils", he insisted, "is set free in those who have religious faith. For this reason the strenuous type of character will) on the battlefield of human history always outwear the easy-going type, and religion will drive irreligion to the wall" (James, 1897, p. 213). James went further and declared that religion is mankind's most important function (James, 1920, p. 127).

Numerous theoretical publications appeared in the 1940's and 1950's explicitly attempting to refute or defend Freud's denunciation of religion*. These theoretical publications, in turn, inspired empirical investigation in the 1950's and 1960's. Unfortunately the research has disappointed the scientific community with non-conclusive data. The conclusions from independent reviews of the literature on religion and its relationship to mental health demonstrate this fact. For example, Argyle in 1959, after having reviewed a large number of empirical studies concluded, "for people between the ages of 16 and 30, the religious individuals are somewhat more neurotic" (Argyle, 1959, p. 106). Davis, six years later in 1965 summarized a number of large scale research studies and came to the opposite conclusion, "It does appear that religious involvement is favourable to mental health", and "certainly the evidence is against the idea that the maladjusted are specially prone to involvement in religious affairs" (Davis, 1965, p. 98). In 1969, Sanua came to an entirely different conclusion that "there is no relationship whatsoever between religiousness and mental health" (Sanua, 1969, p. 1206).

*See Meissner's 1969 annotated bibliography, entries 1094, 1103, 1138, 1151, 1181, 1189, 1203, 1204, 1209, 1214, 1219, 1220, 1126, 1234, 1235, 1237, 1243, 1247, 1249, 1251, 1252.

Since the reviews of the literature in the area of mental health and religion were not able to identify a consistent pattern in the relationship, the present researcher did not attempt another comprehensive review of the literature only to confirm the nonconclusiveness of the literature. Instead he chose to focus on a theoretical explanation for the nonconclusiveness of previous research, namely that there are two types of religionists which the previous studies did not take into consideration.

TWO TYPES OF RELIGIONISTS

The idea of two types of religionists is not new but the concept has taken almost a quarter of a century to become integrated into empirical research (Nelson, 1980, pp. 19-21). Wilson was the first to publish research on Allport's concept of extrinsic-intrinsic religious orientation. Wilson (1960, pp. 286-288) developed a scale for measuring extrinsic religion assuming that a low score on the scale would be indicative of the intrinsic orientation. With this scale, he successfully discriminated high prejudice subjects from low prejudiced subjects, but was criticized because all of the 15 items comprising the scale were unidirectional, thus, possibly causing a response set bias.

Feagin (1964, pp. 3-13) took up the task of measuring extrinsic-intrinsic religion where Wilson left off. He used a scale designed to measure both the extrinsic and the intrinsic orientations in religion, thus avoiding the problem of having all items worded in a unidirectional way. His scales are essentially the same as those which make up the Religious Orientation Scale (ROS) used in the present study. Feagin administered 420 Extrinsic-Intrinsic Scales to five churches and analyzed the results by a factor analysis. Two major orthogonal factors emerged. Those which loaded high on Factor I were intrinsically stated, and those which loaded high on Factor II were extrinsically worded.

After the work of Feagin, additional empirical support for the distinction between extrinsic and intrinsic religionists was provided by a four man team, Spilka, Read, Allen, and Dailey (1970).- These researchers carried out a series of factor analytic studies designed to investigate the pattern of relationships among several of the better constructed and evaluated instruments purporting to assess personal religion. Included among these instruments was Allport's Extrinsic-Intrinsic Religious Orientation Scale. Among the conclusions drawn by Spilka et al. were the following:

- Most measures of religion probably assess similar forms of belief and behaviour.
- Committed-intrinsic and consensual-extrinsic patterns of religion apparently exist.

The latter conclusion gives further empirical support for the existence of the two types of religionists, namely extrinsic religionists, and intrinsic religionists.

In 1969, a study by McConahay and Hough used a factor analysis and Likert scaling techniques to analyze the ROS items combined with 48 other items designed to indicate perspectives based on love, guilt and forgiveness. They "clearly" (their adverb) demonstrated Allport and Ross' extrinsic-intrinsic orientations with extrinsic items loading high positively and intrinsic low negatively.

EXTRINSIC-INTRINSIC RELIGION AND PREJUDICE

The first study to attempt to examine the relationship between extrinsic-intrinsic religion and prejudice was that of Wilson (1960). He obtained significant positive correlations between his 15 item Extrinsic Religious Values scale and a 12 item version of the California Anti-Semitism Scale for eight independent samples of protestant churchgoers.

Feagin (1964) four years later, confirmed Wilson's finding that prejudice correlates with an extrinsic religious orientation. He used his revised form of Wilson's scale which now included both the extrinsic and the intrinsic scales.

Further support for Wilson and Feagin's results was provided by Allport and Ross in 1967. Using Feagin's scale, which they now entitled the Religious Orientation Scale (ROS), they confirmed that people with an extrinsic religious orientation are more prejudiced than people with an intrinsic religious orientation.

When they were analyzing their data, Allport and Ross discovered that there were a number of subjects who were indiscriminate in their responses falling into neither the extrinsic category nor intrinsic category. These were subjects who endorsed both intrinsically worded items and extrinsically worded items.

They appeared not to discriminate, choosing any or all items that to them seemed favourable to religion in any sense. For this reason Allport and Ross called this group an indiscriminately proreligious group. Since non-churchgoers were excluded from their sample, indiscriminately anti-religious or nonreligious subjects were not found, as would be expected. Nevertheless they were assumed to exist for pilot work with the ROS using markedly liberal religious groups had indicated that this group does exist and can be isolated by the ROS (Allport and Ross, 1967).

Also, Thompson (1974) in a sample of adolescents and their parents attending Christian churches in the United States showed that nonreligionists (which he called the indiscriminately antireligious) could be consistently differentiated from proreligionists and extrinsic religionists on measures of dogmatism ($p = .01$).

Nelson (1980) working with a general adult sample including nonchurchgoers as well as churchgoers has confirmed this finding, showing that the ROS clearly discriminates between nonreligionists and intrinsic religionists on MMPI measures of mental health ($p = .01$).

INTRINSIC-EXTRINSIC RELIGION AND MENTAL HEALTH

The empirical study of Allport's concept of extrinsic-intrinsic religion in relation to mental health is still in its earliest stages. The first investigation was undertaken by Rice in 1970 who used the Religious Orientation Scale (ROS) to measure extrinsic-intrinsic religion; and, a questionnaire based on the Worcester Scale for Social Attainment and two scales of Barron's Ego Strength Scale as indices of mental health. Rice concluded that Allport's thesis, that intrinsic religion is more conducive to mental health than is extrinsic religion, was given strong and consistent support by the data on social attainment and by the data on ego-strength using Gottesman's norms.

A second study by Soderstrom completed in 1977, adds additional credence to Allport's hypothesis. He found that the higher commitment one had to his religion as measured by the Intrinsic Religious Motivation Scale and the Vertical-Horizontal Religious Commitment Scale, the higher sense of purpose in life that person had as measured by the Purpose in Life Test.

The third and most recent study relating intrinsic-extrinsic religion to mental health is that done by Nelson at the University of Ottawa, June 1980. Her study, which has been repeatedly referred

to in the introduction of this dissertation is truly the forerunner of the present investigation. For this reason her research will be discussed in considerable detail below.*

Nelson's sample consisted of 80 adult males and 76 adult females who were obtained on a volunteer basis from five church populations and five non-church populations. These subjects were divided into three religious groups and one nonreligious group according to their performance on Allport's Religious Orientation Scale. They were then compared to each other in terms of two MMPI measures of psychopathology. The primary measure of the study was the number of pathological traits obtained on the MMPI (this measure was called primary because it measured the most severe pathology). The secondary measure, which represented the more moderate index of pathology consisted of 12 scores: the number of symptoms admitted to on each of the nine clinical scales of the MMPI, plus the K-Score, the F-Score and the deviation score of the MMPI.

When difference-between-group comparisons were performed, intrinsically religious people had significantly fewer pathological traits than all other comparison groups, extrinsic, proreligious

*The description of the Nelson study is copied with permission from Nelson, 1980.

and nonreligious ($p = .005$). Individuals who did not adhere to an intrinsic faith, religious or nonreligious, male or female, had on average 8.1 times more pathological traits. Also it was found that extrinsically religious people had better mental health than both proreligious males and nonreligious persons of either sex. Furthermore, proreligious males were found to be more pathological than any of the comparison groups.

When her subjects were matched for age and the data was analysed by Discriminant Function Analyses, intrinsic religionists (ten males and ten females) were distinguished from their nonreligious counterparts with 100% accuracy on the bases of their mental health scores alone. The intrinsic consistently scored in the direction of better mental health on all discriminating clinical scales. Similarly, intrinsic religionists were discriminated from extrinsic religionists with 100% accuracy for the female sample (14/14 were correctly classified) and with 95% accuracy for the male sample in which 21 of the 22 males were correctly classified on the bases of mental health scores. As with the above comparison to the nonreligious group, the intrinsic were again superior in mental health on all the discriminating clinical scales. In a third discriminant analysis, all eighteen males were correctly classified into their respective religious groups, intrinsic or indiscriminately proreligious, with intrinsic again showing the better mental health on all discriminating MMPI scales.

These highly significant findings of the Nelson study were cautiously interpreted by Nelson as giving strong and consistent support, not to Allport's hypothesis that intrinsic religion is conducive to mental health, but only to a tenet of that hypothesis, i.e., that intrinsic religion is positively associated with mental health:

Thus, one may conclude that the portion of Allport's hypothesis stating that intrinsic religion is associated with mental health has been strongly supported. This does not automatically imply, however, that the superior mental health scores obtained by the intrinsic group indicate that intrinsic religion is conducive to mental health as Allport theorizes for no cause for the relationship was demonstrated in the present study. Furthermore, there are a number of interpretations possible to account for the fact that intrinsic religionists obtain mental health scores which are superior to those obtained by all other comparison groups (Nelson, 1980, p. 215).

Nelson goes on to discuss three possible alternative interpretations of the close association between intrinsic religion and mental health. The first interpretation considered was the possibility that the superior scores of the intrinsic group do not, in fact, reflect superior mental health at all but rather reflect a defensive response style in which the intrinsic religionist does not readily admit psychological weakness and may in fact be deliberately distorting in the direction of making a more healthy appearance.

If such were to be the case, rather than having superior mental health, the results would indicate that the intrinsic subjects were simply more defensive about admitting their psychological difficulties than were the other groups. Nelson dealt with this possibility by examining the intrinsic group's scores on the K Scale of the MMPI which purports to measure a test taking attitude described as defensiveness against psychological weakness. She found that, rather than score as overly defensive subjects, the intrinsic religionists scored in the same range as normal, adjusted and superior individuals. Thus, she concluded that the intrinsic group's scores on K, rather than indicate extreme defensiveness, appeared to reflect a tendency towards healthy adaptation.

The second alternative interpretation to account for the strong association between intrinsic religion and mental health that Nelson examined was the possibility that intrinsic religion and mental health are not directly related variables but rather covary with a mutual concomitant variable such as level of education or social class.

With regard to education as a possible confounding variable, Nelson reexamined her test returns and discovered that approximately 33% of the religious subjects included their last school grade completed on their test forms. Upon examining that data she found that there was very little variation between the

groups and no consistent patterns were observed regarding education and group membership. She made the conclusion that there is no convincing evidence that level of education is a confounding variable in the relationship between religion and mental health.

With regard to social class as a possible confounding variable, Nelson suggested that the equivalence of education among the groups would suggest that social class would also be comparable. (The mean number of grades completed for the three groups of males ranged between grade 13 and second year university; and that for females ranged between grade 11.5 and grade 12.4). She pointed out, further, that a longitudinal study by Myers, Lendenthal and Pepper (1974) had demonstrated that the relationship between social class and psychiatric symptomatology disappears when the number of life changes is held constant. On the other hand, when social class is held constant, the relationship between the number of life changes and psychiatric symptoms remains significant. These findings suggested that social class is not an important variable to control for in studies of psychopathology but rather the variable of significance is the number of life changes.

The finding, from the longitudinal study by Myers et al., that the number of life changes is related to the number of psychiatric symptoms was used by Nelson as further support for

Allport's theory regarding the reason why intrinsic religion is expected to be conducive to mental health whereas extrinsic religion is not. Her rationale is the following:

According to Allport's theory, the constant, long term, unreachable goals of an intrinsic religion stabilizes (or reduces the number of life changes in) the intrinsic person's life. This happens because the intrinsic person is always moving in a constant direction, and is continually striving towards the same long term, unreachable goals. His all-encompassing religion provides a unifying conception of the nature of all existence. His commitment to his religion is comprehensive and his own needs are subordinated to the one overarching goal of his faith. The extrinsic person, on the other hand, is one who uses his religion to serve his own needs. As a result, his religion does not offer him a comprehensive commitment, nor a constant direction in which to move, nor a constant unreachable longterm goal to strive towards, for all of these change as his personal needs change. Nor does it offer him a unifying conception of the nature of all existence. Thus, compared to the intrinsic, the extrinsic experiences much more variability in life and many more life changes than does the intrinsic religionist (Nelson 1980, pp. 222-223).

Nelson goes further to explain that the constancy associated with an intrinsic religion not only reduces the number of change events in a person's life and in this way reduces the amount of stress experienced but it also contributes to mental health enhancing the processes of integration, differentiation and unification of the personality. This in turn makes the person more resistant to stress and thus less likely to develop psychiatric symptoms.

For a more detailed discussion of this process please refer to Nelson's chapter on theory (Nelson, 1980, Chapter III).

Two important conclusions can be drawn from Nelson's discussion on the possibility of social class being a confounding variable in the present study. The first is that the experimental evidence indicates that social class is not a likely confounding variable in the relationship between intrinsic religion and mental health but that social class may be mistakenly associated with psychopathology because its close companion, "number of life changes" is clearly related to psychiatric symptomology. The second conclusion is drawn from the latter part of the discussion which explains how the long term goals, towards which the intrinsic is constantly striving, are thought to reduce the number of life change events in the intrinsic's life as well as enhance personality development thus making the intrinsic religionist more resistant to stress. The conclusion comes in the form of the following caution:

Is it possible that any socially acceptable long term goal, religious or otherwise, could provide the same stabilizing, integrating and unifying effect on the personality as does intrinsic religion and in turn make the person more stress resistant?

Nelson points out that the investigation of this possibility lies outside the bounds of her study and is largely a task of future research.

This brings us to the third alternative interpretation considered by Nelson as a possible explanation for the positive association found in her study between intrinsic religion and mental health. It is basically an application of "the chicken and the egg problem". That is, which came first, the intrinsic religion or the better mental health? As she suggests, it is feasible that only well integrated and well differentiated individuals who are well adjusted can develop an intrinsic orientation in religion in the first place whereas the poorly differentiated and poorly integrated persons who are not as well adjusted cannot advance past an extrinsic or indiscriminately proreligious level in religion. In this way, superior mental health may, in fact, be a prerequisite for developing an intrinsic faith rather than the intrinsic faith enhancing the better mental health. This would account for the intrinsic group's superior mental health scores.

Having considered three alternative interpretations to that proposed by Allport for the finding of the Nelson study that intrinsic religionists obtain mental health scores which are superior to those obtained by all comparison groups; and, having found none of the alternative explanations limiting or discrediting to Allport's interpretation, the present investigator acknowledges the fact that Allport's theoretical explanation for the relationship between intrinsic religion and mental health remains a tenable possibility. That is to say, that Allport's claim, that an

intrinsic orientation in religion is conducive to mental health, has not been contradicted by any of the Nelson findings. On the contrary, her results are consistent with Allport's expectations.

By way of concluding remarks for this final section of the present chapter, the author points out that all three studies (Rice, 1970; Soderstrom, 1977; and Nelson, 1980) investigating the relationship between intrinsic-extrinsic religion and mental health give consistent and impressive support for Allport's main hypothesis that intrinsic religion is conducive to mental health by demonstrating that intrinsics are consistently more healthy than the extrinsics in that they are better adjusted and have greater ego strength (Rice), show a greater sense of purpose in life (Soderstrom), and have superior mental health in that they are less pathological and have fewer symptoms of psychological disturbance (Nelson). However, while these studies show that intrinsic religion and mental health are positively related, the question of which came first, the intrinsic religion or the better mental health, has not yet been answered. Allport hypothesizes that the intrinsic religion enhanced the health, but at this point we do not know that the superior mental health did not make possible the development of an intrinsic religion; or, alternatively that both intrinsic religion and mental health are varying with respect to some third, yet unknown, variable. It is these perplexing questions that prompts the present investigation.

CHAPTER III
BACKGROUND OF THEORY

The purpose of the present research, as stated in the Introduction, is to empirically examine Allport's hypothesis that intrinsic religion is conducive to mental health. In order to understand Allport's theoretical rationale for this hypothesis, the present chapter presents his concepts of intrinsic-extrinsic religion and his theoretical explanations as to why he expects intrinsic religion to be therapeutic and preventative. This is accomplished under the following headings:

- Allport's Concept of Intrinsic and Extrinsic Religion
- Allport's Concept of Intrinsic Religion as Therapeutic
- Allport's Concept of Intrinsic Religion as Preventative
- Allport's Concept of Why Extrinsic Religion is Not Conducive to Mental Health

For a more detailed description of Allport's theory of personality and of the meaning of religion in Allport's personality theory, please refer to Nelson (1980, Chapter III).

ALLPORT'S CONCEPT OF INTRINSIC AND EXTRINSIC RELIGION

The theory that intrinsic religion is conducive to mental health grew out of Allport's observation that, on the average, churchgoers appeared to be more bigoted toward minority groups than nonchurchgoers. At the same time, however, he noticed that some of the greatest leaders of the civil rights movement seemed to be religiously motivated, for example, people such as Gandhi, Father John La Farge, Martin Luther King, and many others. This apparent contradiction forced him to conclude that if most churchgoers are more bigoted, but if some churchgoers are tolerant, then there must be a vast difference in the type of religious orientation people hold (Allport, 1968, p. 131).

Allport investigated this possibility (a summary of his research is presented in Chapter II) and found that indeed there were two basic types of religionists, one type being high in ethnic prejudice, the other not. He called these two types of religion, extrinsic religion and intrinsic religion, and described them as follows:

Extrinsic Religion

For many people religion is a dull habit, or a tribal investment to be used for ceremony, for family convenience, or for personal comfort. It is something to use but not to live. And it may be used in a variety of ways: to

improve one's status, to bolster one's self-confidence, to enhance one's income, to win friends, power or influence. It may be used as a defense against reality, and most importantly, to provide a supersanction for one's own formula for living. Such a sentiment assures me that God sees things my way (Allport, 1968, pp. 149-150).

Intrinsic Religion

By contrast, intrinsic religion is not an instrumental formation. That is to say, it is not primarily a means of handling fear, or a mode of conformity, or an attempted sublimation of sex, or a wish fulfillment. Earlier in life it may have been all these things. But now these specific needs are not so much served by, as they are subordinated to, an overarching motive. Quandaries, predicaments, cross-purposes, guilt, and ultimate mysteries are handled under the comprehensive commitment. This commitment is partly intellectual, but more fundamentally motivational. It is integral, covering everything in experience and everything beyond experience; it makes room for scientific fact and emotional fact. It is a hunger for, and a commitment to, an ideal unification of one's life, but always under a unifying conception of the nature of all existence (Allport 1968, pp. 150-151).

Allport points out that it is important to note that this conception of intrinsic religion has nothing to do with formal religious structure. For example, he would expect to find intrinsic Catholics and extrinsic Catholics, intrinsic Protestants and extrinsic Protestants, etcetera.

While Allport's initial interest in sorting out the two types of religionists was in reference to his observance of prejudice among churchgoers, he felt equally sure that mental health would be facilitated by an intrinsic, but not by an extrinsic religious orientation, for as he says:

Each of us has known lives that remain serene in spite of inner turmoil, courageous in spite of the shattering shafts of fate. We have also known religious people who, in spite of neurotic fragments in their own lives, manage somehow to maintain control of their sanity - apparently because of a generic and embracing and guiding religious motive (Allport 1968, p. 150).

Thus, he was inspired to develop a theoretical explanation for his personal hunch that, though religion of the extrinsic variety may hinder mental health, religion of the intrinsic orientation may help. To be more specific about how intrinsic religion may help mental health, Allport uses the terms therapeutic and preventative. However, he is quick to point out that the intrinsic religion cannot exist in order to be therapeutic or preventative. It is not something to use.

"It is not a mustard plaster. The sufferer can aim only at religion; he cannot aim at treatment. If he has deeply interiorized his religion, he will find sanity and soundness as a by-product." (Allport, 1968, p. 151).

ALLPORT'S CONCEPT OF INTRINSIC RELIGION AS THERAPEUTIC

To understand why intrinsic religion is thought to be therapeutic one must first understand Allport's general concept of mental health. For him any genuinely human life is psychologically marginal. In his words:

To be human implies moments of delight and glimpses of happiness; but also it implies ordeals of suffering, discord of purpose, frequent defeat of self, and painful reconquest of self. A mentally ill person is one who, at least temporarily, has lost the battle. He regrets his past, abhors his present, and dreads his future (Allport, 1968, p. 142).

Most of us, Allport points out, can identify personally with what he describes here as mental illness for if we ourselves have not gone over this brink, we in all probability have been close enough to it to sympathize with those who have. Within this context of mental illness, Allport believes that our common aim in dealing with the problem of mental illness should be to fortify the human spirit so that it can withdraw from the brink and help those who have fallen to regain their footing. As he says, "mental health requires that we learn to grow muscles where our injuries were" (Allport, 1968; p. 143). This is where religion enters the picture as being therapeutic. Allport's rationale is the following:

When we say that the mentally sick person is one who regrets his past, abhors his present, and dreads his future, religion deepens the issue by adding, "Yes, and I can provide forgiveness for the past, acceptable meaning for the present, and hope for the future". And when we say that mental health requires that we grow muscles where our injuries were, religion echoes, "Yes, our mental health is proportional to the weight of the burden that we can carry". In recent years, psychiatry has been discovering what religion has always maintained: that there is no cure apart from love. Thus, do the concepts of therapy and of redemption fuse. Healing follows the path of redemptive love, whether human or divine (Allport, 1968, p. 143).

In the above rationale as to why Allport would expect intrinsic religion to be therapeutic, four main points can be identified and isolated for investigation. They are the following:

- 1) Intrinsic religion provides love, and thus the intrinsic religionist has reason to want to live. Allport states that love is not only therapeutic but is, in fact, a necessary condition for cure.
- 2) Intrinsic religion provides forgiveness for the past, and thus the intrinsic religionist has reason not to regret his past.
- 3) Intrinsic religion provides meaning for the present, and thus the intrinsic religionist has reason not to abhor his present.
- 4) Intrinsic religion provides hope for the future and thus the intrinsic religionist has reason not to dread his future.

To draw a conclusion about the rationale as to why intrinsic religion is expected to be therapeutic, one may say that intrinsic religion does not profess to lighten the burdens of life nor does it promise to provide a way to escape the stresses of life. It merely increases the muscle tissue by providing the nutrients necessary to strengthen the person mentally. These are love, forgiveness, meaning and hope. In this way, intrinsic religion makes the burdens of life easier to bear and enables one to carry them without stumbling and falling.

ALLPORT'S CONCEPT OF INTRINSIC RELIGION AS PREVENTATIVE

The preventative* aspect of intrinsic religion is essentially in terms of muscle building as well, and as such, includes all of the four points that applied to the therapeutic aspect of intrinsic religion.

It must go even further, however; for it must present a theoretical rationale to explain how intrinsic religion builds muscles that help prevent debilitating injuries from occurring in the first place. This requires us to go into the very development of personality, and we must think of intrinsic religion primarily in terms of how it is expected to develop a healthy, stress resistant, strain of individuals. In order to do this we must first understand some of the basic principles of Allport's theory of personality.

For Allport, personality is the progressive but never complete integration of all systems that deal with an individual's characteristic adjustment to his various environments (Allport, 1961, p. 100). He views the growing individual as progressing

*The preventative aspect of intrinsic religion will, of course, have some application to the therapeutic aspect of intrinsic religion discussed earlier; but because it applies primarily to more long range muscle building, i.e., personality development, it does not have as immediate affect on one's health as the four benefits mentioned under the therapeutic section. That is why it is discussed separately under the preventative section.

in two ways, differentiation and integration. According to him, learning brings about both types of change, and leads to an organization marked by the articulation of finer systems (differentiation) and by the hierarchical arrangements of these systems within the total personality (integration) (Allport, 1961, p. 380).

In the following summary extracted from Nelson's paper, Allport exemplifies how this developmental process takes place by alluding to the behaviour of a new born infant:

...in its earliest moments the infant's behavior is comprised almost exclusively of random movements that are largely neurologically determined. Through the process of maturation, the infant gradually becomes able to make a large variety of differentiated movements - an arm now, a leg later, a wrist here, fingers there. At the same time, however, while the process of differentiation is in operation the infant also develops ways of integrating these disparate movements into stable systems. Thus, an arm here, a hand there, and a trunk and head in that orientation become integrated into the complex system of feeding itself. A system that later, through frequent use, becomes one of many habits.

Habits, in turn, by further differentiation and integration become integrated into more complex and generalized systems which Allport identifies as personal dispositions for behaving. Thus a person who has a personal disposition to behave timidly, will adjust to most situations he meets in a timid way, and will respond to situations which require timid behavior more often than those which do not.

The dispositions for behaving that do not depend on outside referents, Allport calls expressive traits. Those which depend on specific outside referents such as race, colour, nationality, sex etcetera, Allport designates as attitudinal traits. Attitudinal traits include attitudes, intents, values, sentiments and ambitions, among other things. Religious sentiment is one such attitudinal trait and is defined by Allport as a

... disposition built up through experience, to respond favorably, and in certain habitual ways, to conceptual objects and principles that the individual regards as of ultimate importance to his own life...

In the continuing developmental process, numbers of personal dispositions become integrated and united through the processes of differentiation and integration, into selves. Selves are systems of traits which refer to the me as felt and known, and which evolve from childhood to adulthood through seven stages: bodily self, self-identity, and self-esteem through year one to year four, extension of the self and self-image through four to six, rational self between six to twelve; and finally, in adolescence the appropriate striving self that sets long range purposes and gives intention to his life.

Finally, development culminates in what Allport calls personality. The selves along with all other developing systems - habits, dispositions, attitudes, and sentiments - become integrated into the unit called personality. The goal of the developing personality is unity which is achieved by constant striving toward distant goals. Since one's energies are most integrated when in pursuit of some goal, unattainable goals with their consequential directed striving cause the processes of differentiation and integration to continue throughout adulthood (Nelson, 1980, pp. 38-40).

This brief outline of Allport's theory of personality will now permit us to understand his rationale as to why and how intrinsic religion builds stress resistant individuals, or in other words, why intrinsic religion is conducive to mental health by being preventative.*

*Before going into the details of Allport's rationale, it should be pointed out that Allport died before he was able to blend his new concept of intrinsic religion with his earlier understanding of religion and personality. This study has attempted to combine the two. For this reason, in places the assumption has been made that the positive aspects which attributed to religion in general in his earlier work, would be applied to intrinsic religion.

Keeping this in mind, let us consider the role Allport would expect intrinsic religion to play in personality development: Intrinsic religion is an interiorized religious organization of thought and feeling towards God, or the Divine Being, who is of pre-eminent value; and as such, it becomes the overarching motive to which body drives and needs are subordinated to rather than served by. As an overarching motive, intrinsic religion is integral, covering all aspects of experience, and thus, commands a comprehensive commitment on the part of the intrinsic individual under which all situations in life are handled. This total commitment is to an ideal unification of one's life, always under a unifying conception of the nature of all existence. By providing long range unattainable goals for which the individual is continually striving, personality integration is facilitated. This happens because when a person pursues long range goals, in attempting to reach those goals, the person must continually integrate his energies, overcome all distractions and be consistent in the direction in which he moves.

Thus, the unattainable goals of the intrinsic religionist not only facilitate integration but also provide directionality for one's behavior which, in turn, provides a dimension of stability. Furthermore, consistent directionality in behavior and enhanced personality integration together promote the process of differentiation which in turn makes possible even further integration of the personality.

Most important of all, because intrinsic religionists are continually striving towards the same long range goals, are being driven by one overarching motive, are subjected to one comprehensive commitment, are viewing the world through one unifying philosophy of the world, are continually moving in one constant direction, and always towards a higher level of integration; intrinsic religion is a unifying orientation. It provides the unification of the total personality. This, according to Allport is the ultimate goal of personality development (Allport, 1950; 1961, pp. 100-127).

It is for this reason that Allport would expect intrinsic religion to be preventative in terms of a muscle building that prevents psychological injury from occurring in the first place. As in the case of the therapeutic aspect of intrinsic religion, intrinsic religion as a preventative measure, does not trim down the burden to be borne but merely enables one to accept and carry the burden courageously and easily. For this reason, Allport hypothesizes that they who have deeply interiorized their religion will find sanity and soundness as a by-product.

In the above rationale as to why Allport expects intrinsic religion to be preventative of mental illness, four main points can be identified and isolated for empirical investigation. These are the following:

- 1) Intrinsic religion provides definite life goals towards which the individual is continually striving and moving in a constant direction.
- 2) Intrinsic religion facilitates personality integration.
- 3) Intrinsic religion promotes the unification of the total personality.
- 4) Intrinsic religion increases one's ability to tolerate stress. (This happens from a preventative point of view because it enhances the development and growth of the personality always in the direction of greater integration and unity of personality which provides a consistent inner regulation of the many facets of life. When faced with increased levels of stress the person has a strong enough personality organization to be able to stand the tension of the increased demands on his system.

In addition, the four therapeutic benefits of intrinsic religion discussed earlier (love, forgiveness for past, meaning for present, and hope for the future) combine with these four preventative aspects to make stress more bearable and it is because of these eight combined benefits that intrinsic religion is expected to fortify a person against the debilitating effects of stress. It is for this reason that intrinsic religion is expected to be preventive of mental illness and thus conducive to mental health.

ALLPORT'S CONCEPT OF
WHY EXTRINSIC RELIGION IS NOT CONDUCTIVE TO MENTAL HEALTH

Extrinsic religion, on the other hand, does not enhance the development or growth of personality. It is not an organization of thought and feeling toward one definable object of value but rather towards many different objects of continually changing values. To the extrinsic person, religion is something to use, not to live; and, it may be used in a number of ways for personal advantages as pointed out earlier. The extrinsic religionist turns to God but does not turn away from self, and religion for him is actually a shield for self-centeredness. For these reasons, his religion does not provide a constant direction for his behavior nor an overarching motive, nor a comprehensive commitment which is needed to facilitate personality integration, differentiation, and unification.

In motivational terms, extrinsic religion is not a driving or integral motive. It serves other motives such as the need for security, the need for status, the need for self-esteem, and the need to defend oneself against anxiety. Like all other instrumental habits, and all other defenses, extrinsic religion is in danger of breaking down when the cross-purposes of life grow too discordant or when increased stress is brought to bear on him. It is for this reason that Allport would not expect extrinsic

religion to be either preventative or therapeutic in the long run, for as he says (Allport, 1968, p. 150), "...life has a way of shooting its poisoned darts through defensive armor." Allport suggests that if Freud had been more perceptive he would have seen that it is only this kind of religion that resembles a neuroses.

Allport also points out that there are pathogenic strains in some religions such as excessive terror, superstition, a built-in hostility to science, or a palliative defensiveness. These pathogenic strains, he says, are merely extrinsic accretions that lead some worshippers away from the intrinsic possibilities of their faith (Allport, 1968, pp. 150-151).

CHAPTER IV
THE HYPOTHESES TO BE TESTED

The hypotheses are presented according to six steps which are outlined in more detail in Chapter IV.

In Chapter I, the statement of purpose for the present research was presented. This was followed by the development of the practical, theoretical and research basis for this study. Using Allport's description of intrinsic-extrinsic religion, and his rationale as to why intrinsic religion should be conducive to mental health, the hypotheses can be made and presented according to six steps. The first five steps each involve the differentiation of groups on a multiplicity of interrelated measures of mental health spanning both ends of the continuum, ranging from psychopathology at the negative end to superior mental health at the positive end. These various measures of mental health are conjointly referred to in the hypotheses simply as mental health criteria. Due to the fact that multiple measures are involved, multivariate discriminate function analyses are used to test for group differences in these first five steps. Only univariate analyses are required in Step VI. Just as single and multiple measures require different statistical analyses, univariate and multivariate respectively, so they in turn require differently worded hypotheses. This will thus, account for different wording in the hypotheses of the sixth step.

STEP I

Purpose

To determine if intrinsic religionists can be discriminated from extrinsic religionists on the basis of their scores on a wide range of mental health measures including measures of both positive and negative mental health.

Hypothesis

Intrinsic religionists can be differentiated from extrinsic religionists on the basis of mental health criteria.

Step II

Purpose

To determine if intrinsic religionists can be discriminated from nonreligionists on the basis of their scores on a wide range of mental health measures including measures of both positive and negative mental health.

Hypothesis

Intrinsic religionists can be differentiated from nonreligionists on the basis of mental health criteria.

Step III

Purpose

To empirically test Allport's rationale that explains why intrinsic religion is expected to be conducive to mental health. Thus, this step isolates the eight salient variables which according to Allport's theory accounts for the superior mental health of the intrinsic group and then performs discriminate function analyses to see if indeed intrinsics can be discriminated from extrinsics and nonreligionists on the basis of the eight salient variables predicted by his rationale.

Hypotheses

i) Intrinsic religionists can be differentiated from extrinsic religionists on the basis of the eight salient variables predicted by Allport's rationale.

ii) Intrinsic religionists can be differentiated from nonreligionists on the basis of the eight salient variables predicted by Allport's rationale.

Step IV

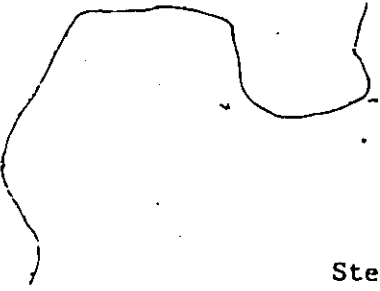
Purpose

To clarify the direction of the relationship between intrinsic religion and mental health by examining the contribution made to the intrinsic-extrinsic distinction in mental health by "personality integration" and "personality unity".

If Allport is correct about the direction of the relationship, namely that the intrinsic religion promotes the better mental health and not the reverse, i.e., that a mature and well developed personality (epitomized by high levels of personality integration and unity) makes possible the development of an intrinsic faith; and if he is also correct in his theoretical assumption that "personality integration" and "personality unity" are only two of many health benefits provided by the intrinsic faith, then the following hypothesis should be true.

Hypothesis

i) Poorly integrated and poorly unified intrinsic religionists can be differentiated from well integrated and well unified extrinsic religionists on the basis of mental health criteria.



Step V

Purpose

To investigate the possibility that any nonreligious life goal could be as related to mental health as is intrinsic religion by determining if intrinsic religionists can be discriminated from nonreligionists on mental health criteria when the degree to which they have "well-defined life goals" is held constant.

The life goal of the intrinsic is his faith, the equally well defined life goal of the nonreligionist excludes his faith and may be anything other than religion. If there is something peculiar about intrinsic faith, and not about life goals in general, that promotes mental health, then the hypotheses is as follows.

Hypothesis

Intrinsic religionists can be differentiated from nonreligionists on the basis of mental health criteria when "life goals" is held constant.

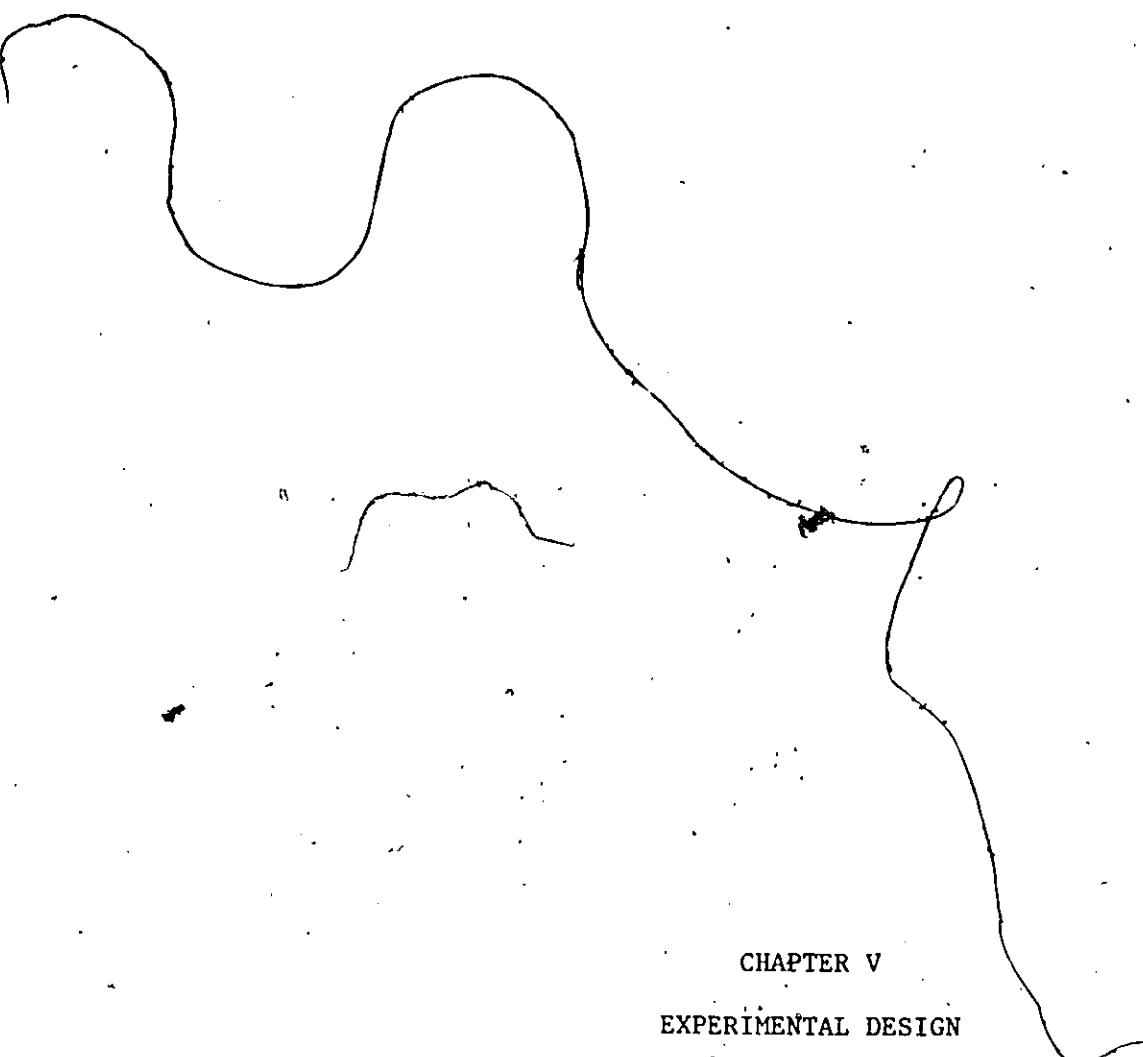
Step VI

Purpose


This step is supplementary as it does not directly contribute to the question of whether or not intrinsic religion is conducive to mental health, however it does seek to further clarify the nature of the relationship between religion, particularly intrinsic religion, and mental health. It does this by isolating from the multiple measures of mental health used in the previous steps one aspect of mental health which the present Minister of Community and Social Services considers essential to a worthwhile existence, namely "direction and purpose in life". It then compares intrinsic religionists, extrinsic religionists and nonreligionists on this variable,

Hypotheses

- i) Intrinsic religionists have more "direction and purpose in life" than do extrinsic religionists.
- ii) Intrinsic religionists have more "direction and purpose in life" than do nonreligionists.
- iii) Extrinsic religionists do not differ to nonreligionists in "direction and purpose in life".



CHAPTER V
EXPERIMENTAL DESIGN



The experimental design will be discussed under the following headings:

THE SUBJECT POOL, WORKING GROUP AND COMPARISON GROUPS

THE PROCEDURE

THE SIX STEP DESIGN

THE INSTRUMENTS

THE SUBJECT POOL, WORKING GROUP AND COMPARISON GROUPS

The Subject Pool

The subject pool was comprised of 329 male residents of Ontario and Western Quebec, obtained on a volunteer basis from 11 church groups and 14 non-church groups (see Table 1) sampled from the 21 towns and cities shown in Table 2. The types of groups and their respective places of residence are listed in separate tables in order to preserve anonymity and thus respect the need for confidentiality.

It is important to point out that it was not the purpose of the investigation to examine any one of these individual groups listed in Table 1. Rather, the purpose of the research was to study the direction of the relationship between intrinsic-extrinsic religion and mental health and, in keeping with this goal, the respondents from these 25 groups were collapsed into one group and reclassified according to Allport's criteria for intrinsic and extrinsic religion.

TABLE 1

DESCRIPTION OF SUBJECT POOL

Types of Groups that Participated in the Research	
<u>Chuches</u>	<u>Non Church Groups</u>
Anglican Church	Armed Forces Personnel Group
Brethren Church	Evangelical Bible College Group
Convention Baptist Church	Farmer's Group
Fellowship Baptist Church	Forest Worker's Group
German Baptist Church	Government Personnel Group
Mennonite Church	Miner's Group
Penticostal Church	Movie Audience Group
Presbyterian Church	Teachers Group
Regular Baptist Church	Trucker Group
Roman Catholic Church	University Groups
United Church	- University of Montreal
	- University of Ottawa
	- University of Quebec
	- University of Waterloo
	- Sir Wilfred Laurier University

TABLE 2

Cities and Towns from
which Subjects were Obtained

Aylmer, Quebec	London, Ontario
Azilda, Ontario	Montreal, Quebec
Burlington, Ontario	North Bay, Ontario
Chelmsford, Ontario	Ottawa, Ontario
Englehart, Ontario	Sioux Lookout, Ontario
Hamilton, Ontario	Sudbury, Ontario
Hull, Quebec	Thornloe, Ontario
Kingston, Ontario	Thunder Bay, Ontario
Kirkland Lake, Ontario	Toronto, Ontario
Kitchener, Ontario	Waterloo, Ontario
Larchwood, Ontario	

The Working Group

Table 3 presents a summary of the test returns. Two hundred and eleven tests were returned completed, valid and on time to be included in the analysis. This number which represents 64% of the 329 tests administered is referred to as the Working Group heretofore. One hundred and eighteen, or 36% of the tests administered were not useable for the following variety of reasons (See Table 3 for a summary): Forty-five of the subjects (13%) who volunteered to complete the test packets returned their's untouched; occasionally notes of apology accompanied these returns indicating that time simply did not allow them to complete the questionnaires. Twenty-eight (8.5%) of the test packets were returned only partially filled out. Most frequently a single page of the test questions had been skipped; less frequently an entire test was either omitted or not returned with the rest of the packet. Fifteen (4.6%) were filled out satisfactorily but were returned too late for the statistical analysis. Thirteen (4%) were returned with essential identifying information missing. In eleven of these cases the age of the subject was missing; in the other two, no clear indication of sex was given. Only males were to take the questionnaires but two test packets were returned with names* that clearly appeared to be female and since the sex category

*Subjects were instructed to fill out the questionnaire packets anonymously. In spite of this however, many chose to include their names.

TABLE 3.

Summary of Test Returns

Total Tests Administered	329
Tests returned untouched	45
Tests returned partially completed	28
Tests returned too late for analysis	15
Tests returned with essential identifying information missing	13
Tests returned on time and complete but invalid	12
Tests completed by the wrong sex	<u>5</u>
Total non-usable test returns	118
TOTAL USABLE TEST RETURNS	211

was not filled in to indicate otherwise, they were not included in the analysis. In addition to these two assumed female-filled-out questionnaires, five questionnaires (1.5%) were clearly marked female and consequently were not included in the Working Group. Finally, twelve (3.6%) returns were not valid and had to be excluded from the analysis for that reason. A test was considered invalid if it was completed by a religious person* outside of the Christian religion; or, if it was not filled out correctly. The most frequent errors in filling out the questionnaires were on the following tests: the Personal Orientation Inventory with both alternatives being filled in on a number of items; the Tennessee Self Concept Scale with more than one level being indicated on the five point rating scale, and the Revised Social Readjustment Rating Scale where subjects answered for their entire lifetime instead of for the past year only.

A description of the Working Group in terms of church membership, or adherence, is presented in Table 4. Careful inspection of the table shows that the majority of the volunteers, 150/185 or 81%, who indicated an association with a church group came from one of the following four religious groups: Baptist, United, Catholic or Brethren. When the religious portion of the

*Whether or not a person considered himself religious was determined by Self Report Item 8.

TABLE 4

Description of the Working Group
($n = 211$) from the
Usable Test Returns

Religious Membership or Adherence	Number	Percentage of Working Sample
<u>Baptist</u>	56	27%
United	40	19%
Catholic	34	16%
<u>Brethren</u>	20	10%
<u>Pentecostal</u>	8	4%
Lutheran	6	3%
Anglican	5	2%
Presbyterian	5	2%
<u>Mennonite Brethren</u>	4	2%
<u>Associated Gospel</u>	3	1%
Salvation Army	2	1%
<u>Christian Missionary Alliance</u>	1	.5%
All Nations	1	.5%
TOTAL CHURCH ASSOCIATED SUBJECTS	185	
NO CHURCH ASSOCIATION GIVEN	26	12%

Note: The churches underlined describe themselves as evangelical.

sample (185 subjects) is subdivided into those who associate with churches which describe themselves as evangelical as opposed to those who do not, 51% classify as evangelical and 49% classify as non-evangelical.

The age range for the Working Group was 16 to 81 years with a mean age of 33 and a standard deviation of - 14. Thus 68% of the subjects were between the ages of 19 and 47.

The number of subjects who returned their questionnaires completed, valid, and on time for the statistical analysis; and who attended, belonged to, or adhered to a Christian religion, or else classified themselves as nonreligious, constituted the total number of subjects for the statistics of the present study (Working Group). The religious subjects were restricted to the Christian religion in order to obtain a relatively homogeneous Christian group as was recommended by Cecil Rice (1970, p. 183).

TABLE 5

Descriptive Statistics of the Total Working Group ($n = 211$)
 On The Three Measures of the Religious
 Orientation Scale and Comparison with the
 Same Statistics of the 1980 Nelson Study

	Upper Numbers From Present Study, Lower Numbers From Nelson, 1980		
	Religious Orientation Full Scale	Intrinsic Subscale	Extrinsic Subscale
Mean	42.65	19.31 17.96	23.34 22.44
Standard Deviation	14.54	9.34 9.23	7.34 7.61
Maximum Score	85.00	42.00 44.00	46.00 45.00
Minimum Score	17.00	9.00 9.00	11.00 11.00
Range	68.00	33.00 35.00	35.00 34.00
Median Score	41.31	16.29 15.10	23.18 22.50
Mode	28.00	10.00	27.00

Note: The full scale scores were not reported by the Nelson (1980) study.

The Comparison Groups

A statistical description of the Working Group on the independent variable of the present research, namely the religious variable measured by the Religious Orientation Scale (ROS), is presented in Table 5. Included in the table are the comparable statistics from Nelson's 1980 study (Nelson, 1980, p. 87. Inspection of the table shows that the descriptive statistics of the two studies are very similar with the means not differing by more than 1.35 points on either of the subscales, and the standard deviations not differing by more than .31 points. Similarly, the median scores which are of primary importance to the present study, do not differ by more than 1.19 points.

The median scores are of importance to the present study because they provide the information necessary for the classification of the Working Group into the three discrete Comparison Groups which this paper wishes to investigate, namely intrinsic religionists, extrinsic religionists and nonreligionists. According to the criteria for establishing these groups, subjects are classified as intrinsic religionists if they score below the median on both

subscale which; in the present study, means if they obtain scores equal to or less than 16 on the Intrinsic scale and equal to or less than 23 on the Extrinsic scale. Similarly, subjects are classified as extrinsic if they score above the median on both subscales, or in other words, if they score above 16 on the Intrinsic subscale and above 23 on the Extrinsic subscale.

Subjects who reject both intrinsically stated items and extrinsically stated items that favour religion are classified as nonreligious. These nonreligious subjects are identified in the present study as those who score 40%* lower on the Extrinsic subscale than expected from their scores on the Intrinsic subscale. Table 6 summarizes the derivation of these three groups (intrinsic religionists, extrinsic religionists and nonreligionists) from the Religious Orientation Scale (ROS).

After the three Comparison Groups were extracted from the Working Group by applying the criteria described in the preceding paragraph and summarized in Table 6, the means and standard deviations of each group on the two subscales of the ROS were computed. These are presented in Table 7.

*Allport's criterion is 50%. In the present study 40% is used in order to obtain a larger n for analysis. This change is expected to decrease the distinctiveness of the nonreligious group.

TABLE 6

Summary of Derivation of the Three Main Comparison Groups
(Intrinsic Religionists, Extrinsic Religionists
and Nonreligionists) By Their Scores on the ROS

Groups	Group Description	Criteria for Group Classification	Sample Size
Intrinsic Religionists	Consistently endorse intrinsically worded items and reject extrinsically worded items.	Below the median on both the Intrinsic and the Extrinsic subscales of the ROS.	78
Extrinsic Religionists	Consistently endorse extrinsically worded items and reject intrinsically worded items.	Above the median on both the Intrinsic and the Extrinsic subscales of the ROS.	76
Nonreligionists	Reject both intrinsically and extrinsically worded items that favour religion.	Score 40% ^a lower on the Extrinsic subscale than expected from score on Intrinsic subscale.	17

^aAllport's criterion is 50%. Here 40% is used in order to obtain a large enough n for analysis. This change would tend to decrease the distinctiveness of the proreligious and nonreligious groups.

TABLE 7

Means and Standard Deviations of
Intrinsic, Extrinsic and Nonreligionists
on the Religious Orientation Subscales

	Intrinsic Subscales		Extrinsic Subscale	
	<u>m</u>	<u>SD</u>	<u>m</u>	<u>SD</u>
Intrinsic Religionists	11.58	2.05	16.47	3.59
Extrinsic Religionists	27.14	6.91	29.96	4.92
Nonreligionists	35.76	5.85	21.53	3.86

A further description of the three comparison groups is provided by Table 8 which shows the composition of each group in terms of church affiliation. Inspection of the table reveals that the intrinsic group is primarily composed of Baptists (57.69%) and Brethren people (14.10%) whereas the extrinsic group is primarily composed of United (32.40%) and Catholic (30.26%) people.

More detailed study of Table 8 reveals that the majority of the religious subjects, 87.16%, who are intrinsically oriented in their faith come from churches which describe themselves as evangelical. On the other hand, the majority of religious subjects, at least 77.63%*, who are extrinsically oriented in their faith come from churches which do not describe themselves as evangelical.

Another interesting observation from Table 8 is that none of the subjects who are defined by their performance on the Religious Orientation Scale (ROS) as nonreligious have an association with an evangelical church, whereas 29.4% of those who clearly

*Five percent of the extrinsics did not indicate their church association, thus the actual percentage may be higher than 77.63%.

TABLE 8

Composition of the Three Comparison Groups
(Intrinsics, Extrinsics and Nonreligionists)
in Terms of Church Affiliation

<u>Church Affiliation</u>	$n = 78$ <u>Intrinsics</u>		$n = 76$ <u>Extrinsics</u>		$n = 17$ <u>Nonreligionists</u>	
	#	%	#	%	#	%
<u>Baptist</u>	45	57.69%	7	9.21%	0	0%
<u>Brethren</u>	11	14.10%	3	3.95%	0	0%
<u>Pentecostal</u>	7	8.97%	1	1.32%	0	0%
<u>United</u>	5	6.41%	25	32.90%	2	11.76%
<u>Catholic</u>	3	3.85%	23	30.26%	1	5.88%
<u>Associated Gospel</u>	2	2.56%	0	0%	0	0%
<u>Christian Missionary Alliance</u>	1	1.28%	0	0%	0	0%
<u>Lutheran</u>	1	1.28%	3	3.95%	1	5.88%
<u>Mennonite Brethren</u>	1	1.28%	1	1.32%	0	0%
<u>Salvation Army</u>	1	1.28%	1	1.32%	0	0%
<u>Anglican</u>	0	0%	4	5.26%	1	5.88%
<u>Presbyterian</u>	0	0%	4	5.26%	1	5.88%
<u>NO CHURCH AFFILIATION GIVEN</u>	1	1.28%	4	5.26%	12	70.59%

Note: Churches that describe themselves as evangelical are underlined.

reject Christianity on the ROS admit some type of an association with a nonevangelical church. Over 70% of those scoring as nonreligious on the ROS, however, indicate no church association. This is an expected finding.

Additional information can be discovered about the various church groups and their religious orientation in religion by comparing Tables 8 and 4. Table 4 presents the number of subjects from each church group that are in the total Working Group, and Table 8 presents the number from each of the church groups that classify as intrinsic, extrinsic, or nonreligious. Thus, from these combined data one can determine the percentage of each church group, in the study, that are intrinsic, extrinsic and nonreligious. This is accomplished in Table 9.

Inspection of Table 9 reveals that some churches have a higher proportion of intrinsics than do others; and similarly, that certain other churches have a higher proportion of extrinsics. The churches that have the highest proportion of intrinsics are the following: Pentecostal with 87.50% intrinsic, Baptist with 66.66%, and Brethren with 55.00%. If one refers back to Table 4, he will observe that these four churches each describe themselves as evangelical. The churches that have the highest proportion of

TABLE 9

The Percentage of Each Church Group
that Classify as Intrinsic Religionists,
Extrinsic Religionists, and Nonreligionists

<u>Religious Group</u>	<u>Intrinsic</u>	<u>Extrinsic</u>	<u>Nonreligious</u>	<u>Other</u>
<u>Associated Gospel</u>	66.66%	00%	00.00%	33.33%
Anglican	00.00%	80%	00.00%	20.00%
Baptist	80.36%	12.50%	00.00%	07.14%
Brethren	55.00%	15.00%	00.00%	30.00%
Catholic	08.82%	67.65%	02.94%	20.59%
Lutheran	16.66%	50.00%	16.66%	16.68%
<u>Mennonite Brethren</u>	25.00%	25.00%	00.00%	50.00%
Pentecostal	87.50%	12.50%	00.00%	00.00%
Presbyterian	00.00%	80.00%	20.00%	00.00%
<u>Salvation Army</u>	50.00%	50.00%	00.00%	00.00%
United	12.50%	62.50%	05.00%	20.00%
<u>All Nations</u>				
<u>Christian Missionary Alliance</u>				

Note: The church groups which are underlined had a sample size of less than 5, therefore the distribution may not be representative. The last two church groups had only one subject. Therefore percentages were not calculated. The subject from the ALL NATIONS church fell into the "Other" category and the subject from the Christian Missionary Alliance church fell into the intrinsic category.

extrinsics are the following: Anglican and Presbyterian both with 80% extrinsic, Catholic with 67.65% extrinsic and United with 62.50%. None of these churches describe themselves as evangelical (Table 4).

One will observe from Table 9 that not all subjects are included in the classification intrinsic, extrinsic, and nonreligious but that some are left over and designated as "Other". While it is not the purpose of the present study to examine this fourth group, it is expected that these excluded subjects belong to what the Nelson (1980) study identified as the indiscriminately proreligious group. Nelson found that her proreligious group had more psychopathology than any other group.

THE PROCEDURE

The investigator's original intention was to test church groups only, since he was interested in examining the direction of the relationship between religion and mental health. With this in mind, he sent a form letter (pre-stamped and self-addressed) to 197 Christian Churches in the Ottawa-Hull area inviting them to participate in the research (See Appendix 1). Only seven of the 197 churches, which were sent the forms, answered in the affirmative. Of these seven, only six followed through with the research project, the seventh was not able to because of an internal disruption. The average number of subjects obtained from each of these six churches was eight subjects. At this point, various other religious and nonreligious groups in Ontario and Western Quebec were contacted and asked to participate in the study. The groups identified in Table 1 agreed to participate.

The test instruments described in a following section were combined into one package and administered in the following way.

First, full cooperation was sought from the leaders of the various groups referred to in the discussion of the Subject Pool. This was done through conversations with individual group

leaders at which time the general purpose of the study was outlined (as in form letter in Appendix 1). The leaders were permitted to examine the questionnaires if they so wished before consenting to participate. Those who consented, were asked to announce the study to their respective group and ask for all male volunteers to report to the investigators, or to his trained assistants, at the close of a specified meeting.

All who volunteered between the ages of 16 and 100 were given a self-addressed and stamped envelope containing the questionnaires for the study, and were advised that there was more than one questionnaire; that each questionnaire had different instructions; that it was necessary to follow the instructions of each individual questionnaire carefully; that they were to fill out the questionnaires independently; and, that it was most essential that all questionnaires be returned by mail and within a week if possible. Each volunteer was asked to leave his telephone number and the number of his questionnaire packet with the investigator, however he was assured that while his telephone number would be accessible to the research team for the purpose of tracing missing questionnaires, all responses to the questionnaires would be strictly confidential and would be coded by a personally non-identifiable number only.

The questionnaires were returned to the investigator by

~~mail.~~

The subjects participating in the study were requested to identify themselves on the questionnaires only in terms of age, sex (only males accepted) and religious affiliation, if any.

The specific instructions given to each group were those which appear on the front of each questionnaire.

THE SIX STEP DESIGN

Step I compares intrinsic religionists to extrinsic religionists on measures of general mental health including both positive and negative aspects. This step is a preliminary step and is included for two reasons. The first is to attempt to replicate the finding of the Nelson (1980) study, namely that intrinsic religionists have higher indices of mental health than do extrinsic religionists, using a different and broader measure of mental health than that employed in the Nelson study. The second reason for this step is to provide a foundation for the following steps of the present investigation for if the expected relationships are not found in Steps I and II there will be no point in proceeding to the later steps which seek to explore the directionality of that expected relationship.

At this first step, intrinsic-extrinsic religion and general mental health will be measured by the following instruments:

Intrinsic-extrinsic religion - Religious Orientation
Scale.

General Mental Health

Ten Measures of Positive Mental Health:

Time Competence Scale of the Personal Orientation Scale (TC)
 Life Framework Scale-Positive of the Life Regard Index (FWPS)
 Life Fulfillment Scale-Positive of the Life Regard Index (FLPS)
 Total Positive Score of the Tennessee Self Concept Scale (TPOS)
 Personality Integration Scale of Tennessee Self Concept Scale (PI)
 Personality Unity by the Number of Deviant Signs Score of the
 Tennessee Self Concept Scale (NDS)
 Feeling Loved by Self Report Item 2 (LOV)
 Past Forgiveness by Self Report Items 4 and 6 (FG)
 Present Meaning by Self Report Item 7 (PRES)
 Future Hope by Self Report Items 1, and 5 (HP)

Nine measures of Negative Mental Health

Self Criticism Score of the Tennessee Self Concept Scale (SC)
 General Maladjustment Scale of the Tennessee Self Concept Scale (GM)
 Personality Disorder Scale of the Tennessee Self Concept Scale (PD)
 Neurosis Scale of the Tennessee Self Concept Scale (N)
 Life Framework-Negative of the Life Regard Index (FWNG)
 Life Fulfillment-Negative of the Life Regard Index (FLNG)
 Stress Factors of the Revised Social Readjustment Rating Scale (S_1)
 Stress per Factor of the Revised Social Readjustment Rating Scale (S_2)
 Total Stress of the Revised Readjustment Rating Scale (S_3)

Step II compares intrinsic religionists to nonreligionists on the same measures of positive and negative mental health as in Step I. As with Step I, this too is a preliminary step and is again included first to see if the relationship found in the Nelson study can be replicated with different measures of mental health, and secondly to provide a foundation on which to build the following steps.

In this step, the comparison is made on the same measures of general mental health as in Step I. Thus, the only new variable to be defined is nonreligion.

The term nonreligionist as used in this paper is limited to a rejection of orthodox Christianity. A nonreligionist is operationally defined as an individual who on the Religious Orientation Scale (ROS) rejects items favourable to religion regardless of whether they are intrinsically stated or extrinsically stated. According to Allport's Reformulation on the ROS, persons are classified as nonreligious if they score 50% lower on the extrinsic scale than is expected from their score on the intrinsic scale, thus indicating a rejection of both intrinsic and extrinsic items.

Step III empirically tests Allport's rationale as to why intrinsic religion is expected to be conducive to mental health. It will accomplish this by comparing intrinsics to extrinsics and to nonreligionists on eight salient variables, which according to Allport's theory, are purported to account for the better mental health in the intrinsic group.

In effect, this step will seek to determine whether or not intrinsics are superior on the following combination of variables drawn from Allport's theory:

- i) Life Goals - measured by the Total Framework Scale of the Life Regard Index (TOTFW).
- ii) Personality Integration - measured by the Personality Integration Scale of the Tennessee Self Concept Scale (PI).
- iii) Personality Unity - measured by the Number of Deviant Signs Score of the Tennessee Self Concept Scale (NDS).
- iv) Stress - measured by the following three scores from the Revised Social Readjustment Rating Scale:

Stress Factors (S_1)
 Stress per Factor (S_2)
 Total Stress (S_3)

These first four variables are derived from Allport's theory as to why Intrinsic religion is expected to be preventative of mental illness. The remaining four are derived from his theory as to why intrinsic religion is expected to be therapeutic and thus enhance mental health.

- v) Feeling Loved - measured by Self Report Item 2 (LOV).
- vi) Past Forgiveness - measured by Self Report Items 4 & 6 (FG).
- vii) Present Meaning - measured by the following three scores.
 - Self Report Item 7 (PRES).
 - Total Life Fulfillment Scale of the Life Regard Index (TOTFL).
 - Time Competence Scale of the Personal Orientation Inventory (TC).
- viii) Future Hope - measured by Self Report Items 1 & 5 (HP).

Step IV If in the previous three steps Allport's hypothesis receives support, the investigator will proceed to Step IV. Step I will have shown that intrinsic religionists have superior mental health scores as compared to extrinsic religionists; Step II will have shown the intrinsic religionists to have superior mental health scores to nonreligionists; and, Step III will have found support for Allport's rationale as to why intrinsic religionists should obtain superior scores in mental health as compared to the comparison groups; or, in other words, why intrinsic religion is expected to enhance mental health. These three findings, when considered together would thus provide strong support for Allport's hypothesis that intrinsic religion is conducive to mental health, giving one more confidence that the direction of the positive relationship between intrinsic religion and mental health is actually that predicted by Allport. While such findings would be convincing they would not be conclusive. There is still the possibility that, while Allport's rationale (as to why intrinsic religion facilitates mental health) is supported, the superior mental health actually precedes the intrinsic faith. In fact, as suggested earlier, it is possible that only mature and integrated personalities are able to develop an intrinsic faith, and, that all the elements of Allport's rationale that discriminate intrinsic from other groups, are present in the intrinsic group only because they were more developed individuals to begin with.

The purpose of Step IV is to investigate this possibility and to further clarify which came first, the intrinsic religion as Allport suggests or the mature well developed personality. To do this, the investigator will select measures of what Allport considers to be the ultimate goal in personality development and growth, that being personality integration and unity (Allport 1961, pp. 100-127). He will then compare poorly integrated and poorly unified intrinsics to well integrated and well unified extrinsics on the remaining measures of mental health (that is, all of the measures of mental health excluding the measures of integration and unity). If the intrinsics still obtain higher indices of mental health, it will be established that a well integrated and unified personality is not a prerequisite for the development of an intrinsic religion and does not account for the superior mental health of the intrinsic. Thus, further support will have been found for Allport's interpretation of the positive association between intrinsic religion and mental health, namely that the intrinsic religion enhances the mental health and not that a well integrated and unified personality, which enables the development of an intrinsic religion in the first place, accounts for the superior mental health in the intrinsics.

Levels of Personality Integration and Personality Unity will be measured by the following two scores from the Tennessee Self Concept Scale: the Personality Integration Scale (PI) and the Number of Deviant Signs score (NDS).

Step V compares intrinsics to nonreligionists on measures of mental health while life goals (measured as in Step III) are held constant. For this comparison, subjects are matched for the degree to which their lives are directed by definite life goals. Thus, the nonreligionists will have equally well defined or equally poorly defined life goals as compared to the intrinsics. There is an important difference between these groups however, and that is that the intrinsic's life goal is his all-encompassing faith whereas the nonreligionists' life goals may include any type of life goal other than a comprehensive religious commitment, for the nonreligionist, by definition, is one who rejects religion.

The intent of this comparison, is to clarify the relationship between intrinsic religion and mental health by exploring the possibility that any life goal could provide the same stabilizing, integrating and unifying effect on the personality as does intrinsic religion, and thus, in turn, make the nonreligious person equally stress resistant.

Life goals will be measured by the Total Framework Scale of the Life Regard Index, as in Step III.

Step VI compares intrinsics, extrinsics and nonreligionists on measures of "Direction and Purpose in Life". This is a supplementary step. It is not part of the strategy to establish

the direction of the relationship but rather seek to clarify the nature of the relationship between religion and one very essential element in a worthwhile existence, that being, "Direction and Purpose in Life". More specifically it will test a tenet of the commonly accepted assumption that religion provides direction and purpose in life, i.e., that religion is positively associated with "Direction and Purpose in Life".

"Direction and Purpose in Life" will be measured by the Framework Scales of the Life Regard Index:

- Life Framework Scale-Positive (FWPS)
- Life Framework Scale-Negative (FWNG)
- Total Life Framework Scale (TOTFW)

To sum up, the strategy is to proceed in the following six steps:

- Step I - compares intrinsics to extrinsics on measures of mental health.
- Step II - compares intrinsics to nonreligionists on measures of mental health.
- Step III - empirically tests Allport's rationale by comparing intrinsics to both extrinsics and nonreligionists on a combination of eight salient variables drawn from his rationale.

- Step IV - compares poorly integrated and poorly unified
intrinsic to well integrated and well unified
extrinsic.
- Step V - compares intrinsic to nonreligionists on
mental health measures holding life goals
constant.
- Step VI - compares intrinsic, extrinsic and nonreligionists
on "Direction and Purpose in Life".

THE INSTRUMENTS

Five instruments were used to obtain the desired data. These were the Religious Orientation Scale (ROS), the Personal Orientation Inventory (POI), the Life Regard Index (LRI), the Tennessee Self Concept Scale (TSCS), and the Revised Social Readjustment Rating Scale (SRRS). In addition to the above scales, eight Self-Report Items were added. These items are presented after the description of the five above mentioned instruments.

In the following paragraphs, the test instruments are briefly analyzed. Each analysis includes a description of the instrument, a discussion of its validity and reliability and a statement of the relevancy to the present study.

1) The Religious Orientation Scale

Description

As stated in Chapter II, the Religious Orientation Scale* was developed by Feagin (1964) from Wilson's (1960) Extrinsic Religious Values scale. Feagin extended Wilson's scale to include intrinsically stated items in addition to extrinsically worded items.

Later, in the work of Allport and Ross (1967) this revised Extrinsic-Intrinsic scale became known as the Religious Orientation Scale (ROS).

The full ROS is available from ADI.** It consists of twenty items, nine of which describe an intrinsic religious style (Intrinsic Subscale) and eleven describing an extrinsic religious style (Extrinsic Subscale). A sample item from each of the Extrinsic and Intrinsic Subscales follows:

*A copy of the scale can be seen in Appendix II.

**The full Religious Orientation Scale has been deposited with American Documentation Institute, Order Document No. 9268, from ADI Auxiliary Publications Project, Library of Congress Washington, D.C.

What religion offers me most is comfort when sorrows and misfortune strike (Extrinsic subscale).

- a) I definitely disagree
- b) I tend to disagree
- c) I tend to agree
- d) I definitely agree

My religious beliefs are what really lie behind my whole approach to life (Intrinsic subscale).

- a) this is definitely not so
- b) probably not so
- c) probably so
- d) definitely so

In both subscales the items are scored in such a way that scores of four and five indicate an extrinsic orientation, regardless of the scale; and, scores of one and two indicate an intrinsic orientation. If an item is omitted, it receives a score of three. Hence, for all cases a score of five for an individual item indicates the most extrinsic response, a score of one, the most intrinsic.

It is possible to use the twenty items as a continuous scale with a low score representing an intrinsic orientation, and a high score representing the extrinsic. However, it is advantageous to obtain scores for the Extrinsic Subscale and the Intrinsic

Subscale separately in that it allows one to discriminate individuals that are inconsistent in their responding, such that they cannot be reliably assigned to either type of religious orientation, intrinsic or extrinsic. This group consists of those who endorse items intrinsically worded on the Intrinsic Subscale but who do not necessarily reject those worded extrinsically on the Extrinsic Subscale, or vice versa. In other words, these inconsistent subjects subscribe to both the positive and negative wording of the same question. An example of a question negatively and positively worded is the following:

Intrinsic wording - My religious beliefs are what really lie behind my whole approach to life.

Extrinsic wording - Though I believe in my religion I feel there are many more important things in my life.

The approach used to discriminate inconsistent individuals is that used by Peabody (1961), and Allport and Ross (1967, pp. 432-443).

In the present study, the second scoring method will be used because it divides the subjects into discrete groups which can be used in group difference comparisons. The groups are defined as follows:

Intrinsic type includes individuals who agree with intrinsically worded items on the intrinsic subscale, and who disagree with extrinsically stated items on the extrinsic subscale. By the scoring method used, these persons fall below the median scores on both subscales.

Extrinsic type includes individuals who agree with extrinsically stated items on the extrinsic subscale, and who disagree with intrinsically worded items on the intrinsic subscale. By the scoring method used, these persons fall above the median scores on both subscales.

Nonreligious type includes those who on the extrinsic subscale, score 50% lower than one would expect from his score on the intrinsic subscale.

Validity

Concerning the validity of the ROS, several studies by a number of independent researchers lend support to the validity of the instrument as a measure of the designated construct, that is, of extrinsic and intrinsic religious orientation.

In 1964, Feagin, by a factor analysis, demonstrated the scale could effectively discriminate intrinsic and extrinsic religious orientation. In his analysis two major factors emerged. Factor I measured the acceptance or rejection of a devout or intrinsic religious style, whereas Factor II measured the acceptance or rejection of a utilitarian or extrinsic religious style. When he compared the mean of the subscales with each other and with the overall scale (both subscales combined) he found that the extrinsic subscale discriminated better than either the complete scale, or the intrinsic subscale, for his sample of southern fundamental churches.

In 1967, Allport and Ross refined the ROS in what has become known as the "Reformulation of the ROS". They found, as mentioned earlier in Chapter III that while some subjects were consistently intrinsic and others were consistently extrinsic, there were some who were notoriously inconsistent endorsing both intrinsic and extrinsic items, or else rejecting the intrinsically worded items as well as the extrinsically worded items. This caused them to separate out these inconsistent subjects by the method described by them in Allport 1968, p. 251. They then had three groups, intrinsic, extrinsic and indiscriminately proreligious. (They also suggested that in a nonchurch population, a fourth indiscriminately nonreligious group would emerge. On five measures of prejudice, they compared these three religious groups and found

consistent and highly significant differences between them on all five measures of prejudice ($p < .001$). The indiscriminate groups were more prejudiced than both the intrinsic and extrinsic; and, the extrinsic were more prejudiced than the intrinsic. Thus, the ROS was shown to have high discriminatory ability.

Spilka et al. (1970), performed factor analytical studies to investigate the patterns of relationships among a number of the better measuring instruments designed to assess personal religion. The following tests were included: Rated Importance of Religion, Religious Identity, the Thurstone-Clave Attitude Towards the Church Scale, Frequency of Church Attendance, Orthodoxy Scale, the ROS, and others. The purpose of their studies was to determine what these instruments actually measured. Using 146 students in introductory psychology as their sample, they isolated three factors by means of the Varimax rotation. Factor I appeared as a very pervasive religiosity, with emphasis on religion as a guide for life. The intrinsic subscale of the ROS correlated .72 with this Factor.

Further support for the validity of the ROS was found by correlating the extrinsic and intrinsic subscales with Spilka et al.'s second factor. This factor emphasized the importance of the church as an institution but downgraded the importance of religion. The intrinsic subscale correlated -.33 with it, while the extrinsic

subscale obtained a high positive correlation of .83 with it. In fact, the extrinsic subscale's correlation with Factor II was higher than any other test used in the analysis, the next highest being .127.

In 1969, another factor analytic investigation was undertaken by McConahay and Hough. They included the ROS in a study with 48 original items designed to indicate perspectives based on love, guilt, and forgiveness themes in Christianity, plus a conventional orientation. The third factor that emerged was clearly the Allport-Ross ROS factor with extrinsic items loading high positively and intrinsic low negatively. They also found the extrinsic subscale to correlate with their self-developed conventional scale ($r = .35$). McConahay and Hough concluded that the ROS measured motivation for religious practices rather than theological content.

Further validation for the ROS was provided by Hood's 1970 study. He compared extrinsics and intrinsics, as measured by the Allport-Ross reformulation, on the REEM which is a technique for measuring degree of religious experience. He found that intrinsics obtained significantly higher religious experience scores than did the extrinsics ($p = .01$). The correlation between the intrinsic scale and the REEM was .51 ($p = .01$). The extrinsic scale was unrelated.

In 1971, Tate and Miller cross-validated the ROS with the Rokeach Value Survey using a sample of United Methodist Churchgoers. Their findings yielded good construct validation for Allport's extrinsic-intrinsic groups obtained by the reformulation: their extrinsics ranked the terminal value Salvation significantly lower than the intrinsics did. Extrinsics also valued "Forgiving", "Loving" and "Helpful" significantly less than did the intrinsics; and as expected, the extrinsic religionists placed significantly higher values on "A Comfortable Life" and "Pleasure" than did the intrinsic religionists.

Construct validity was also provided by two studies (Nelson, 1979; and Strictland et al., 1971) relating extrinsic-intrinsic religion as measured by the ROS to one's locus of control for decision making. Both investigations found that an intrinsic faith was associated with the more internal locus of control for decision making, whereas an extrinsic faith was more related to the more external control for decision making. When correlations were computed from this relationship, both investigators obtained coefficients of .31 between extrinsic religious orientation and external locus of control. The difference between the intrinsic and extrinsic groups in locus of control was significant at the .05 level in both studies.

One further measure of construct validity will be cited.

It was provided in a 1977 investigation into death by a four man team, Spilka, Stout, Minton, and Sizemore. These researchers administered the ROS, Spilka et al.'s measure of Committed-Consensual Faith, and a Death Perspective instrument to 168 religious Christian volunteers. Their results showed that the intrinsic subscale of the ROS correlated .64 with the committed scale, and the Extrinsic subscale correlated .45 with the consensual scale.

In addition, the relationships of the Extrinsic/Intrinsic subscales to the death perspective were consistent with the theoretical expectations of the extrinsic and intrinsic orientations in faith. In fact all six death perspectives having an unfavourable outlook correlated ($p < .01$) in the expected direction with extrinsic faith. Using the Extrinsic subscale, the strongest of these relationships existed with death perceived as "Failure" (.49), "Indifference" (.39), and "Loneliness-Pain" (.36). The Intrinsic subscale yielded equally significant correlations ($p < .01$) in the opposite direction indicating that intrinsic faith was not associated with negative concepts of death. On the contrary, the Intrinsic subscale was most highly correlated with the positive, hopeful perspective of "Afterlife-of-Reward" ($r = .37, p < .01$).

In summary, the ROS has been shown to be an instrument which effectively distinguishes between two major religious orientations, namely extrinsic religion and intrinsic religion. There is considerable evidence to support the validity of the ROS as a measure of the designated construct.

The ROS is also able to discriminate a third, nonreligious group when used with liberal religious groups or nonreligious groups. Pilot work done by Allport and Ross (1967) first demonstrated that a nonreligious group could be successfully isolated with the ROS. Thompson in 1974 confirmed this use of the ROS by showing that nonreligionists could be differentiated from proreligionists and extrinsic religionists on measures of dogmatism ($p = .01$). Nelson (1980) provided further evidence showing that the ROS clearly discriminated between nonreligionists and the following three religious groups: intrinsic religionists ($p < .000$), extrinsic religionists ($p < .05$), and indiscriminately proreligionists ($p < .01$) on MMPI measures of mental health.

Reliability

Concerning the reliability of the ROS, Wilson (1960, pp. 286-288) reported equivalent-half reliability coefficients ranging from .80 to .85 for the earlier form of the scale (15 items) which contained five less items than the present form. The

increased length of the present form was hoped to enhance the reliability of the ROS but since the two subscales of the ROS are not usually combined into a total ROS score because of the necessity of eliminating inconsistent respondents (explained in Allport's reformulation) the lengths of the new subscales are, in fact, shorter than Wilson's original 15 item scale. In spite of this, the reliability coefficients (K-R 20) are as high as those for the original scale and higher, .85 for the Extrinsic subscale and .91 for the Intrinsic subscale (Spilka et al., 1977).

With regard to the stability of the ROS over time, no studies have been done to explicitly obtain coefficients of stability, however, the evidence for its validity suggests that the reliability of the ROS must be adequate.

Relevance to the Present Study

The ROS measures and operationally defines the independent variables of the present study, namely intrinsic and extrinsic religion, and nonreligion.

2) The Personal Orientation InventoryDescription

The Personal Orientation Inventory (POI) is a forced-choice, 150 items, self-report inventory designed to assess values, attitudes and behaviour relevant to Maslow's concept of the self-actualized person.* Its ability to discriminate between individuals who have been observed in their life behaviour to have attained a high level of self-actualization from those who have not evidenced such development, has given it the reputation of measuring the optimal personality or positive mental health.

The POI items are scored twice, first for the two major scales of personal orientation, inner directed support (127 items) and time competence (23 items); and, second for ten subscales each of which measures an important element of self-actualization. The two major scales combine in a ratio to yield an objective measure

*According to Maslow the self-actualized person is a person who is more fully functioning and lives a more enriched life than does the average person. Such an individual is seen as developing and utilizing all of his unique capabilities, or potentialities, free of the inhibitions and emotional turmoil of those less self-actualized (Maslow, 1954, 1962).

of the client's total level of self-actualization. The ten subscales yield a self-actualization profile in which self-actualized groups score significantly higher than non-self-actualized groups on nine of the ten subscales (the NC scale is excluded). Normal groups tend to score in between.

Only one of the two major scales, the Time Competence Scale (TC) is used in the present study. TC measures the tendency of the person to live primarily in the present free of hangups over past events and future uncertainties. Thus, the time competent person lives in the "now" with full awareness, full reality contact and full feeling reactivity, while the time incompetent person lives primarily in the past, with guilts, regrets, and resentments, or in the future, with unrealistic expectations and fears.

Validity

The TC Scale of the POI is considered to have good content validity (Bloxom, 1972). The variable being assessed by the items is broadly defined and the content of the items in the scale is appropriately quite varied.

The strongest evidence of construct validity for the TC Scale is demonstrated by its ability to discriminate between self-actualized and non-self-actualized individuals. A study by Shostrom (1964) shows that the TC Scale discriminates between clinically judged self-actualized and non-self-actualized groups with probability level of .01. The persons in these two groups were carefully selected, each being nominated by practicing, certified clinical psychologists contacted through societies of clinical psychologists.

Concurrent validity is provided by Shostrom and Knapp (1966). They found that the TC Scale could discriminate at a .01 level between two groups of outpatients in therapy, one a group of 37 patients beginning therapy and the other a sample of 39 patients in advanced stages of the psychotherapeutic process. Further concurrent validation is provided by Fox (1965) who demonstrated that the TC Scale of the POI could discriminate, at the .01 level of confidence, between hospitalized psychiatric patients and a nominated self-actualized sample; and, between the hospitalized sample and a normal adult sample. Zaccaria and Weir (1966) report similar findings to the above study. They showed the TC scores for an alcoholic treatment group to be significantly lower than both the original validating, clinically nominated, self-actualized sample and the normal adult sample. The alcoholic group were also significantly lower than the original non-self-actualized sample.

Another form of concurrent validity is provided by correlational studies. Shostrom and Knapp (1966) have found significant correlations ($p < .01$) between the TC Scale and the following six MMPI scales: Depression ($r = -.47$); Psychasthenia ($r = -.65$); Schizophrenia ($r = -.52$), Social Introversion ($r = -.50$); F Scale ($r = -.55$); and the K Scale ($r = .50$). Knapp (1965) correlated the TC Scale with the Neuroticism Scale of Eysenck's Personality Inventory and obtained a correlation of $-.57$, significant at the $.01$ level. Finally, Dandes (1966) has shown the TC Scale to be significantly correlated ($p = .01$) with both the California F Scale, and the Dogmatism Scale.

Reliability

Test-retest reliability coefficients have been obtained by Klavetter and Mogar (1967) for the POI scales on a sample of 48 undergraduate college students. The Inventory was administered twice, a week apart, to the sample with the instructions that it was part of the experiment to take the inventory twice. The reliability coefficient obtained for the TC Scale is $.71$ which is commensurate with other personality inventories.

Examining the stability of POI scores among a sample of 46 student nurses over a one-year period, Ilardi and May (1968)

report a coefficient of .55 for the TC Scale which is well within range of somewhat comparable test-retest studies with inventories such as the MMPI and EPPS.

Relevance to Present Study

The TC Scale is especially pertinent to the study because it purports to measure an aspect of mental health directly predicted by Allport's theory, i.e., the tendency of a person to live primarily in the present free from guilts and regrets of the past or unrealistic expectations and fears of the future. Allport theorizes that an intrinsic faith provides forgiveness for the past, meaning for the present and hope for the future. Thus, one would expect intrinsic religionists to have higher TC scores than extrinsic religionists.

TC will also be used as a measure of general mental health representing the positive end of the continuum in the preliminary two steps of the present investigation.

3) The Life Regard Index

Description

The Life Regard Index is designed by Battista and Almond (1973) to provide an unbiased measure of purpose and fulfillment in life, and it is based on the concept of positive life regard, i.e., an individual's belief that he is fulfilling his positively valued life goal. The test is composed of 28 items with a five point scale, and is divided into two scales, Life Framework and Life Fulfillment. The Total Life Framework Scale (TOTFW) measures the ability of an individual to see his life within some context or perspective, and to have derived a set of life-goals, purpose in life, or life-view from them. The Total Life Fulfillment Scale (TOTFL) on the other hand, measures the degree to which an individual sees himself as having fulfilled or as being in the process of fulfilling his framework or life-goals. Each scale has 14 items, half phrased positively and half negatively to control for response set. The sum of these two scales comprises the Life Regard Index (LRI) which is used as an overall indicator of positive life regard.

Validity

The LRI, although a new instrument, has demonstrated good validity. Battista and Almond (1973) report a study in which they administered the LRI to a group of medical students and separated out high scorers (1.5 SD above the mean) and low scorers (1.5 SD below the mean) and then had these subjects interviewed on his or her life-goals and satisfaction with life as a medical student, in an attempt to evaluate each one's level of purpose-in-life. The subjects did not know the reason they were interviewed and the interviewer did not know if they came from a high or low purpose-in-life group. Utilizing this technique the interviewer was able to correctly identify 14/16 of the low purpose-in-life group, and 14/14 of the high purpose-in-life group ($p < .001$).

Further evidence of the validity of the LRI in distinguishing individuals with purposeful and purposeless lives was obtained from questionnaires administered to these same high and low groups after the interview. By this means, it was determined that the low purpose-in-life group had visited psychiatrists in the past significantly more often ($p < .05$) and for longer periods of time ($p < .05$).

Cross-validation studies have been done with both the Self-Actualization Value Scale of the Personal Orientation Inventory, and the Purpose in Life Test. Both of the above tests were able

to statistically differentiate between high and low purpose-in-life groups as measured by the LRI ($p < .01$).

The LRI has been tested for both social desirability and denial. The data revealed that it was only mildly correlated with social desirability, with social desirability accounting for only 4% of the variation of the LRI. Denial, and defensiveness or openness, were unrelated to the LRI scale. From these findings, it was concluded that the LRI can be utilized to differentiate high purpose-in-life persons from low purpose-in-life persons without a significant confounding effect from either social desirability or denial.

Reliability

A test-retest reliability coefficient of .94 is reported for the LRI. However, the test-retest time interval is not specified.

Concerning internal consistency, the two scales, Total Life Framework (TOTFW) and Total Life Fulfillment (TOTFL), are highly correlated with the total LRI scale with coefficients of .94, and .93 respectively. This implies that the LRI scale can be utilized as a good indicator of overall level of life regard. There is also a high correlation (.76) between the TOTFW and TOTFL scales. This suggests, according to Battista and Almond, that

either individuals find it very hard to retain their beliefs in a life-framework that they are unable to fulfill, or that the development of a life-framework is the limiting factor in developing purpose in life.

Relevance to the Present Study

The main reason for including the Life Regard Index (LRI) in the present study is that it provides measures of two of the salient variables to be investigated from Allport's rationale. These are "Life Goals" measured by his Total Life Framework Scale (TOTFW) and acceptable meaning for the present or "Present Meaning", measured by his Total Life Fulfillment Scale (TOTFL).

The Total Life Framework Scale of the LRI (TOTFW) is used to measure "Life Goals" because it purports to measure the ability of an individual to see his life within some context or perspective, and to have derived a set of goals or purpose in life from them. The TOTFW represents exactly one half of the total LRI and correlates very highly with the full LRI (.94). Thus, it can be considered to be largely measuring the same thing, and consequently the validity for the full scale provides a good estimate of the validity of the TOTFW Scale.

The Total Life Fulfillment Scale of the LRI (TOTFL) is used to measure "Present Meaning" because it purports to measure the degree to which an individual sees himself as having fulfillment in life or as being in the process of obtaining that fulfillment. The TOTFL Scale which represents one half of the full LRI, correlates .93 with it. For this reason, the validity of the full scale gives a reasonable estimate of the validity of the TOTFL Scale.

In addition, the LRI's Framework and Fulfillment Scales will also be used as measures of General Mental Health in the present research. The seven positively phrased items of the Framework Scale (FWPS) and the seven positive items of the Fulfillment Scale (FLPS) will represent positive mental health, whereas the seven negative items of each scale respectively (FWNG and FLNG) will represent the negative end of the mental health continuum.

In a preliminary study to the present one with a sample of 35 males, the present investigator determined that the positive and negative halves of both the Life Framework Scale (FWPS and FWNG) and of the Life Fulfillment Scale (FLPS and FLNG) were highly correlated with their parent scales: FWPS and FWNG correlated .93 and .91 respectively with their parent Life Framework Scale (TOTFW); and the FLPS and FLNG correlated .93 and .93 respectively with their parent Life Fulfillment Scale (TOTFL). For this reason they may be considered good measures of their parent scales.

In the same study, the positive and negative halves were found to correlate significantly with feeling hope for the future (Future Hope) measured on a 1 to 5 point self-report rating scale: Framework-Positive (FWPS) correlated .53, Framework-Negative (FWNG) correlated .71, Fulfillment-Positive (FLPS) correlated .65 and Fulfillment-Negative (FLNG) correlated .64. All coefficients were significant at the .001 level. It should be noted that the two negative halves are in the form of inverse scales which explains the positive correlations with Future Hope.

The positive and negative halves were also found to correlate significantly with Total Positive Self Concept (TPOS) and with absence of Neurosis (N), Personality Disorder (PD), and General Maladjustment (GM), all measured by the Tennessee Self Concept Scale.

Table 10 presents the correlation coefficients for the preliminary study referred to above.

TABLE 10

Intercorrelations of the Life Regard Index and
Correlations with Other Variables

(n = 35)

	<u>Intercorrelations</u>				
	FWPS	FWNG	TOTFL	FLPS	FLNG
TOTFW	.93****	.91****	.78****	.79****	.66****
FWPS		.69****	.63****	.68****	.49****
FWNG			.91****	.77****	.74****
TOTFL				.93****	.92****
FLPS					.71****

	<u>Correlations with Other Variables</u>					
	TOTFW	FWPS	FWNG	TOTFL	FLPS	FLNG
HOPE	.67****	.53***	.71****	.70****	.65****	.64****
<u>GM</u>	.48**	.36*!	.53***	.72****	.62****	.72****
<u>PD</u>	.32*	.25	.35*!	.54***	.52***	.48**
<u>N</u>	.51**	.39**	.56****	.78****	.76****	.68****
TPOS	.43**	.32*	.49**	.73****	.67****	.68****

Note: Underlined scales are inverse scales

- * Significant at .05 level
- *! Significant at .025 level
- ** Significant at .01 level
- *** Significant at .001 level
- **** Significant at .0000 level

4) Tennessee Self Concept Scale

Description

The Tennessee Self Concept Scale (TSCS) is a self-administering instrument consisting of 100 self-description items of which 90 assess the self-concept and 10 assess self-criticism. For each item, the respondent chooses one of five response options labeled from "completely false" to "completely true". Thirty scores are derived from these items in the Clinical and Research Form. These include: one self-criticism score, nine self-esteem scores (identity, self-satisfaction, behaviour, physical self, more-ethical self, personal self, family self, social self, total self-esteem or total positive score), three variability of response scores (variation across first three of the self-esteem scores, variation across the last five self-esteem scores, and total) one distribution score, one time score, one response bias score, one net conflict score, one total conflict score, six empirical scale scores for group discrimination of various sorts (normals, neurotics, psychotics, personality disorder subjects, defensive positive subjects, personality integration subjects), one number of deviant signs score, and five scores consisting of counts of each type of response made. The various content areas of these scales are said to have been conceived and the scale yields a vast amount of information from only 100 items.

With regard to the construction of the Tennessee Self Concept Scale, it is the result of much painstaking work. The items in the original pool were derived from surveys of the literature on the self concept and from analyses of self-reports filled out by patients. The final items were chosen by seven clinical psychologists who were required to classify each item according to its fit with the respective constructs. Only those items on which the seven clinicians had 100% agreement were included in the test.

The scale was standardized on a sample of 626 persons of varying age, sex, race and socio-economic status.

Validity

The TSCS has a two-fold nature, first is the measurement of the self concept, and second is the ability to differentiate normals from non-normals. Regarding the former, there is the problem of construct validity which faces all research on self-concept assessment, i.e., how does one select the criterion variable for self concept, it was assumed that changes in one's self-concept would take place in response to certain significant experiences such as hospitalization, psychotherapy, and membership in certain minority groups. The results of studies investigating these possibilities showed that all three experiences mentioned above did lead to significant changes in one's self-concept scores.

Regarding the latter aspects of its nature, i.e., its usefulness in discriminating various groups, the TSCS has its greatest strength. The manual cites cross-validation data which gives considerable evidence that the TSCS scale does a competent job. The empirical scales were found, on initial standardization, to discriminate among the following groups: normals, psychotics, neurotics, personality disorders, defensive positive persons, and integrated personalities.

The TSCS is judged to have good content validity according to the reviews of the test in the seventh Mental Measurement Yearbook (1972, #151). Furthermore, in the construction of the test, an item was retained in the Scale only if there was unanimous agreement by the judges that it was classified correctly.

In the present study the TSCS is used to measure the whole continuation of mental health, that is, both positive mental health and negative mental health or mental pathology. There is considerable validity for it as a measure of these two extremes of mental health:

i) Discrimination Between Patient and Non-Patient Groups. The authors report (TSCS Manual, 1965, p. 17) a study in which 369 psychiatric patients were significantly discriminated from 626 non-patients on all scales of the TSCS used in the present study

except SC. Several other studies (Congdon, 1958, Havener 1961; Piety, 1958; and Wayne, 1963) have demonstrated similar significant patient versus non-patient differences. Using Piety's data, the manual reports that Fitts was able to make a blind, patient-non-patient classification with 72% accuracy (p .001).

ii) Discrimination Between Patients, Non-Patient Norm Groups, and People Characterized as High in Personality Integration.

These three groups are compared by Fitts (1965). The means for all except the Self Criticism score show that the group high in personality integration, the PI Group, differ from the norm group in a direction opposite from that of the patient group.

Further group discrimination between patients, non-patient norm groups, and the high personality integration group, reported by Fitts (1965, p. 20) is demonstrated in Table 11 which shows how effectively each score discriminates in terms of cutoff points.

iii) Cross Validation for the Patient Versus Non-Patient Discrimination.

The left side of Table 11 shows the discrimination of 17 TSCS scores among the original groups. The right side of the table demonstrates that the original level of discrimination holds up quite well in four cross-validation groups.

TABLE 11
 Percent of Cases Exceeding Cutoff Points
 Patients and Non-Patients

Variable	Normal Limits	Original Validation Groups				Cross Validation Groups					
		Norm Group N=626	PI Group N=75	Psy Group N=100	PD Group N=100	OSU Students N=100	Ohio Patients N=125	RMHC Patients N=459	VA Patients N=100		
SC Total P	48 & 27	10	5	14	12	11	19	5	15	10	12
Row 1	421 & 318	17	4	43	47	46	2	14	41	44	41
Row 2	147 & 117	13	4	56	45	49	3	14	45	50	38
Row 3	144 & 87	10	0	22	27	27	2	5	25	27	22
Col. A	140 & 102	10	3	31	35	35	3	9	34	32	29
Col. B	88 & 63	10	6	44	22	43	9	13	41	35	38
Col. C	88 & 62	10	7	24	50	25	7	14	24	34	34
Col. D	81 & 56	10	6	33	31	44	8	10	24	33	21
Col. E	88 & 62	10	6	40	45	39	6	16	36	43	33
Total V	86 & 59	11	8	33	18	26	3	7	42	25	14
DP	65 & 21	10	4	16	18	12	6	3	28	17	20
GM	72 & 33	12	8	24	22	22	47	11	20	20	19
PD	88 & 114	10	6	53	43	43	5	8	26	40	33
N	63 & 101	12	0	30	58	32	4	11	40	32	36
PI	71 & 107	14	7	64	29	59	8	11	34	41	34
NDS	25 & 7	14	7	64	51	47	40	15	50	48	46
	10 & 0	20	10	93	76	71	61	21	78	81	79

Note: This data is summarized from Fletz, 1965, p. 20.

iv) Further Evidence for Discrimination Between Groups. Atchison (1958), using the Counseling Form of the Scale found statistically significant differences in the predicted direction between delinquents and non-delinquents on all variables except SC and D. In a similar study, Lefeber (1964) found significant differences in the expected direction between juvenile first offenders and repeated offenders.

Likewise, Boston and Kew (1964) in a study with unwed mothers found predicted differences on almost every scale. Similar studies with soldiers who could and who could not weather the stresses of Paratrooper training (Gividen 1959); and with college students who could and who could not cope with experimental stress (Schalon, 1968), show the TSCS Scales to discriminate successfully between those who were able to handle stress and those who were not able to handle stress.

v) Correlations with Other Measures of Mental Health and Mental Pathology

- a) Correlations with MMPI. McGee, 1960 correlated TSCS variables with scales of the MMPI using a sample of 102 psychiatric patients. Ninety-nine percent (99%) of the TSCS scales used in this study are significantly correlated with the MMPI scales and virtually all are in the expected direction.
- b) Correlations with Edwards Personal Preference Schedule. Sundby (1962) correlated TSCS variables with the EPPS using a sample of 66 high school students. These data indicate clear nonlinear relationships between the two tests.

- c) Correlations with Other Personality Measures. Table 12 presents correlations between the TSCS scales used in the present study (plus other TSCS scales) and a variety of other personality measures. The Inventory of Feelings referred to is an unpublished instrument developed by Fitts to measure positive and negative feeling states (see Manual of TSCS, p. 24). The measures employed by Hall are described in his unpublished doctoral dissertation completed in 1964. Table 12 is an excerpt of a more inclusive table prepared by Fitts (1965).

Thompson, 1972 presents Pearson product moment correlation coefficients between the TSCS Scales and five different measures of anxiety. All of the TSCS scores which measure positive mental health show a negative correlation with the anxiety scores, and almost all of these correlations are significant.

Reliability

Retest reliability, for all but one scale, ranges in the high .80's and low .90's. This is sufficient to warrant confidence in the TSCS' stability over time.

The internal consistency of the TSCS is considered to be quite high. This judgment is based on the large correlations obtained between scale scores and other measures such as the MMPI scales. Another reason for such an expectation is found in the intercorrelative matrix (Table 13) which shows high inter-correlations.

TABLE 12
Correlations Between Tennessee Self Concept Scale and Selected Personality Measures

Other Tests	SC	Tot. P	Row	Row	Row	Col. A	Col. B	Col. C	Col. D	Col. E	DP	GM	Empirical Scales	PI	NDS	
			1	2	3	1	2	3	4	5						6
Taylor Anxiety	.39	-.70	-.67	-.52	-.71	-.56	-.59	-.67	-.43	-.50	-.49	.42	.39	.46	-.17	.26
Cornell Medical Index	.38	-.56	-.57	-.42	-.61	-.45	-.46	-.58	-.28	-.41	-.49	.40	.38	.67	-.15	.43
Inventory of Feelings California F-Scale	-.27	.64	.66	.15	.71	.52	.43	.72	.34	.50	.29	-.58	-.04	-.60	-.02	-.37
	.02	-.21	-.33	.10	-.10	-.12	-.24	-.02	.04	-.21	.02	.24	.13	.16	.14	-.25
	N = 68,	r = ± .23 significant at .05, r = ± .30 significant at .01														
Agreement	(.30)	(.36)	(.40)	(.30)	(.37)	(.45)	(.26)	(.40)	(.37)	(.31)	(.37)	(.36)	(.24)	(.51)	(.48)	(.30)
Response Set	.24	-.19	-.01	-.26	-.24	.02	-.26	-.24	-.21	-.05	.02	.19	.23	.24	-.37	.24
Locus of Control	(.30)	(.46)	(.46)	(.33)	(.53)	(.38)	(.40)	(.45)	(.44)	(.43)	(.30)	(.59)	(.37)	(.55)	(.50)	(.50)
Extraversion	(.39)	(.56)	(.54)	(.47)	(.55)	(.39)	(.38)	(.55)	(.50)	(.64)	(.53)	(.51)	(.56)	(.66)	(.38)	(.51)
Neuroticism	(.07)	.53	.54	.45	.45	.29	2.7	.51	.40	.61	.47	-.50	-.36	-.60	.33	-.44
Maladjustment	(.27)	(.65)	(.53)	(.62)	(.68)	(.42)	(.58)	(.60)	(.65)	(.52)	(.44)	(.63)	(.67)	(.67)	(.46)	(.58)
	.10	-.59	-.45	-.52	-.62	-.27	-.50	-.52	-.54	-.47	-.32	-.57	.59	.58	-.46	.50
	(.35)	(.67)	(.57)	(.60)	(.65)	(.49)	(.71)	(.71)	(.63)	(.53)	(.49)	(.64)	(.59)	(.75)	(.64)	(.62)
	.16	-.64	-.55	-.57	-.63	-.39	-.39	-.68	-.63	-.45	-.40	.64	.52	.71	-.60	.62
	From Hall (1964).	N = 50, r = ± .28 significant at .05, r = ± .36 significant at .01														

Note: This table is summarized from Fitz, 1965, p. 27.

TABLE 13

Interrelation of Scores Used in Present Study

Sample: 102 Psychiatric Patients

	Total Positive	GM	PD	N	PI	NDS
SC	-.10	.10	.25 ^a	.21 ^a	-.16	-.00
Total Positive		-.93 ^a	-.86 ^a	-.89 ^a	.47 ^a	-.68
GM			.77	.79	-.56 ^a	.74
PD				.68 ^a	-.36 ^a	.52
N					-.46 ^a	.68
PI						-.73

^aSpuriously high because of overlapping items.

$r = .195$ significant at .05 level.

$r = .254$ significant at .01 level.

Data in the Table is summarized from Fitz, 1965, p. 16.

Note: This data is summarized from data provided by Fitz, 1965, p. 16.

Relevance to Present Study

The TSCS ranks among the better instruments combining group discrimination on measures of both positive and negative mental health. Its greatest strength lies in the ability of its empirical scales to screen for two of the essential elements of the present study, namely personality integration (PI) and pathology (GM, PD, N). Also, its Total Positive Score (TPOS), comprised of nine subscores, provides a reliable measure of an important aspect of positive mental health, that being level of overall self worth. In addition to these, it provides a purely empirical measure of level of personality unity by its NDS score which measures the number of deviant features in a person's self concept profile. This measure is comprehensive, encompassing not only the number of times one deviates but the degree to which one deviates. Furthermore, it takes into account both the variability within the person as well as the amount of deviation from the norm.

To summarize, in the present study the TSCS provides measures of the following variables:

- Personality Integration (PI)
- Personality Unity (NDS)
- Positive Mental Health (TPOS)
- Negative Mental Health (GM, PD, N, & SC).

5) Revised Social Readjustment Rating Scale

The Revised Social Readjustment Rating Scale is a 43 item, self-administered life change scale originally developed in 1967 by Holmes and Rahe. The assumption upon which it was developed is that any change in normal life patterns produce the necessity of a series of adjustments on the part of the individual. These adjustments are always stressful to some degree and the accumulation of a significant number of changes and adjustments will produce enough stress to bring on illness. The type of change, i.e., positive or negative, is not considered a critical factor but rather the extent to which the change is disruptive of established patterns is considered the important variable. For example, a move can be to a better or worse neighbourhood. Usually, one would think the move to the worse neighbourhood would be more stressful than the move to a better neighbourhood. However, the authors of the original scale, Holmes and Rahe purpose that because both types of moves demand equivalent amounts of adjustment, i.e., the making of new friends, the developing of new patterns of recreational, shopping, educational and religious behaviour; and perhaps new attitudes, norms and values as well, both will be equally stressful. This assumption has been given empirical support in a study by Dohrenwend in 1973 who found that the amount of change was more highly correlated with psychological symptoms than was the direction of change. Moreover several studies at the

Navy Research Unit have been reported by Rahe (1974) which have demonstrated that positive life change events uniformly show positive correlations with the development of illness.

The original life change instrument was not an attempt to assess directly the amount of readjustment required by certain types of events, but was an attempt to measure the amount of perceived change that different types of events produce. The original sample consisted of 394 subjects who were asked to assign numerical values to 43 commonly experienced events such as divorce, moving, beginning a new job, etcetera. These subjects were asked to determine how much, more or less, adaptation the respective experiences would require than a criterion variable, i.e., marriage. The criterion variable was assigned an arbitrary score of 500. If another experience was judged by the subject to be twice as serious, it was assigned a score of 1,000 or if it was judged to be half as serious, it was assigned a score of 250, etc. The values assigned to each event and averaged across subjects became the amount of change or the number of units of change needed to adjust to that particular event. The total of these averaged values yielded the total number of life change units perceived. The consensus concerning the degree of adjustment judged necessary to individual items is very high across sexes, age groups, social classes, races, education levels, and religious groups with 15/16 of the correlations in the .90's, the exception being .82 (Holmes and Masuda, 1974).

Fifteen cross-cultural comparisons between American, Japanese, Western European, Spanish, Negro American and Mexican American yielded 13/15 correlations in the high .70's or .80's. The two that were lower were .70 and .73. (Holmes and Masuda, 1974).

Validity

Construct validity was obtained by numerous studies which compared highly stressed groups to controls. Paykel, Myers, Dienelt, Klerman, Lindenthal, and Pepper (1974, pp. 136-142) found depressed patients to report significantly more (three times as many) life change events than did their matched controls. Paykel, Prusoff, and Myers (1974, pp. 142-147) found suicide attempters reported four times as many life change events than did the general population controls ($p < .01$), and that psychiatric patients report more life change events than well relatives. Furthermore, it is a well accepted fact that psychiatric symptomatology is significantly related to the level of social class (Myers, Lindenthal and Pepper, 1974, p. 174); however Myers et al (pp. 147-194) using a longitudinal study, demonstrated that when the number of life changes was held constant, the relationship between social class and symptoms disappeared. On the other hand, when social class was controlled for, the relationships between the number of life changes and psychiatric symptoms remained significant. These findings were

interpreted as evidence that the greater number of life change events, the more likely there is to be a substantial increase in an individual's psychiatric symptoms regardless of social class.

In addition, the range of psychological correlates to life changes is expanded by evidence from epidemiological research with community samples reported by Markush and Favero (1964, pp. 171-190), and by Myers and his colleagues (1974, p. 314). Markush and Favero found that relatively mild symptoms of depression as well as an index of general mental health were related to measures of stressful life events. Myers et al. showed that a slightly different index of mental health was also related to the stressfulness of life events.

Further construct validity is provided by the work of Holmes and Masuda (1974, pp. 49-72) who cite studies showing that life changes, as measured by the SRRS, correlate with a wide variety of stressful situations. These include heart disease, fractures, poor teacher performance, low college grade point average, and college football player's injuries.

Rahe (1974, pp. 82-83) reports further evidence that the 43 SRRS items can provide a valid measure of the number of life changes. From over 600 subjects with coronary heart diseases, data regarding recent life changes was gathered by two methods, by presenting the

SRRS items by questionnaire and asking subjects to mark which had occurred to them, and by interview. When the findings from the two methods were compared, the questionnaire was found to be a "valid although conservative estimate of the subjects' life change experience". Furthermore, it was reported that subjects "rarely if ever" falsified their questionnaires.

Reliability

Rahe (1974, p. 83) states that when the SRRS was scored for the number of life change events, the test-retest correlation was .90 over a time interval of two weeks. When the time interval was eight months, the correlations ranged between .64 and .74. This is expected for within such an extended time period as eight months the number of life changes experienced would be expected to vary considerably.

Regarding internal consistency, no coefficients are given.

When the forty-three life change events of the SRRS were assigned LCU (life change unit) weightings to reflect the degree of intensity of life change, highly consistent findings (correlations in the .80's and .90's) were obtained across cultures, sexes,

ages, social classes, and religious groups. Although these are not direct measures of reliability, adequate reliability may be inferred from such consistent results.

Relevance to the Present Study

The revised SSRS is relevant to the present study as the "most valid" measure of stress available in questionnaire form (Hough, Fairbank, and Garcia 1976, p. 72). Stress within this context is defined as the presence and effect of life changes in an individual's life. By using Clum's 1976 revision, three measures of stress will be obtained. The first is an objective measure of stress which is merely the total number of life changes in the past year. This will be referred to as the number of stress factors or simply as Stress Factors (S_1). The second measure (S_2) is a measure of the average level of stress experienced per stress factor when level of stress is rated on a 1 to 5 point rating scale; and, the third measure (S_3) is the accumulative amount of stress experienced in the past year. This score is obtained by simply adding the levels of stress experienced for each stress factor.

Using Clum's instructions, the subjects will be asked to indicate the number of times each life change has occurred to him in the past year, and the level of stress experienced for each occurrence rated on a 1 to 5 point scale.

Eight Self Report Items

The items outlined below are to be considered individually. They do not combine to comprise a scale.

Each item will be scored in such a way that scores of 4 and 5 indicate the positive outlook on life, while scores of 1 and 2 indicate a negative outlook on life. A neutral response receives a score of 3.

1. I really do not have much hope for the future.
 - a) this is definitely not so
 - b) probably not so
 - c) sometimes this is true, sometimes not
 - d) probably so
 - e) definitely so

2. I feel that I am loved.
 - a) definitely not true of me
 - b) tends not to be true
 - c) sometimes I do, sometimes I don't
 - d) tends to be true
 - e) definitely true

3. I know for certain that I have been born again.
 - a) definitely not true of me
 - b) tends not to be true
 - c) at times I think so, at times I don't
 - d) tends to be true
 - e) definitely true

4. I feel that I can never be completely forgiven for my past mistakes and wrongdoings.
- a) clearly true in my case
 - b) tends to be true
 - c) sometimes true, sometimes not
 - d) tends not to be true
 - e) definitely not true of me
5. I can honestly say that I dread the future.
- a) definitely not true of me
 - b) tends not to be true
 - c) at times it's true, at times it's not
 - d) tends to be true
 - e) clearly true in my case
6. Generally speaking, I do not regret my past.
- a) definitely not true of me
 - b) tends not to be true
 - c) at times it's true, at times it's not
 - d) tends to be true
 - e) definitely true
7. There are times when I actually abhor the present.
- a) almost never
 - b) sometimes
 - c) sometimes I do, sometimes I don't
 - d) usually
 - e) almost always
8. I consider myself a religious person.
- a) definitely true of me
 - b) tends to be true
 - c) partly true, partly not
 - d) tends not to be true
 - e) definitely not true

Validity

Four variables, derived from Allport's theory as to why intrinsic religion is expected to be therapeutic and thus enhance mental health, were measured by the subjects' self-report in response to direct questions enquiring about these variables. The subjects answered each question by rating themselves on a five point scale ranging from "definitely true of me" to "definitely not true of me". Each of the four variables had to do with the subjects' personal feelings at the time of testing and were not intended to necessarily reflect or coincide with objective reality. In other words, if a subject indicated that it was definitely true that he "felt" that he was loved, whether or not he actually was loved was not the concern but rather that he felt loved.

The four Self-Report variables are the following:

- i) Feeling Loved - feeling that you are loved.
- ii) Past Forgiveness - feeling that you can be forgiven for past mistakes or wrongs.
- iii) Present Meaning - feeling that you have found acceptable meaning in the present.

iv) Future Hope - feeling that you have hope for the future.

In order to establish confidence that the Self-Report items were indeed measuring what they purported to measure, a preliminary correlational study was done with a sample of 16 males. Table 14 presents the intercorrelation matrix for the four Self-Report variables from this study.

Upon examining the table, one will note that all but one of the correlations are significant and all of the correlations are in the expected direction indicating that the four variables, Loved, Past Forgiveness, Present Meaning and Future Hope are positively associated with each other. The strongest and most significant relationship was obtained between Present Meaning (acceptable meaning for the present) and Future Hope (the feeling of having hope for the future) ($p < .000$). The Pearson coefficient of the correlation between these two variables is .86 which, when interpreted, means that changes in one's level of meaning for the present account for approximately 74% of the variation in the amount of hope one has for the future. When this finding is considered together with the relationship between Past Forgiveness and Future Hope (which has itself a correlation of .62 indicating that changes in the degree to which one feels he can have forgiveness for his past mistakes and wrongs accounts for 38% of the variation in the amount of hope one has for the future) the impact

TABLE 14
Intercorrelation Matrix for the
Four Self-Report Variables
Sample: 16 Males

	Feeling Loved	Past Forgiveness	Present Meaning	Future Hope
Feeling Loved	1.00****			
Past Forgiveness	.25	1.00****		
Present Meaning	.44*	.46*	1.00****	
Future Hope	.42*	.62**	.86****	1.00****

*Significant at .05 level.
**Significant at .01 level.
***Significant at .000 level.

of the two variables, Present Meaning and Past Forgiveness, on Future Hope is very great. Together they account for 91% of the variation in the amount of Hope one has in the future. This is calculated by adding the amount of variation accounted for by Present Meaning (74%) to that accounted for by Past Forgiveness (38%) and subtracting out amount of interaction between Present Meaning and Past Forgiveness (21%) indicated by their correlation coefficient of .46. When a comparison is made between the amount of variation accounted for by Present Meaning and that accounted for by Past Forgiveness, Present Meaning accounts for approximately twice the amount of change in level of Future Hope.

Further validation is provided for the Self-Report measures in Table 15 which shows the correlation of the four Self-Report measures with six other measures which one would rationally expect to be related. As one can see from the table, all of the correlations, of which 22 of the 24 are significant, are in the positive direction which is the expected direction. This may not be readily apparent from the table for three of the six "Other" measures (Personality Disorder, General Maladjustment and Neurosis) are measures of psychopathology and it may appear that a positive correlation with these measures indicates a positive relationship between the Self-Report variables and pathology. This is not what is indicated but rather the reverse because each of the pathology measures are inverse scores, meaning the higher

TABLE 15
 Pearson Correlations Between the
 Four Self-Report Variables and
 Six Other Measures

(n = 16)

	Feeling Loved	Past Forgiveness	Present Meaning	Future Hope
<u>Tennessee Self Concept Scale</u>				
Total Positive Score	.50*!	.43*	.53*!	.47*
Personality Disorder ^a	.35	.41*	.59**	.51*!
General Maladjustment ^a	.51*!	.45*	.47*	.39
Neurosis ^a	.43*	.43*	.50*!	.50*!
<u>Life Regard Index</u>				
Life Framework Scale	.64***	.60***	.54*!	.61***
Life Fulfillment Scale	.70***	.55*!	.46*	.61***

^aThese are inverse scales.

*Significant at .05 level.
 *!Significant at .025 level.
 **Significant at .01 level.
 ***Significant at .005 level.

one scores, the less pathology he has. Thus, the positive correlations indicate that the Self-Report variables are each associated with an absence of pathology in terms of personality disorder, general maladjustment and neurosis, rather than with the presence of it. Furthermore, the four Self-Report variables are significantly correlated with all three measures of positive mental health in Table 15: Feeling Loved correlates .50 with the Total Positive Score of the Tennessee Self Concept Scale which is a measure of self worth, .64 with the Life Framework Scale of the Life Regard Index, which measures "direction and purpose in life", and .70 with the Life Fulfillment Scale of the Life Regard Index which is a measure of the degree of fulfillment one has found in his life. These three correlations present evidence that Feeling Loved is very important to one's general feeling of wellbeing, for according to these findings, it accounts for 25% of the variability in self worth, 41% of the variability in feeling "purpose and direction in life" and 49% of the variability in finding fulfillment in life.

The second Self-Report variable, Past Forgiveness, has a similar though smaller association with general wellbeing. Its positive correlations of .43, .60, and .55 with the Total Positive Score, the Life Framework Scale and the Life Fulfillment Scale respectively indicate that Past Forgiveness accounts for 18% of the variability in self-worth, 36% of the variability in "direction

and purpose in life", and 30% of the variability in life fulfillment. Similarly the third Self-Report variable, Present Meaning, shows correlations of .53, .54 and .46 on the same three positive mental health measures accounting for 28%, 29% and 21% of the variability in the measures of self worth, "direction and purpose life", and life fulfillment, respectively. Finally, the fourth Self-Report variable, Future Hope, follows in the same trend as the previous three Self-Report variables. Its correlations of .47, .61 and .61 account for 22%, 37% and 37% of the change in self worth, "direction and purpose in life", and fulfillment in life, respectively.

As can be seen from the preceding paragraphs, the results of the preliminary correlational study with the sample of 16 males, which are summarized in Tables 14 and 15, render considerable evidence for the validity of the four Self-Report items used in the present study. In order to confirm these findings and provide additional validation for the Self-Report variables, a similar correlational study was undertaken using the entire Working Group of the present research (see Table 16). The four Self-Report variables were correlated both with themselves and with twelve other variables thought to be related. Six of the "Other" variables were the three measures of psychopathology and the three measures of positive mental health used in the preliminary study with the 16 males. The six new measures included: two scores from the Tennessee Self Concept Scale, the Defensive Positive Score (DP)

TABLE 16
 Pearson Correlations Between the
 Four Self-Report Variables and
 Other Measures
 Working Group ($n = 211$)

	Feeling Loved (LOV)	Past Forgiveness (FG)	Present Meaning (PRES)	Future Hope (HP)
<u>Tennessee Self Concept Scale</u>				
TPOS	.38****	.36****	.44****	.45****
PD ^a	.33****	.26****	.39****	.40****
GM ^a	.39****	.38****	.44****	.48****
N ^a	.32****	.30****	.45****	.44****
DP	.25****	.21***	.34****	.27****
NDS ^a	-.32****	-.19***	-.26***	-.30****
<u>Life Regard Index</u>				
TOTFW	.32****	.31****	.33****	.52****
TOTFL	.31****	.26****	.39****	.43****
<u>Personal Orientation Inventory</u>				
TC	.36****	.35****	.33****	.36****
<u>Revised Social Readjustment Rating Scale</u>				
S ₁	-.19***	-.24***	-.39****	-.21***
S ₂	-.25****	-.28****	-.28****	-.21***
S ₃	-.26****	-.30****	-.40****	-.24***
<u>Self-Report Variables</u>				
LOV	1.00****	.21***	.43****	.31****
FG	.21***	1.00****	.33****	.38****
PRES	.43****	.33****	1.00****	.56****
HP	.31****	.38****	.56****	1.00****

^aThese are inverse scales.

***Significant at .005 level.
 ****Significant at .000 level.

which purports to measure the adequacy of a person's psychological defenses, and the Number of Deviant Signs Score (NDS) which is a measure of unity of personality in that it is simply a count of the number of deviant features in a person's self concept scores; the Time Competence Score (TC) from the Personal Orientation Inventory which is designed to measure the degree to which a person lives primarily in the present free from past guilts and regrets, or future fears and fantasies; and, three measures of stress from the Revised Social Readjustment Rating Scale, number of stress factors (S_1), average level of stress experienced per factor (S_2), and total amount of stress experienced (S_3).

The results of this second correlational study using the much larger sample, i.e., the entire Working Group consisting of 211 subjects, not only confirmed the preliminary findings but yielded highly significant correlation coefficients. All sixty of the correlations computed were significant and in the direction predicted; and, 54 of the 60 coefficients, or 90% were significant at the .000 level (see Table 16).

From the two correlational studies examined in this section involving both intercorrelations between the Self-Report measures and correlations with "Other Variables", one may conclude that there is considerable evidence to support the validity of the four Self-Report measures.

Relevance to Present Study

Six of the eight "Additional Items" are used to measure the four salient variables in Allport's rationale that pertain to intrinsic religion being therapeutic. Below is a list of these salient variables with the items used to measure them:

- i) Feeling Loved - Item 2
- ii) Past Forgiveness - Items 4 and 6
- iii) Present Meaning - Item 7
- iv) Future Hope - Items 1 and 5

The above four salient variables each have to do with the subject's personal feelings at the time of testing and are not intended to necessarily reflect objective reality. That is, they are not concerned with whether or not the subject actually is Loved, actually has forgiveness, etcetera but rather whether or not he feels that he is loved, that he can have forgiveness, and so on. For this reason, they are measured by the subjects direct self report and hereafter are identified by the name Self-Report Items.

The two "Additional Items" that were not included in the above six relating to the salient variables of Allport's rationale are numbers 8 and 3. Number 8 asks the subject whether or not he considers himself to be a religious person. This item was used to determine one aspect of the validity of the test returns. More specifically, a test return was considered invalid if it was completed by a "religious" person outside of the Christian faith; however, it would be accepted as valid if it was filled out by a person who classified himself as "nonreligious" but yet had an association with a church outside of the Christian faith: Item 8 was thus used to classify a prospective subject as religious or not religious in the preliminary stages of the examination of the test returns.

Item 3 was included in the "Additional Items" as part of a follow-up study to the present one.

CHAPTER VI
PRESENTATION OF RESULTS

Section 1: Results of the Hypotheses Testing, Presented
According to the Six Steps which Define
The Purpose of the Present Study

Step I

Hypothesis Confirmed. In order to test the hypothesis of Step I that intrinsic religionists can be differentiated from extrinsic religionists on the basis of mental health criteria, discriminant function analyses were used.

Discriminant function analysis is a method of maximizing the discrimination between groups by combining the variables in the manner in which they best discriminate between the groups. Applied to the present hypothesis, the discriminant function analysis weights and linearly combines the multiple mental health measures into a function, called the discriminant function, that maximizes the difference between intrinsic religionists and extrinsic religionists while minimizing the difference within each of the same two groups. In this way, intrinsic religionists are forced to be as statistically distant as possible from the extrinsic religionists. If the discriminant function does successfully differentiate intrinsics from extrinsics, the discriminant analysis can then be applied to assess the similarity of any given individual to each of the two groups, intrinsic and extrinsic; and on this

basis, can classify each person into the group he most resembles. The classification criteria thus established can later be used as rules for the placement of new individuals into one of the groups, however this latter process is not within the limits of the present study.

The hypothesis of Step I was tested by performing discriminant function analysis on three separate combinations of mental health measures. The first combination, described as General Mental Health included all 19 of the mental health measures, ten of which had to do with positive mental health:

- Time Competence (TC)
- Framework-Positive (FWPS)
- Fulfillment-Positive (FLPS)
- Total Positive Self Concept (TPOS)
- Personality Integration (PI)
- Personality Unity (NDS)
- Feeling Loved (LOV)
- Past Forgiveness (FG)
- Present Meaning (PRES)
- Future Hope (HP)

and nine of which had to do with negative mental health or psychopathology:

- Self-Criticism (SC)
- General Maladjustment (GM)
- Personality Disorder (PD)
- Neurosis (N)
- Life Framework Negative (FWNG)
- Life Fulfillment Negative (FLNG)
- Stress Factors (S_1)
- Stress per Factor (S_2)
- Total Stress (S_3)

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The second combination, described as Positive Mental Health was comprised of only the ten measures of positive mental health, and, the third combination, described as Negative Mental Health, consisted of only the nine measures of negative mental health.

For each of these three combinations of mental health variables, two discriminant function analyses, Direct and Wilks, were carried out on the total sample of intrinsic and extrinsic religionists when matched for age (the importance of matching subjects for age was indicated by Nelson's 1980 study). The Direct method was used to determine the power of the discriminating function when all of the mental health variables were included, and the Wilks' method was used to establish the most discriminating combination of mental health variables that best differentiated the groups. Table 17 summarizes the results of these six analyses.

Inspection of Table 17 reveals that there is one discriminant function (second column from left) for each of the six analyses. The reason for this is that the number of functions obtained is always the number of groups to be discriminated minus one which, in the present case, is two groups (intrinsic and extrinsic) minus one which equals one. The third column on the left in Table 17 shows the canonical correlation which, when squared, represents the amount of variance between the groups that the

TABLE 17

Discriminant Function Analyses
 Summary Data for Discrimination Between
 Intrinsic Religionists and Extrinsic Religionists
 on the Basis of Multiple Measures of General Mental Health,
 Positive Mental Health, and Negative Mental Health

Sample: 96 Males (Matched for Age)

Method	Disc. Func.	Canon. Correl.	Wilks' Lambda	Chi- Square	df	p	Correct Classif.
<u>General Mental Health, Positive & Negative (19 Measures)</u>							
Direct	1	.76	.43	72.29	19	.0000	88.54%
Wilks	1	.72	.48	66.81	8	.0000	88.54%
<u>Positive Mental Health (10 Measures)</u>							
Direct	1	.63	.61	44.12	10	.0000	79.17%
Wilks	1	.61	.62	43.69	4	.0000	80.21%
<u>Negative Mental Health (9 Measures)</u>							
Direct	1	.64	.59	47.31	9	.0000	81.25%
Wilks	1	.64	.60	47.20	6	.0000	79.17%

Disc. Func. means Discriminant Function
 Canon. Correl. means Canonical Correlation
 Chi-Square means Chi-Squared
 df means Degrees of Freedom
 p means Probability Level
 Correct Classif. means Correct Classification

discriminant function accounts for; and, the p column to the right indicates how significant that magnitude of group difference actually is.

Before examining the discriminating power of the individual discriminant functions for the six analyses in Table 17, a quick judgement of the validity of the hypothesis of Step I i.e., that intrinsic religionists can be differentiated from extrinsic religionists on the basis of mental health criteria can be determined by observing column p in Table 17. In all six analyses the p values indicate that intrinsics can be distinguished from extrinsics by their respective discriminant functions with an exceptionally high degree of confidence, the probability levels being .0000 in all six cases. When these probability levels are interpreted, it means that group differences of the magnitude found in each of the six analyses would not likely occur by chance variation alone even once if 10,000 similar investigations were undertaken. Thus, considering such great odds, the differences found between intrinsics and extrinsics are too great to be attributed to chance variation, and therefore this paper accepts the hypothesis of Step I that intrinsic religionists can be differentiated from extrinsic religionists on the basis of mental health criteria with a confidence level of $p = .0000$.

Having given a general summary of the results of testing the hypothesis of Step I in the preceding paragraph, now a more detailed examination of the results will be made. This will be done by looking at the two discriminant function analyses for each of the three separate combinations of mental health variables, i.e., General Mental Health (positive and negative variables); Positive Mental Health (positive variables only) and Negative Mental Health (negative variables only).

i) General Mental Health ($n = 96$) Table 17 shows that the two different types of discriminant analyses (Direct and Wilks) produced similar results, the main difference being that the Direct method which shows the degree of differentiation made between the groups using all 19 mental health variables, was able to account for 57% of variation between intrinsic religionists and extrinsic religionists whereas the Wilks' method, which selected out only the best combination of the 19 variables that would maximize the discrimination between the groups (it needed only 8) was able to account for 52% of the variation between the groups. These figures were arrived at by squaring the canonical correlations, .76 and .72 of the two analyses respectively. Both discriminant analyses produced functions which differentiated intrinsics from extrinsics with a confidence level of .0000. When these were applied to assess the similarity of any given individual to the

intrinsic and extrinsic groups and then used to classify* each person into the group he most resembled, both the Direct function and the Wilks' function were able to classify the total combined sample of intrinsics and extrinsics ($n = 96$) with 88.54% accuracy which means that 85 of the 96 subjects were correctly classified by each analysis.

Knowing now that intrinsic religionists can be differentiated from extrinsic religionists with approximately 89% accuracy and with a very high level of confidence (.0000) on the basis of 19 variables measuring General Mental Health, including both positive and negative mental health, the question that still remains to be answered is which group has the higher indices of General Mental Health.

*To avoid any misunderstanding, it should be pointed out that in this discriminant analysis, and in the ones to follow, discriminant function coefficients were calculated from a particular sample and then utilized to derive classification function coefficients for the same sample. The purpose in including such classification results is to demonstrate the ability of the measures to differentiate between the current groups and not to provide classification criteria for the classification of new individuals into one of the groups. Thus no cross-validation of the prediction accuracy was deemed necessary.

The answer to this question is not immediately apparent from the results of the discriminant function analyses due to the fact that the multiple mental health measures which are combined to form the discriminant functions are highly intercorrelated with each other in both positive and negative directions (refer back to Tables 14, 15 and 16). With multiple intercorrelated variables, the relationships possible among sets of variables are so complex that a variable with a positive correlation with the criterion variable can receive a negative weight in the discriminant function because it is functioning as a suppressor variable within that particular combination of variables making up the discriminant function, that is, it contributes to the discrimination primarily by removing error from another variable and consequently the algebraic sign in the discriminant function is contrary to the component for the same variable in a standardized contrast. Furthermore, with a different combination of variables, its sign and/or magnitude can be substantially different (see Nelson, 1980, pp. 127 for a demonstration of this). Thus, in interpreting the results it is necessary to keep in mind that the discriminant function allots weights to variables solely according to their contribution to an optimal differentiation of group means, and thus even when standardized, the resultant coefficients of the discriminant functions do not necessarily reflect the direction of the effect of the corresponding variable. They do not necessarily reflect the magnitude of the corresponding variable either for if

two variables are highly correlated and show similar values in the standardized contrast, the function will treat the variables effectively as one, and divide the weight between them. On the other hand, if a single variable with a contrast of the same magnitude is unrelated to other variables, it will be assigned all the weight and show a larger coefficient. A more complete discussion of the interpretation of discriminant function coefficients involving multiple interrelated variables is provided by Darlington (1968), Whitla (1968), Hope (1969) or Sanathanan (1975).

The preceding discussion explains why it is not readily apparent from the discriminant function coefficients which of the groups discriminated (intrinsic or extrinsic), obtained the better mental health scores. Thus, to determine this, the present researcher examined the means and the group differences on each individual mental health variable. Table 18 presents the means, standard deviations and group differences for intrinsic and extrinsic on each of the 19 variables comprising the measure of General Mental Health. Inspection of the table shows that on all of the 19 variables, the intrinsic scored in the direction of better mental health, that is, their means (\bar{m}) were higher on all variables for which higher scores were indicative of better health and their means were lower on all scores for which lower scores were indicative of the better mental health. The p column to the extreme right, which presents the significance levels for the

Table 18

Difference Between Intrinsic Religionists and
Extrinsic Religionists on the General Mental Health Variables
Comprising the Discriminant Functions

Sample: 96 Males

Mental Health Variables	Intrinsic		Extrinsic		Wilks' Lambda	F	p
	<u>m</u>	<u>SD</u>	<u>m</u>	<u>SD</u>			
<u>Positive Mental Health</u>							
TC	17.29	2.71	16.29	2.91	.98	2.22	.1397
FWPS	30.77	3.34	25.44	4.46	.69	41.99	.0000
FLPS	28.28	3.64	25.94	4.26	.92	8.46	.0045
TPOS	360.08	30.70	345.63	35.76	.96	4.39	.0388
PI	12.96	3.68	11.10	3.81	.94	5.87	.0178
NDS	10.33	10.77	11.08	12.46	.99	.99	.7531
LOV	4.67	.81	4.37	.94	.97	2.67	.1057
Fg	8.25	1.42	7.71	1.75	.97	2.77	.0993
PRES	4.67	.63	4.29	.80	.94	6.53	.0122
HP	9.58	1.03	8.81	1.54	.92	8.33	.0045
<u>Negative Mental Health</u>							
SC	29.96	2.71	34.83	2.91	.81	13.97	.0003
GM	98.90	8.02	95.63	9.43	.97	3.35	.0702
PD	79.44	11.24	73.92	10.88	.94	5.98	.0164
N	85.15	10.53	82.97	12.18	.99	1.03	.3126
FWNG	31.17	3.34	27.46	4.46	.82	21.24	.0000
FLNG	27.40	4.61	24.31	5.66	.92	8.56	.0043
S ₁	11.13	7.88	17.88	11.84	.90	10.82	.0014
S ₂	2.14	.84	2.86	.61	.80	23.33	.0000
S ₃	26.19	23.74	51.69	37.04	.85	16.13	.0001

Note: Variables underlined have inverse scales.

group differences on each of the mental health variables, shows that 13 of the 19 comparisons reached a significance level of .05 or less, and that nine of the 13 significant group differences were highly significant with a probability level of .005 or less. Five were actually less than a .000 level. From these findings it is clear that the intrinsic religionists consistently obtained the superior mental health scores. Thus, one may conclude from the analysis that intrinsic religionists can clearly be differentiated from extrinsic religionists on the basis of General Mental Health criteria with the intrinsic consistently scoring in the direction of better mental health.

When the Wilks' method of discriminant function analysis was used to select out only the best combination of the 19 general mental health variables that would maximize the discrimination between the groups, the following eight variables were selected:

Self Criticism (SC)
 Framework-Positive (FWPS)
 Framework-Negative (FWNG)
 Personality Integration (PI)
 Personality Unity (NDS)
 Stress Factors (S_1)
 Stress Per Factor¹ (S_2)
 Total Stress (S_3)

Of this combination of the eight best discriminating variables, all but one of them (Self-Criticism is the exception) represent the essential elements of Allport's theory as to why intrinsic religion is expected to be preventative of mental illness and thus

conducive to mental health. To summarize briefly, Allport's theory states that the life goals of the intrinsic facilitate the processes of personality integration and personality unification which in turn makes the intrinsic more resistant to stress. In the above analysis, the first element of Allport's theory, life goals, is measured by two scales, the Framework-Positive Scale (FWPS) and the Framework-Negative Scale (FWNG); the second element, personality integration, is measured by the Personality Integration Score (PI); the third element, personality unity, is measured by the Personality Unity Score (NDS); and, the fourth element, Stress, is measured by three stress scores (S_1 , S_2 and S_3).

The finding that the Wilks' stepwise discriminate function analysis selected out of 19 mental health variables, as the combination of variables that best discriminate intrinsics from extrinsics, precisely the combination of variables that Allport considers to be most salient to his preventative theory provides strong support for Allport's theory that intrinsic religion is conducive to mental health. Further support is added by the high level of discrimination demonstrated by the Wilks' discriminant function comprised of these variables, plus only one additional measure (S_c), for it accounted for 52% of the variation between the groups (this is determined by squaring the canonical correlation of .72); it was able to discriminate intrinsic religionists from extrinsic with a

confidence level of $p = .0000$; and, it was able to correctly classify 85/96, or 89%, of the subjects into their respective groups. This finding will be referred to later in Step III.

ii) Positive Mental Health ($n = 96$) The multiple measures of general mental health were subdivided into those that represented desirable aspects of mental health, these being classified as Positive Measures of Mental Health; and, those that represented undesirable aspects of mental health, these being classified as measures of Negative Mental Health. There were ten in the former classification and nine in the latter. This section examines the results of the two discriminant function analysis, Direct and Wilks', using only the ten former measures classified as Positive Mental Health. A summary of these results is provided in the middle part of Table 17. Referring back to that table, one may observe that both methods of discriminant analysis, Direct using all ten variables and Wilks' using a combination of the most discriminating variables, were able to differentiate intrinsics from extrinsics with a confidence level of .0000 and with a classification accuracy of 79% and 80% for the two methods respectively. Seventy-six of the 96 subjects were correctly classified by the Direct method using all 10 measures, and 77/96 were correctly classified by the Wilks method using only the following four measures:

TSCS Total Positive Score (TPOS)
Framework-Positive (FWPS)
Personality Integration (PI)
Personality Unity (NDS)

The canonical correlations of .63 and .61 obtained by the Direct and Wilks' methods (see Table 16), when squared, indicate that the two discriminant functions were able to account for 40% and 37% of the variation between the groups respectively.

iii) Negative Mental Health (n = 96) The two discriminate function analyses, Direct and Wilks, using the Negative Mental Health variables to differentiate intrinsic religionists from extrinsic religionists are summarized in the bottom section of Table 16. As with the Positive Mental Health variables, both the Direct and Wilks' methods were able to successfully differentiate the intrinsics from the extrinsics using only negative mental health criteria with a high level of confidence ($p = .0000$). The classification accuracy was similarly high being 81% and 79% for the two methods respectively. Seventy-eight of the 96 subjects were correctly classified by the Direct method using all nine negative mental health variables to make the classification, and 76/96 were correctly classified by the Wilks' method using only the following six best discriminating variables.

Self Criticism (SC)
Neurosis (N)
Framework-Negative (FWNG)
Stress Factors (S_1)
Stress Per Factor¹ (S_2)
Total Stress (S_3)

The canonical correlations of .64 and .64 (see Table 16) obtained by both the Direct and the Wilks' method, when squared, indicate that each method of analysis produced functions that were able to account for 41% of the variation between intrinsics and extrinsics.

Step I Conclusions: Having now inspected the results from six discriminant function analyses computed to test the hypothesis of Step I, the following conclusions can be made. On multiple measures of General Mental Health, including both positive and negative aspects of mental health, intrinsic religionists could be clearly differentiated from extrinsic religionists and on each variable the intrinsic scored in the direction of superior mental health. Seven of the eight most discriminating General Mental Health measures used to make this differentiation were precisely those that represent the salient variables of Allport's theory as to why intrinsic religion is expected to be preventative of mental illness. Furthermore, when the positive and negative components of General Mental Health were considered independently, intrinsic religionists could be clearly differentiated from extrinsic religionists in terms of both Positive Mental Health and Negative Mental Health. Thus, one may conclude the following two points with regards to the hypothesis of Step I:

- It is reasonable to accept the hypothesis that intrinsic religionists can be differentiated from extrinsic religionists on the basis of mental health criteria.
- Without exception, the intrinsic religionists score in the direction of superior mental health.

Step II

Hypothesis Confirmed. As with the hypothesis of Step I, in this step discriminate analyses were used to determine if intrinsic religionists could be differentiated from nonreligionists on three combinations of mental health criteria, namely General Mental Health (19 variables), Positive Mental Health (10 variables) and Negative Mental Health (9 variables). The two groups were matched for age as were the groups in Step I. Table 19 which summarizes the outcome of these analyses, shows that for all six discriminations, the discriminant function was able to differentiate the intrinsic from the nonreligionists, with significant levels ranging from $<.05$ to $.0000$. Thus, since the differences between the groups are too great to be attributed to chance, the smallest probability indicating that it would occur less than five times in 100 similar experiments by random variation, it is reasonable to accept the hypothesis that intrinsic can be differentiated from nonreligionists on the basis of mental health criteria.

Having made this general conclusion, we will now examine the discriminations on the three different combinations of mental health variables (General Mental Health, Positive Mental Health, and Negative Mental Health) to see how precise the discriminations are, what combination of variables discriminate best, and which of the groups discriminated scored in the direction of better mental health.

TABLE 19

Discriminant Function Analyses Summary Data for
 Discrimination Between Intrinsic Religionists and
 Nonreligionists on the Basis of Multiple Measures
 of General Mental Health, Positive Mental Health,
 and Negative Mental Health

Sample: 34 Males

	Method	Disc Func	Canon Concl	Wilks' Lambda	Chi Square	df	p	Correct Classif.
General Mental Health	Direct	1	.93	.13	45.09	19	.0007	100.00%
	Wilks'	1	.86	.26	37.89	8	.0000	97.06%
Positive Mental Health	Direct	1	.70	.51	18.40	10	.0491	85.29%
	Wilks'	1	.69	.52	19.24	5	.0017	82.35%
Negative Mental Health	Direct	1	.75	.43	23.20	9	.0058	91.18%
	Wilks'	1	.62	.61	14.93	3	.0019	79.41%

i) General Mental Health. Table 19, upper section, presents the summary data for both the Direct and the Wilks' discriminant function analyses. One will observe that both methods produced highly discriminating discriminant functions. Using all 19 General Mental Health variables, the Direct method differentiated intrinsic religionists from nonreligionists with a confidence level of .0007 and a classification accuracy of 100%. This means that all 34 subjects were correctly classified into their respective groups, intrinsic or nonreligionist. With such high discriminatory ability the question to be answered is which group obtained the better mental health scores. To determine this, the experimenter prepared Table 20 which presents the means and standard deviations of the two groups on each of the 19 mental health variables. The table also gives the Univariate F -ratios and the significance levels for group differences.

The greatest difference between intrinsic religionists and nonreligionists is on the Negative Mental Health variables with significant differences on the following variables:

Self Criticism (SC)
Personality Disorder (PD)
Framework Negative (FWNG)
Stress Per Factor (S_2)
Total Stress (S_3)

TABLE 20

Difference Between Intrinsic Religionists and
Nonreligionists on the General Mental Health Variables
Comprising the Discriminant Function

Sample: 34 Males

Mental Health Variables	Intrinsic		Nonreligionists		Wilks' Lambda	F
	<u>m</u>	<u>SD</u>	<u>m</u>	<u>SD</u>		
<u>Positive Variables (10)</u>						
TC	17.71	2.64	16.53	3.22	.96	1.36
FWPS	31.41	2.43	26.65	4.83	.71	13.19***
FLPS	28.35	3.37	26.52	3.97	.94	2.08
TPOS	371.00	20.41	355.76	41.21	.94	1.87
PI	13.53	3.64	11.29	2.76	.89	4.07*
NDS	6.59	6.04	9.41	9.89	.97	1.01
LOV	4.71	.59	4.65	.61	.99	.82
FG	8.29	1.45	7.94	1.64	.99	.44
PRES	4.53	.72	4.35	.70	.98	.53
HP	9.58	1.00	9.41	1.00	.99	.26
<u>Negative Variables (9)</u>						
SC	28.88	5.73	34.41	3.87	.75	10.86***
<u>GM</u>	101.35	6.99	97.88	9.25	.95	1.52
<u>PD</u>	82.65	6.03	75.94	10.63	.86	5.12*
<u>N</u>	89.65	6.87	88.71	13.07	.99	.69
<u>FWNG</u>	31.24	3.27	28.53	2.92	.83	6.48**
<u>FLNG</u>	27.59	3.36	26.29	4.75	.97	.84
S ₁	13.41	6.31	15.12	7.68	.98	.50
S ₂	1.95	.73	2.69	.82	.81	7.75**
S ₃	27.41	17.23	42.12	25.16	.89	3.95*

Note: Underlined variables have inverse scale.

*Significant at .05 level.

**Significant at .01 level.

***Significant at .005 level.

****Significant at .001 level.

On the Positive Mental Health variables, intrinsic differers significantly to nonreligionists on the following variables:

Framework-Positive (FWPS)
Personality Integration (PI)

Careful study of Table 20 (taking into consideration the inverse scales) shows that on all seven of the significant group differences, the intrinsic scored in the direction of better mental health. With regard to the remaining variables on which the group differences did not reach a significant level, Table 20 reveals that without exception the means of the intrinsic are higher on the variables for which higher scores are indicative of better mental health and lower on the variables for which lower scores are an indication of better mental health.

Thus, one may conclude that intrinsic religionists can clearly be differentiated from nonreligionists by a discriminant function comprised of the 19-measures of General Mental Health with the intrinsic religionists consistently scoring in the direction of better mental health ($p = 0007$; correct group classification = 100%).

When the Wilks' method of discriminant function analysis was used to determine the combination of the most discriminating variables, the following eight were selected:

Life Framework-Positive (FWPS)
Life Fulfillment-Positive (FLPS)
Total Positive Self-Concept (TPOS)
Personality, Unity (NDS)
Past Forgiveness (FG)
Self-Criticism (SC)
Neurosis (N)
Total Stress (S_3)

Five of these eight most discriminating measures (FWPS, FLPS, NDS, FG, and S_3) represent five of the eight salient variables predicted by Allport's rationale.

By combining the above eight measures, Table 19 reveals that the Wilks' discriminant produced a function which discriminates between intrinsics and nonreligionists with a confidence level of .0000. The canonical correlation of this discriminant function of .86, when squared, indicates that the function accounts for 74% of the variation between the groups. When this discriminant function was used to classify subjects, it could classify 33 of the 34 subjects into their respective groups. This reflects a 97% accuracy level.

The conclusions for the Wilks' method of discriminant analysis are similar to those for the Direct method of analysis, i.e., that the intrinsic religionists can clearly be differentiated from nonreligionists with the intrinsic consistently scoring in the direction of better health on each of the eight most discriminating variables.

ii) Positive Mental Health. If one refers back to Table 19, middle section, he will observe that intrinsic were successfully differentiated from nonreligionists on the basis of Positive Mental Health alone (excluding measures of Negative Mental Health). Using all 10 measures of Positive Mental Health (see Table 20 for a list of these) the Direct method produced a function that could account for 49% (canonical correlation squared) of the variation between the groups; that could discriminate between the groups with a .05 level of confidence; and, that could classify subjects into their respective groups with 85% accuracy. Twenty-nine of the 34 subjects were correctly classified on the basis of these 10 measures of Positive Mental Health; and, since these 10 measures of Positive Mental Health represent a subset of the 19 General Mental Health variables discussed earlier in this step, we know that the intrinsic subjects consistently scored in the direction of better mental health.

When Wilks' method of discriminant analysis was used to select out the combination of Positive Mental Health variables that best discriminated between intrinsic religionists and nonreligionists, only five variables were needed to differentiate between the groups with a probability level of less than .002 and a classification accuracy of 82% (see Table 19, middle). Twenty-eight of the 34 subjects were correctly classified. The five variables that were used in this function produced a canonical correlation, which when squared, accounted for approximately 48% of the variation between the groups. The five best-discriminating variables were the following:

Life Framework-Positive (FWPS)
 Personality Integration (PI)
 Past Forgiveness (FG)
 Future Hope (HP)
 Total Positive Self-Concept (TPOS)

The first four measures represent four of the salient variables in Allport's rationale.

iii) Negative Mental Health. The bottom section of Table 19 presents the discriminant analysis summary data for the differentiation of intrinsic from nonreligionists on the basis of nine measures of Negative Mental Health. A list of these nine measures is shown in Table 20. As with the analyses using only

Positive Mental Health measures, both the Direct and Wilks' method were able to clearly differentiate intrinsic religionists from nonreligionists. The Direct method, using all nine Negative Mental Health variables, produced a function that accounted for 56% of the variation between the groups (canonical correlation squared). It discriminated intrinsic religionists from nonreligionists with a probability level of .0058, and correctly classified 91% or 31 or 34 subjects into their respective groups.

The Wilks' method was also able to differentiate between the groups with a high level of confidence, $p .002$, by combining only the following three variables:

Self Criticism (SC)
Life Framework-Negative (FWNG)
Total Stress (S_3)

The Function thus produced accounted for 38% (canonical correlation squared) of the differences between the groups and successfully classified 79%, or 27 of the 34 subjects.

Thus, with both the Direct and Wilks' methods, intrinsic religionists were significantly differentiated from nonreligionists on measures of Negative Mental Health and since these measures are a subset of

General Mental Health, we know that the intrinsic group scored in the direction of better mental health on all of the Negative Mental Health variables. The reader will see that this was determined by examining the means of each group in Table 20 when the results for General Mental Health were presented.

Step II Conclusions: Having now examined the results from the six discriminant function analyses computed to test the hypothesis of Step II, the following conclusions can be drawn. On multiple measures of mental health, including measures of both positive and negative mental health, intrinsic religionists can be clearly differentiated from nonreligionists with the intrinsic scoring, without exception, in the direction of better mental health. Thus, for Step II, the following two points can be stated:

- It is reasonable to accept the hypothesis that intrinsic religionists can be differentiated from nonreligionists on the basis of mental health criteria.
- Without exception, the intrinsic religionists score in the direction of superior mental health.

Step III

Hypotheses Confirmed. The two chief hypotheses of the present investigation were tested in this step. Both were hypotheses derived from Allport's theoretical rationale as to why intrinsic religion is expected to be conducive to mental health. The two previous steps, Step I and II, were preliminary steps intended to provide the foundation for this present step, and since they clearly showed that intrinsic religionists consistently had superior mental health scores to both extrinsic religionists (Step I) and nonreligionists (Step II), it is appropriate to proceed with Step III which statistically examines Allport's rationale for the superior mental health scores obtained by the intrinsic. The reader will recall that Allport purports that the intrinsic faith is conducive to mental health and that it promotes mental health by being both preventative and therapeutic. How it becomes preventative and therapeutic is clearly explained by Allport. From his explanation eight salient elements have been identified and extracted to be subjected to a statistical analysis to determine if the salient variables predicted by his rationale do, in fact, discriminate intrinsic from the comparison groups. Thus, the present step tests two related hypotheses:

- i) Intrinsic religionists can be differentiated from extrinsic religionists on the eight salient variables predicted by Allport's rationale.

- ii) Intrinsic religionists can be differentiated from nonreligionists on the eight salient variables predicted by Allport's rationale.

Both hypotheses were tested by using the two methods, Direct and Wilks, of discriminate function analyses used in Steps I and II. As in the first two steps, subjects were matched for age for all analyses. (This applies to all future analyses of Steps IV to VI as well.)

Two further points need to be made, first that the subjects of Steps I and II are the same subjects used to test the present hypotheses; and second, that all except two (TOTFW and TOTFL) of the salient variables of Allport's rationale have been included in the previous two steps among the General Mental Health variables. Hence, if the discriminations are successfully made in testing the present two hypotheses, the group scoring in the direction of better mental health will have already been determined for all variables except TOTFW and TOTFL in Steps I and II and we will be able to conclude that the superior scores consistently belong to intrinsic religionists.

Regarding the two new variables TOTFW and TOTFL, they are merely the total scores of the two Life Framework Scales (FWPS and FWNG) and of the two Life Fulfillment Scales (ELPS and FLNG) respectively, included in Steps I and II. Thus, they operate in

the same manner as did the two subscales of which they are comprised. Univariate F-Ratios indicate that the intrinsics score in the direction of better mental health both compared to extrinsics ($p = .0000$ and $.002$ for TOTFW and TOTFL respectively) and compared to nonreligionists ($p = .001$ for TOTFW; the p level (.20) is not significant for TOTFL but the intrinsics obtain the higher mean).

Below the results for each hypothesis of Step III will be presented separately.

i) Hypothesis re Intrinsics and Extrinsics ($n = 96$).

Table 21 summarizes the results for six discriminant analyses used to determine if intrinsics can be differentiated from extrinsics on the eight salient variables predicted by Allport's rationale which are the following:

Life Goals	-	(TOTFW)
Personality Integration	-	(PI)
Personality Unity	-	(NDS)
Stress	-	(S_1, S_2, S_3)
Feeling Loved	-	(LOV)
Past Forgiveness	-	(FG)
Present Meaning	-	(TOTFL, PRES, TC)
Future Hope	-	(HP)

TABLE 21

Discriminant Function Analyses Summary Data for
 Discrimination Between Intrinsic Religionists and
 Extrinsic Religionists on the Basis of the Salient Variables
 Predicted by Allport's Theory (Preventative and
 Therapeutic, Preventative Alone, Therapeutic Alone)

Sample: 96 Males

	Method	Disc Func	Canon Concl	Wilks' Lambda	Chi Square	df	p	Correct Classif.
Preventative and Therapeutic	Direct	1	.70	.51	59.61	12	.0000	81.25%
	Wilks'	1	.70	.51	60.65	7	.0000	82.29%
Preventative Alone	Direct	1	.69	.52	59.64	6	.0000	84.38%
	Wilks'	1	.69	.52	59.64	6	.0000	84.38%
Therapeutic Alone	Direct	1	.36	.87	12.70	6	.0481	64.58%
	Wilks'	1	.35	.88	12.26	2	.0022	64.58%

The first four are preventative variables, the second four therapeutic. Twelve scores were used to measure these eight salient variables, six for the preventative variables and six for the therapeutic variables. These are indicated in the right column above.

The first two analyses summarized in Table 21 are of main concern to the present hypothesis because they included all eight salient variables of Allport's rationale. The remaining four analyses merely determine the relative contribution of the preventative and therapeutic variables to the discrimination.

Upon examination of the results of the Direct discriminant analyses in Table 21, row 1, using all eight salient variables of Allport's rationale (represented by 12 scores), one will observe a highly significant discrimination between intrinsic religionists and extrinsic religionists ($p = .0000$). This means that the difference between intrinsics and extrinsics on the eight salient variables is so large that if 10,000 similar experiments were carried out, one would not expect to find a difference of so great a magnitude by chance variation alone. The function that was developed by combining the eight salient variables to make this high level of differentiation, produced a canonical correlation of .70, which when squared, indicates that it could account for 49% of the differences between intrinsic religionists and extrinsic

religionists. Furthermore the function correctly classified 81%, or 78/96, of the intrinsics and extrinsics into their respective groups.

When the Wilks' method was used to select out the most discriminating combination of the eight salient variables, Table 21 (row 2) reveals that a function was produced which made an equally significant differentiation between the groups ($p = .0000$) using only five of the eight salient variables. These were:

Life Goals (TOTFW)
 Personality Integration (PI)
 Personality Unity (NDS)
 Stress (S_1, S_2, S_3)
 Past Forgiveness (FG)

This function was able to account for 49% of the variation between the groups and was able to correctly classify 82%, or 79/96 of the subjects.

When one compares the present list of the five most discriminating variables selected by Wilks' to the previous full list of Allport's eight salient variables, he will observe that four (the first four) of the five most discriminating variables are precisely the four from Allport's rationale for intrinsic religion being preventative of mental illness. The fifth discriminating variable, "Past Forgiveness", is part of his rationale for religion as therapeutic.

Two questions are raised by these findings. They are the following: Since Allport's four "preventative variables" are clearly the most discriminating of the eight salient variables predicted by his rationale, how well do they discriminate between the groups without the help of any of the "therapeutic variables"; and, can the "therapeutic variables" discriminate between the groups without the aid of the "preventative variables"?

The answer to both of these questions is found in Table 21. The first question regarding the independent contribution of the four "preventative variables" (measured by six scores) is answered by the results summarized in the third row of Table 21. There we see that the Direct discriminant function, produced by optimally combining all of the preventative measures, was as able to discriminate intrinsics from extrinsics as was the function which combined both the preventative and therapeutic measures (Table 21, row 1) for it discriminated the groups with a .0000 level of confidence accounted for 48% of the variation between the groups, and correctly classified 84%, or 81/96 subjects into their respective groups.

Concerning this same discrimination, namely that using only "preventative variables", row 4 of Table 21 shows what happened when the Wilks' method was used to select out the most discriminating combination of measures from among the preventative variables.

Every single one of the preventative measures was needed to maximize the differentiation between the groups. As a result, the findings of the Wilks' analysis are identical to those using the Direct method. This explains the identical results for Direct and Wilks reported in rows 3 and 4 of Table 21.

The second question raised regards the contribution of Allport's "therapeutic variables" to the distinction between intrinsics and extrinsics. Table 21, bottom two rows, answers this question. As can be seen by the p levels of .0481 and .0022, the two groups can be significantly discriminated on the basis of Allport's "therapeutic variables" alone. Approximately 65%, which is 62 of the 96 subjects, were correctly classified using a function derived from the "therapeutic variables" alone. Seventy-five percent of the intrinsics were correctly identified.

When the Wilk's method was used to determine the combination of the most discriminating variables, two variables were selected out as maximizing the distinction between the groups. These were Total Life Fulfillment (TOTFL) and Future Hope (HP). Together they could differentiate between intrinsics and extrinsics with a .002 level of confidence (Table 21)

with 64.58% of the subjects being correctly classified on the basis of the two "therapeutic variables" (Life Fulfillment and Future Hope).

When one compares the results for the discriminant analyses using only the "preventative variables" ($p = .0000$; total classification 84%) to the results using only the "therapeutic variables" ($p = .0481$ & $.0022$; total classification 64%), one will easily observe that the "preventative variables" of Allport's rationale contribute more to the differentiation between intrinsic religionists and extrinsic religionists than do the therapeutic variables.

ii) Hypothesis re Intrinsic and Nonreligionists ($\eta = 34$).

This section presents the discriminant analyses results for the differentiation of intrinsic from nonreligionists on the basis of the salient variables derived from Allport's rationale (see Table 22). The present hypothesis is basically examining the same relationship as did the first hypothesis of this section but with a different sample. The first hypothesis predicted a differentiation between "intrinsic and extrinsic" on the basis of the salient variables of Allport's rationale; the present hypothesis predicts a similar differentiation but between "intrinsic and nonreligionists".

TABLE 22

Discriminant Function Analyses Summary Data for
 Discrimination Between Intrinsic Religionists and
 Nonreligionists on the Basis of the Salient Variables
 Predicted by Allport's Theory (Preventative and
 Therapeutic, Preventative Alone, Therapeutic Alone)

Sample: 34 Males

	Method	Disc. Func.	Canon Correl.	Wilks' Lambda	Chi- Square	df	p	Correct Classif.
Preventative and Therapeutic	Direct	1	.73	.47	19.84	12	.0702	85.29%
	Wilks'	1	.70	.51	20.05	4	.0005	88.24%
Preventative Alone	Direct	1	.64	.58	15.56	6	.0163	82.35%
	Wilks'	1	.64	.59	16.04	3	.0011	82.35%
Therapeutic Alone	Direct	1	.26	.93	2.13	6	NS	55.88%
	Wilks'	1	.22	.95	1.61	1	NS	55.88%

Upon inspecting Table 22 one will observe three things.

First he will notice that the first four discriminant functions successfully differentiated the intrinsics from the nonreligionists. This is indicated by the high degree of classification accuracy ranging from 82% to 88%. The first two of these successful discriminations had access to all of Allport's salient variables including both preventative and therapeutic variables. The second two had access to his preventative variables only. No differentiation was made between the groups using Allport's therapeutic variables only.

Second, the reader will observe that although it is clear by the high level of classification accuracy (85%) that the first Direct analysis (Table 22, row 1) was successful in discriminating between the groups, the p level of .0702 does not recognize this differentiation as significant. The reason why this particular p level appears not to adequately reflect the level of group differentiation is thought to be due to the small sample size ($n = 16$) compared to the relatively large number of variables entered into the analysis (12) for in this analysis there were too few cases in each group for the inverse matrices to be non-singular. Please refer to Hope (1969) and Morrison (1969) for a more detailed discussion of this phenomenon. The remaining analyses shown in Table 22 did not suffer from this same limitation because of the smaller number of variables being used to make the discriminations.

The third point that the careful observer will notice from Table 22 is that the group discriminations made by the Wilks method in terms of correct classification and p levels are as good or better than those made using the Direct. For this reason the remainder of the presentation of the results for the present hypothesis will focus on the Wilks' results.

The reader will recall that the results presented for the present hypothesis are basically examining the same relationship as did the first hypothesis of this same step, namely whether intrinsics can be differentiated from nonintrinsics on the basis of the eight salient variables of Allport's rationale. The difference between the first and second hypotheses is that the first hypothesis compares intrinsics to extrinsics whereas the present hypothesis compares intrinsics to nonreligionists. There is a high degree of replication and similarity in the results for these two hypotheses, and to demonstrate this the Wilks' results for the present hypothesis will be presented in a summary table which provides an immediate comparison to the results of the same analysis with the first sample of "intrinsics and extrinsics". This is accomplished in Table 23.

Inspection of Table 23 reveals that the results for this second sample are very similar to those for the first sample. Intrinsics are clearly differentiated from nonreligionists when

TABLE 23

Wilks' Discriminant Function Analysis Summary
for Two Samples on the Basis of the
Salient Variables Predicted by Allport's Theory

	Groups Compared	Disc Func	Canon Concl	Wilks' Lambda	Chi Square	df	p	Correct Classif.
Preventative and Therapeutic	I and E ($n = 96$)	1	.70	.51	60.65	7	.0000	82%
	I and Non ($n = 34$)	1	.70	.51	20.25	4	.0005	88%
Preventative Only	I and E ($n = 96$)	1	.69	.52	59.64	6	.0000	84%
	I and Non ($n = 34$)	1	.64	.59	16.04	3	.0011	82%
Therapeutic Only	I and E ($n = 96$)	1	.35	.88	12.26	2	.0022	65%
	I and Non ($n = 34$)	1	.22	.95	1.61	1	NS	56%

I stands for Intrinsic Religionists
E stands for Extrinsic Religionists
Non stands for Nonreligionists

all of the salient variables of Allports rationale (both preventative and therapeutic) are available for the analysis (compare rows 1 and 2). In the first sample, the function required seven measures to maximize the differentiation between the groups; in this second sample it required only four:

Total Life Fulfillment (TOTFW)
Personality Integration (PI)
Stress (S_2)
Time Competence (TC)

The first three of these four measures represent Allport's "preventative variables"; the last measure (TC) represents his "therapeutic variables".

By combining the above four variables, the function was able to account for the same amount of variation between the groups (49%) as did the function in the first sample. This is indicated by the identical canonical correlations of .70. With this level of differentiation, the function distinguished intrinsics from nonreligionists with a .0005 level of confidence and a classification accuracy of 88%. Thirty of the 34 subjects were correctly classified.

As mentioned above, three of the four best discriminating variables were "preventative variables". As with the first sample, this suggests that most of the discrimination between the groups

was on the basis of Allport's "preventative variables" rather than his "therapeutic variables". This was confirmed by two further analysis, the first included only "preventative variables", the second only "therapeutic variables".

The results of these two analyses are summarized in the fourth and sixth rows of Table 23. It can be seen that just as with the larger sample of "intrinsic and extrinsic" (rows 3 & 5), the results for this smaller sample of "intrinsic and nonreligionists" show that most of the differentiation between the groups on the salient variables from Allport's rationale is provided by his "preventative variables" and not by his "therapeutic variables". The Wilks analysis based on the "preventative variables" alone needed only the following three "preventative variables" to produce a function that could discriminate the groups with a .001 level

Life Goals (TOTFW)
 Personality Integration (PI)
 Stress (S₂)

of confidence and could correctly classify 82% of the subjects. The analysis using only "therapeutic variables" on the other hand was neither able to successfully differentiate the groups nor able to classify them with an accuracy level greater than chance alone (see Table 23, row 6).

Step III Conclusions: Having now presented the results of the discriminant analyses used to test the two hypotheses of Step III, the following conclusions can be made. Intrinsic religionists can be significantly differentiated from both extrinsic religionists and nonreligionists on the basis of the salient variables of Allport's rationale with the intrinsics consistently scoring in the direction predicted by Allport, namely in the direction of better mental health. (This latter point was established in Steps I and II). Secondly, the most discriminating of Allport's salient variables are clearly those which Allport describes as "preventative variables". Thus, one may conclude the following points with regards to the two hypotheses of Step III:

- It is reasonable to accept both hypotheses, namely that intrinsic religionists can be differentiated from both extrinsic religionists (first hypothesis) and nonreligionists (second hypothesis) on the basis of the eight salient variables predicted by Allport's rationale.
- Without exception the intrinsics score in the direction predicted by Allport's rationale.

Step IV

Hypothesis Confirmed. This step tests the hypothesis that poorly integrated and poorly unified intrinsic religionists can be differentiated from well integrated and well unified extrinsic religionists on the basis of mental health criteria. Before any discriminant analysis could be carried out to statistically examine this hypothesis, the investigator had to first determine if such comparison groups actually existed. That is, whether or not there were intrinsics that were poorly integrated and poorly unified. If a high level of integration and of unity are necessary prerequisites for the development of an intrinsic faith, as the opponents of Allport's theory would suggest, then such a group would not exist.

The groups were determined by the following procedure. First, the means and standard deviations for each variable (personality integration and personality unity) were obtained for the total sample of combined intrinsics and extrinsics ($n = 154$, before subjects were matched for age). These were 12.00 ± 3.60 for Personality Integration (PI); and, $10.71 \pm .11.32$ for Personality Unity (NDS). Second, well integrated and poorly integrated subjects were then defined as those who scored one standard deviation above the mean and those who scored one standard deviation below the mean on the scale measuring personality integration,

respectively. Well unified and poorly unified subjects could not be determined by the same method due to the fact that the NDS scale measuring personality unity was considerably skewed, thus median cut-offs were used to separate the well unified from the poorly unified subjects. In other words, those who scored below the median on NDS were defined as well unified, and those who scored above the median were defined as poorly unified. (The reader should be reminded that NDS is an inverse scale.)

The third stage in preparing the comparison groups for the discriminant analysis required matching the groups for age. After the matching for age was accomplished, there were eight subjects in each group. A statistical description of each group in terms of personality integration and personality unity is provided in Table 24. The Univariate F-Ratios shown in the table reveal that the extrinsics were both significantly more integrated ($p = .0000$) and significantly more unified ($p = .002$) than were the intrinsics. Thus, for the following discriminant analysis the intrinsics are considered to be both poorly integrated and poorly unified relative to the extrinsics who in turn, compared to the intrinsics are considered to be well integrated and well unified.

Both methods of discriminant analysis was used to examine the differences between the groups on multiple measures of mental health. Table 25 shows these results for comparisons on General Mental Health, Positive Mental Health and Negative Mental Health.

TABLE 24

Means, Standard Deviations and Group Differences
Between Intrinsic and Extrinsic on
Personality Integration, Personality Unity

Variables	Intrinsic ($n = 8$)		Extrinsic ($n = 8$)		Wilks Lambda	F	P
	<u>m</u>	<u>SD</u>	<u>m</u>	<u>SD</u>			
Personality Integration (PI)	6.5	1.2	17.5	1.6	.05	242.0	.0000
Personality Unity ^a (NDS)	15.0	7.1	4.9	3.1	.50	13.8	.002

^aInverse Scale.

TABLE 25

Discriminant Function Analyses Summary Data for
 Discrimination Between "Poorly Integrated and
 Poorly Unified Intrinsic Religionists" and
 "Well Integrated and Well Unified Extrinsic Religionists"
 on the Basis of Mental Health Criteria

Sample: 16 Males

	Method	Disc Func	Canon Concl	Wilks' Lambda	Chi Square	df	p	Correct Classif.
General Mental Health	Direct	1	.99	.02	27.160	14	.0184	100.00%
	Wilks'	1	.99	.02	27.160	14	.0184	100.00%
Positive Mental Health	Direct	1	.66	.56	5.727	8	NS	87.50%
	Wilks'	1	.66	.56	5.727	8	NS	87.50%
Negative Mental Health	Direct	1	.82	.33	10.661	9	NS	93.75%
	Wilks'	1	.76	.43	10.166	4	.0377	87.50%

Inspection of the classification accuracy presented in the last column in the table indicates that the two groups were differentiated with a high degree of accuracy in all six analyses, with correct classification ranging from 87.5% to 100%. The highest level of differentiation between the groups was made on measures of General Mental Health (Table 25, rows 1 & 2) with all 16 of the subjects being correctly classified. When General Mental Health was subdivided into Positive and Negative Mental Health, the differentiation was greatest using measures of Negative Mental Health. This is indicated by the higher level of classification accuracy with Negative measures (93.75%) as compared to that with the positive measures (87.5%) when the Direct method, which includes all measures of each, was used (Table 25, rows 5 and 3).

The generally high level of group differentiation indicated by the accuracy level of the group classifications is not clearly reflected in either the p levels or in the canonical correlation coefficient. For example, in the first row of Table 25, there is a very high group discrimination as indicated by the 100% correct group classification, yet the significance level is only .0184 which is much lower than in previous discriminations with much lower classification accuracy (refer back to Tables 21 and 23). In addition, the canonical correlation of .99 is spuriously high. Such a high correlation accompanying a relatively low significance level is expected to be a function of the small n involved in the

comparison since there were too few cases in each group for the inverse matrices to be nonsingular (see Hope, 1969, p. 100; and Morrison, 1969, p. 158). The p values and canonical correlations thus limit our understanding of the actual magnitude of the differences between the groups. It is for this reason that the level of differentiation in the present analyses is considered to be most clearly reflected by the accuracy level of the classification of the subjects into their respective groups.

i) General Mental Health. On the General Mental Health comparison, both functions (Direct and Wilks) were able to classify the intrinsics and extrinsics into their respective groups with 100% accuracy, that is, 16/16 subjects were correctly classified (rows 1 & 2, Table 25). The 14 mental health measures used to make this discrimination were the following:

Life Framework-Positive (FWPS)
 Life Fulfillment-Positive (FLPS)
 Total Positive Self Concept (TPOS)
 Feeling Loved (LOV)
 Present Meaning (PRES)
 Self Criticism (SC)
 General Maladjustment (GM)
 Personality Disorder (PD)
 Neurosis (N)
 Fulfillment-Negative
 Stress (S_1)
 Hope (HP)
 Time Competence (TC)
 Forgiveness (FG)

On the first 11 of the 14 measures listed on the previous page, a comparison of the means (Table 26) indicates that the intrinsics scored in the direction of better health. On the last two measures, the extrinsics scored in the direction of better mental health and on one variable, Future Hope, the means of the two groups were identical.

ii). Positive Mental Health: With regard to the differentiation between the groups in terms of Positive Mental Health (see Table 25, rows 3 and 4), both the Direct and the Wilks methods used all eight measures to differentiate intrinsics from extrinsics with a classification accuracy of 87.5%; correctly classifying 14/16 subjects. The eight measures are listed below:

FWPS	PRES
FLPS	HP
TPOS	TC
LOV	FG

The intrinsics scored in the direction of better mental health on five of the eight measures (the first five listed). The extrinsics scored in the direction of better health on two measures, TC and FG. (See Table 26.)

TABLE 26

Means and Standard Deviations of
 Poorly Integrated-Unified Intrinsic and
 Well Integrated-Unified Extrinsic
 ($n = 16$)

General Mental Health Measures	Intrinsic		Extrinsic	
	<u>m</u>	<u>SD</u>	<u>m</u>	<u>SD</u>
<u>Positive Mental Health</u>				
TC	17.38	2.33	18.75	2.60
FWPS	28.25	4.77	25.63	3.81
FLPS	27.00	8.33	26.25	3.88
TPOS	375.13	46.41	360.75	10.15
LOV	5.00	0.0	4.75	0.71
FG	8.0	1.93	8.25	0.71
PRES	4.75	0.46	4.38	0.92
HP	9.38	1.19	9.38	0.92
<u>Negative Mental Health</u>				
SC	30.13	8.53	31.50	7.45
<u>GM</u>	101.13	12.51	99.88	2.70
<u>PD</u>	83.88	15.14	79.88	5.77
<u>N</u>	90.13	17.17	86.75	5.06
<u>FWNG</u>	29.50	5.04	28.25	4.10
<u>FLNG</u>	26.37	7.48	26.00	5.95
S	7.13	3.48	29.88	16.37
S ₁	1.91	1.10	2.97	0.56
S ₂	18.0	14.62	57.12	43.26
S ₃				

*Means differ at less than a .05 level of significance.

Note: Underlined scales are inverse scales.

iii) Negative Mental Health. Two further discriminate analysis were performed using only measures of Negative Mental Health to discriminate between the groups (Table 25, rows 5 & 6).

The results of the Direct analysis show a high level of group differentiation using all nine Negative Mental Health measures, the classification accuracy being 93.75% which means that 15/16 subjects were correctly classified. If one refers back to Table 26, he will observe that, without exception, the mean scores of the intrinsics are in the direction of better mental health on all of the measures of Negative Mental Health.

The Wilks analysis of this comparison reveals that a function comprised of four Negative Mental Health Variables could significantly differentiate the groups with a classification accuracy of 87.50%.

Step IV Conclusions: Having examined the results of the analyses used to test the hypothesis of Step IV, namely that poorly integrated and poorly unified intrinsics can be differentiated from well integrated and well unified extrinsics on the basis of mental health criteria, the following conclusions can be made. First, the preliminary finding from the Univariate F-Ratio tests of the differences between the intrinsics and the extrinsics on personality integration and personality unity, revealed that the

extrinsics were significantly more integrated ($p = .0000$) and more unified ($p = .002$) than the intrinsics. Relative to the extrinsics, the intrinsics could be described as poorly integrated and poorly unified.

Secondly, when discriminate analyses were performed, the poorly integrated and poorly unified intrinsics were differentiated from the well integrated and well unified extrinsics with a classification accuracy of 100% on the basis of measures of General Mental Health with the intrinsics scoring in the direction of better mental health on 11 of the 13 discriminating measures for which direction could be determined. The extrinsics scored in the superior direction on two. When compared on the basis of Negative Mental Health measures only, the groups were differentiated with a classification accuracy of 93.75% with the Intrinsics scoring in the direction of better mental health on all 9 of the measures of Negative Mental Health. On the measures of Positive Mental Health, the groups were successfully differentiated with a correct classification level of 87.50% with the intrinsics scoring in the direction of better mental health on five of the seven measures for which direction could be determined.

From these findings the following three points may be concluded:

- There are poorly integrated and poorly unified intrinsic religionists.
- It is reasonable to accept the hypothesis that poorly integrated and poorly unified intrinsic religionists can be differentiated from well integrated and well unified extrinsics on the basis of mental health criteria.
- The poorly integrated and poorly unified intrinsic religionists clearly score in the direction of superior mental health.

Step V

Hypothesis Confirmed. As in the previous four steps, discriminant function analyses were used to test the hypothesis of Step V that intrinsic can be differentiated from nonreligionists when matched for goals (As in all previous analyses subjects were matched for age). Prior to carrying out the discriminant analyses, matching for level of goals was accomplished by matching the subjects on both of the Life Framework subscales, Framework-Positive (FWPS) and Framework-Negative (FWNG). This was found to be necessary because an initial attempt to match the subjects for goals used only the Total Framework and after the matching discovered that the groups still differed significantly on the individual subscales of the Total Framework Scale, FWPS and FWNG. In the initial comparison of intrinsic and nonreligionists in Step II, intrinsic had significantly higher scores on both FWPS ($p = .001$) and FWNG ($p = .01$) and, because of these vast differences between the groups, it was difficult to match the groups for goals. Only two subjects matched perfectly. Thus, in order to obtain a large enough sample for the analyses, subjects were considered a match if they did not differ on either scale by more than two points. Using this criteria, 13 matched pairs were obtained yielding a total sample of 26 for the discriminant analyses. The means and standard deviations of these groups, matched for goals, are presented in Table 27. As can be seen by examining the p levels, although not identical, the groups did not significantly differ in level of goals.

TABLE 27

Means, Standard Deviations and Group Differences
for Intrinsic and Nonreligionists Matched for Goals

Measures		<u>m</u>	<u>SD</u>	Wilks Lambda	<u>F</u>	<u>p</u>
FWPS	I	27.69				
	N	27.31	4.15	.99	.29	.96
FWNG	I	28.62	4.			
	N	28.54	3.04	.99	.44	.81

I refers to Intrinsic religionists
N refers to nonreligionists

Table 28 summarizes the results of the discriminant analyses executed on the 26 subject sample of intrinsic and nonreligionists, matched for goals. It is quickly apparent from observing the column to the extreme right presenting the classification accuracies that the discriminant functions were able to successfully differentiate intrinsic religionists from nonreligionists when life goals were held constant. It shows that the subjects were correctly classified into their respective groups with accuracy levels ranging from 76.92% to 100% depending on the mental health criteria being used to differentiate the groups. Using all of the mental health criteria, i.e. the measures of General Mental Health which include both measures of Positive Mental Health and of Negative Mental Health, both the Direct and the Wilks methods of discriminant analyses were able to significantly differentiate the intrinsic religionists from the nonreligionists with p levels of .01 and .0005 for the two methods respectively. The p level of the Direct method ($p = .01$) is expected to underestimate the actual significance of the group discrimination because in this particular discriminant analysis due to the fact that all of the General Mental Health measures were included with only 26 subjects, there were too few cases for the inverse matrices to be nonsingular. Because of this limitation, the best indication of the level of differentiation made between the groups by the Direct method on General Mental Health is provided by the classification accuracy which is 96.15%. This means that 25/26 subjects were correctly classified.

TABLE 28

Discriminant Function Analyses Summary Data for
 Discrimination Between Intrinsic Religionists
 and Nonreligionists Matched for Goals on the Basis
 of Multiple Measures of Mental Health

Sample: 26 Males

	Method	Disc Func	Canon Correl	Wilks' Lambda	Chi Square	df	p	Correct Classif
General Mental Health	Direct	1	.93	.14	31.013	16	.0134	96.15%
	Wilks'	1	.88	.22	29.539	9	.0005	96.15%
Positive Mental Health	Direct	1	.64	.59	10.151	9	NS	76.92%
	Wilks'	1	.56	.69	8.420	3	.0381	80.77%
Negative Mental Health	Direct	1	.76	.42	17.240	8	.0277	100.00%
	Wilks'	1	.74	.45	17.032	5	.0044	92.31%

The Wilks' method was able to differentiate the groups as well as the Direct method did by using a combination of the following nine best discriminating measures:

TC _s	N
FLPS	FLNG
PI	TPOS
SC	SI
GM	

By optionally combining the above nine measures, the Wilks' method produced a function that accounted for 77% of the variance between the two groups (determined by the square of the canonical correlation of .88) and correctly classified 96%, or 25/26, of the subjects.

When General Mental Health was subdivided into Positive Mental Health and Negative Mental Health respectively, and the subjects, matched for goals, were differentiated on the basis of each separately, Table 28 (rows four to six) shows that the groups were successfully differentiated on the basis of both types of mental health criteria and that the differentiation based on the measures of Negative Mental Health reflected a more accurate group of Positive Mental Health. Using all eight of the measures of Negative Mental Health, the Direct method of discriminant analyses

produced a function that accounted for 58% of the variation between the groups, that discriminated between the groups with a .0277 level of confidence, and that correctly classified 100% of the 26 subjects into their respective groups. The Wilks' method using only five measures correctly classified 92% of the subjects.

When all nine of the Positive Mental Health measures were used by the Direct method to discriminate between the groups, 41% of the variation between the groups was accounted for and 76.92% of the subjects were correctly classified. This level of group differentiation was improved by the Wilks' method which required only three mental health measures to maximize the difference between the groups. Using TC, FG and Pres, it produced a function that accounted for 31% of the variation between the groups, differentiated the groups with a .0381 level of confidence, and classified the groups with 80.77% accuracy. Twenty-one of the 25 subjects were correctly classified.

Having determined that intrinsic religionists can be clearly differentiated from nonreligionists when matched for goals, the question of importance is which group scored in the direction of the better mental health. Univariate F-Ratios revealed that the intrinsic scored significantly lower on S_2 ($p < .01$) and on SC ($p < .05$). Significant mean differences were not found on the remaining discriminating variables so, in order to determine

which group scored in the direction of better mental health on these measures, Table 29 which presents the means and standard deviations for each group was prepared. If one carefully inspects the table taking into account the inverse scales, he will observe that the intrinsic's means are in the direction of the better mental health on 11 of the measures (TC, FLPS, PI, LOV, PRES, HP, SC, GM, PD, S₂ and S₃) and that the nonreligionists score in the direction of better mental health on six measures (TPOS, NDS, GN, N, FLNG, and S₁).

Step V Conclusions: Having now examined the results of the discriminate analyses computed to test Step V, the following conclusions can be made. On multiple measures of General Mental Health including measures of both Positive and Negative Mental Health, intrinsic's can be clearly differentiated from nonreligionists when matched for goals. When General Mental Health is subdivided into Positive Mental Health and Negative Mental Health, the two groups can be differentiated on the basis of each type of mental health criteria (Positive and Negative) independently. The differentiation made on the basis of the Negative Mental Health criteria alone has the highest level of classification accuracy, namely 100% correct classification. The best differentiations made using General Mental Health measures and Positive Mental Health measures correctly classified 96.15% and 80.77% respectively.

TABLE 29

Means and Standard Deviations for Intrinsic
and Nonreligionists on Measures of General Mental Health

Mental Health Measures	<u>Intrinsic Religionists</u>		<u>Nonreligionists</u>	
	<u>m</u>	<u>SD</u>	<u>m</u>	<u>SD</u>
<u>Positive Mental Health</u>				
TC	18.07	1.89	16.00	3.37
FLPS	26.92	4.13	26.54	3.95
TPOS	352.00	21.90	352.54	40.12
PI	13.31	2.90	12.23	2.42
<u>NDS</u>	7.92	8.16	7.69	7.48
<u>LOV</u>	4.69	0.63	4.53	0.66
FG	8.00	2.00	8.15	1.52
PRES	4.77	0.60	4.15	0.69
HP	9.46	1.13	9.38	1.12
<u>Negative Mental Health</u>				
SC	30.	6.16	34.0	3.26
<u>GM</u>	98.15	6.05	96.69	8.71
<u>PD</u>	76.62	11.81	75.62	9.29
<u>N</u>	84.00	7.81	88.38	11.90
FLNG	25.08	4.31	25.15	4.72
SI	15.77	7.30	13.62	7.05
S ₂	1.93	0.72	2.81	0.85
S ₃	32.62	20.38	40.23	25.21

The underlined measures have inverse scales.

The intrinsic obtained the higher indices of mental health scoring in the direction of better mental health on 11 of the 17 (65%) discriminating measures for which direction could be determined. Thus, for Step V, the following two points can be stated:

- It is reasonable to accept the hypothesis that intrinsic religionists can be differentiated from nonreligionists on the basis of mental health criteria when the degree to which they have well defined life goals is held constant.
- On 11 of the 17 discriminating mental health measures for which direction could be determined, the intrinsic scored in the direction of superior mental health.

Step VI

Hypotheses Confirmed. The three hypotheses of Step VI were tested by computing nine Univariate F-Ratios. These are presented in Table 30 together with the means and standard deviations for each group on the three scales measuring "Direction and Purpose in Life". The first three comparisons relate to the first hypothesis, the second three comparisons relate to the second hypothesis, and the third three comparisons relate to the third hypothesis.

i) Re The First Hypothesis

Table 30 reveals that the intrinsic religionists obtained higher scores than did the extrinsic religionist on all three measures of "Direction and Purpose in Life". Higher scores indicate a greater sense of direction and purpose in life. These differences were highly significant with p levels of .0000 for all three comparisons. When interpreted this means that the differences found between the two groups were so great that the probability of them having occurred by chance variation alone is less than 1 in 10,000 replications. Thus, from these findings one can make the following statement:

- It is reasonable to accept the hypothesis that intrinsic religionists have greater "Direction and Purpose in Life" than do extrinsic religionists.

TABLE 30

Differences Between Groups on Three Measures of
"Direction and Purpose in Life"

Groups Compared	Measures of Direction and Purpose	\bar{M}	SD	Wilks' Lambda	F	p
Intrinsic(I) ($n = 48$)	TOTFW-I	61.94	5.50	.686	42.96	.0000
	E	52.89	7.81			
Versus	FWPOS-I	30.77	3.78	.691	41.99	.0000
	E	25.44	4.27			
Extrinsic(E) ($n = 48$)	FWNG-I	31.17	3.34	.816	21.24	.0000
	E	27.46	4.46			
Intrinsic(I) ($n = 17$)	TOTFW-I	62.65	5.41	.720	12.40	.001
	NON	55.18	6.86			
Versus	FWPOS-I	31.41	2.43	.708	13.19	.001
	NON	26.65	4.83			
Nonreligionist (NON) ($n = 17$)	FWNG-I	31.24	3.27	.832	5.48	.01
	NON	28.53	2.92			
Extrinsic(E) ($n = 17$)	TOTFW-E	55.24	6.91	.981	.63	NS
	NON	53.12	8.67			
Versus	FWPOS-E	26.53	4.72	.990	.31	NS
	NON	25.65	4.46			
Nonreligionist (NON) ($n = 17$)	FWNG-E	28.71	2.97	.974	.84	NS
	NON	27.47	4.69			

ii) Re The Second Hypothesis

Inspection of the second set of three comparisons shown in Table 30 (middle section) reveals that the intrinsic religionists obtained higher scores than did the nonreligionists on all three measures of "Direction and Purpose in Life". These differences were significant with p levels of .001, .001 and .01 for TOTFW, FWPS, and FWNG respectively. When interpreted this means that differences of the magnitude found between these two groups are so great that they would occur due to random variation alone only one or fewer times in 100 similar investigations. For this reason, they may be considered to represent actual group differences. Thus, from these findings one may make the following conclusion:

- It is reasonable to accept the hypothesis that intrinsic religionists have greater "Direction and Purpose in Life" than do nonreligionists.

iii) Re The Third Hypothesis

Inspection of Table 30, bottom three comparisons, reveals that no significant differences were obtained between extrinsic religionists and nonreligionists on any of the three measures of "Direction and Purpose in Life". Thus one may conclude the following:

- The hypothesis that extrinsics do not differ to nonreligionists in "Direction and Purpose in Life" is as good as any other hypothesis.

Section 2: Summary of Results Presented
According to the Six Steps which
Define the Purpose of the Present Study

The reader will recall that the purpose of the present research was to empirically examine Allport's hypothesis that intrinsic religion is conducive to mental health. This purpose was broken down into six testable steps and specific hypotheses were developed for each step. The results for the hypotheses testing were presented in detail for each of the six steps in the previous section, Section 1. Now, in this present section an attempt is made to briefly summarize the results of each step in such a way as to make them easy to relate to the hypotheses they test and also easy to relate to the overall purpose of the investigation which is to empirically examine Allport's hypothesis that intrinsic religion is conducive to mental health. In this way, the present section prepares the way for the final chapter of this paper which will discuss the results in the context of that purpose.

Before presenting the summaries for each individual step, three general points should be made. First, for all analyses of all steps, the samples were comprised of males only; second, for all analyses subjects were matched for age; and third, multivariate discriminate function analyses were used for Step I through V and univariate F-Ratios were used for Step VI.

i) Hypothesis of Step I Confirmed. Intrinsic religionists could be clearly differentiated from extrinsic religionists on the basis of mental health criteria ($p = .0000$). See Table 31.

- Intrinsic could be differentiated from their extrinsic counterparts with 89% accuracy (85/96) by a Direct discriminant function comprised of 19 measures of General Mental Health; and could be differentiated with the same level of accuracy by a Wilks' discriminant function comprised of eight of the best discriminating measures of General Mental Health. See Table 31 (top section) for lists of the discriminating measures of General Mental Health.
- Intrinsic could be differentiated from their extrinsic counterparts with 79% accuracy (76/96) by a Direct discriminant function comprised of 10 measures of Positive Mental Health; and, could be differentiated with 80% accuracy (77/96) by a Wilks' discriminant function comprised of four of the best discriminating measures of Positive Mental Health. See Table 31 (middle section) for lists of the discriminating measures of Positive Mental Health.
- Intrinsic could be differentiated from their extrinsic counterparts with 81% accuracy (78/96) by a Direct discriminant function comprised of nine measures of Negative Mental Health; and, could be differentiated with 79% accuracy (79/96) by a Wilks' discriminant function comprised of six of the best discriminating measures of Negative Mental Health. See Table 31 (bottom section) for lists of the discriminating measure of Negative Mental Health.
- Without exception, the intrinsic religionists score in the direction of superior mental health.

TABLE 31

Step 1
 Summary of the Discriminant Analysis for the Differentiation Between
 Intrinsic and Extrinsic Religionists on Mental Health Variables

(n = 96)

Mental Health Variables	Direct Method		Wilks' Method	
	p	Correct Classif.	p	Correct Classif.
General Mental Health	.0000	89% (85/96)	.0000	89% (85/96)
		TC(1) *FWPS(1) *FLPS(1) *TPOS(1) *PI(1) NDS(1) LOV(1) FG(1) *PRES(1) *HP(1)		Discriminant Measures With Group Obtaining Healthiest Scores in Brackets *TC(1) GM(1) *PD(1) N(1) *FWNG(1) *FLNG(1) *S1(1) *S2(1) *S3(1)
Positive Mental Health	.0000	79% (76/96)	.0000	80% (77/96)
		TC(1) *FWPS(1) *FLPS(1) *TPOS(1) *PI(1) NDS(1) LOV(1) FG(1) *PRES(1) *HP(1)		Discriminant Measures With Group Obtaining Healthiest Scores in Brackets *FWPS(1) *TPOS(1) *PI(1) NDS(1)
Negative Mental Health	.0000	81% (78/96)	.0000	79% (79/96)
		TC(1) *FWPS(1) *FLPS(1) *TPOS(1) *PI(1) NDS(1) LOV(1) FG(1) *PRES(1) *HP(1)		Discriminant Measures With Group Obtaining Healthiest Scores in Brackets *SC(1) GM(1) *PD(1) N(1) *FWNG(1) *FLNG(1) *S1(1) *S2(1) *S3(1)

*Group superiority significant at p .05.
 I stands for Intrinsic Religionists.

ii) Hypothesis of Step II Confirmed. Intrinsic religionists could be clearly differentiated from nonreligionists on the basis of mental health criteria ($p = .0000$). See Table 32.

- Intrinsic could be differentiated from their nonreligionist counterparts with 100% accuracy (34/34) by a Direct discriminant function comprised of 19 measures of General Mental Health; and, could be differentiated with 97% accuracy (33/34) by a Wilks' discriminant function comprised of eight of the best discriminating measures of General Mental Health. See Table 32 (top section) for lists of the discriminating measures of General Mental Health.
- Intrinsic could be differentiated from their nonreligionist counterparts with 85% accuracy (29/34) by a Direct discriminant function comprised of 10 measures of Positive Mental Health; and, could be differentiated with 82% accuracy (28/34) by a Wilks' discriminant function comprised of five of the best discriminating measures of Positive Mental Health. See Table 32 (middle section) for lists of the discriminating measures of Positive Mental Health.
- Intrinsic could be differentiated from their nonreligious counterparts with 91% accuracy (31/34) by a Direct discriminant function comprised of nine measures of Negative Mental Health; and, could be differentiated with 79% accuracy (27/34) by a Wilks' discriminant function comprised of three of the best discriminating measures of Negative Mental Health. See Table 32 for lists of the discriminating measures.
- Without exception, the intrinsic religionists score in the direction of superior mental health.

iii) Hypotheses of Step III Confirmed. Intrinsic religionists could be clearly differentiated both from extrinsics (first hypothesis) and from nonreligionists (second hypothesis) on the

TABLE 32

Step II
 Summary of the Discriminant Analysis for the Differentiation Between
 Intrinsic Religionists and Nonreligionists on Mental Health Variables
 (n = 34)

Mental Health Variables	Direct Method		Wilks' Method		Discriminant Measures with Group Obtaining Healthiest Scores in Brackets
	p	Correct Classif.	p	Correct Classif.	
General Mental Health	.0007	100% (34/34)	.0000	97% (33/34)	* SC(1) N(1) * S3(1) *FWPS(1) FLPS(1) TPOS(1) NDS(1) FG(1)
Positive Mental Health	.049	85% (29/34)	.001	82% (28/34)	* SC(1) GM(1) * PD(1) N(1) *FWNG(1) *FLNG(1) * S1(1) * S2(1) * S3(1) TC(1) *FWPS(1) FLPS(1) TPOS(1) * PI(1) NDS(1) LOV(1) FG(1) PRES(1) HP(1)
Negative Mental Health	.005	91% (31/34)	.001	79% (27/34)	* SC(1) GM(1) * PD(1) N(1) *FWNG(1) *FLNG(1) * S1(1) * S2(1) * S3(1) TC(1) *FWPS(1) FLPS(1) TPOS(1) * PI(1) NDS(1) LOV(1) FG(1) PRES(1) HP(1)

*Group superiority significant at p .05.
 } stands for Intrinsic Religionists.

basis of the eight salient variables predicted by Allport's rationale.

($p = .0000$ for first hypothesis; $p = .0005$ for second hypothesis.)

See Table 33 and 34.

- Intrinsic~~s~~ could be differentiated from extrinsics with 81% accuracy (78/96) and from nonreligionists with 85% accuracy (29/34) by Direct discriminant functions. Each comprised of 12 measures of Allport's salient theoretical variables including both preventative and therapeutic variables. Intrinsic~~s~~ could also be differentiated from extrinsics with 82% accuracy (79/96) and from nonreligionists with 88% accuracy (30/34) by Wilks' discriminant functions comprised of seven and four of the above best discriminating measures for the two comparisons respectively. See Tables 33 and 34 (top sections) for lists of the discriminating measures.
 - Intrinsic~~s~~ could be differentiated from extrinsics with 84% accuracy (81/96) and from nonreligionists with 82% accuracy (28/34) by Direct discriminant functions. Each comprised of six measures of Allport's salient "preventative variable". The Wilks' discriminant functions did not change either of the above accuracy levels but was able to reach the same accuracy level in discriminating intrinsic~~s~~ from nonreligionists by using half the number of measures (3) as in the Direct method. See Tables 33 and 34 (middle section) for lists of the discriminating measures of Allport's "preventative variables".
 - Intrinsic~~s~~ could be differentiated from extrinsics with 65% accuracy (62/96) by a Direct discriminant function comprised of six measures of Allport's "therapeutic variables"; and, could be differentiated with the same level of accuracy by a Wilks' discriminant function comprised of two best discriminating measures of Allport's "therapeutic variables". See Table 33 for lists of the discriminating measures.
- Intrinsic~~s~~ could not be differentiated from nonreligionists on the basis of Allport's "therapeutic variables" (see Table 34, bottom section).
- Without exception, the intrinsic religionists score in the direction predicted by Allport's rationale.

TABLE 33

Step III
 Summary of the Discriminant Analysis for the Differentiation Between
 Intrinsic Religionists and Extrinsic Religionists on the Salient Variables
 Predicted by Allport's Theory

(n = 96)
 Hypothesis 1

Salient Theoretical Measures	Direct Method		Wilks' Method			
	R _c	Correct Classif.	P	Classif.		
Preventative and Therapeutic	.0000	81% (78/96)	.0000	82% (79/96)	Discriminant Measures With Group Obtaining Healthiest Scores in Brackets	
					LOV(1)	*TOTFW(1)
					FG(1)	* PI(1)
					* PRES(1)	* NDS(1)
Preventative Alone	.0000	84% (81/96)	.0000	84% (81/96)	Discriminant Measures With Group Obtaining Healthiest Scores in Brackets	
					*TOTFW(1)	*TOTFW(1)
					* PI(1)	* PI(1)
					* NDS(1)	* NDS(1)
Therapeutic Alone	.048	65% (62/96)	.002	65% (62/96)	Discriminant Measures With Group Obtaining Healthiest Scores in Brackets	
					LOV(1)	*TOTFW(1)
					FG(1)	* PI(1)
					* PRES(1)	* NDS(1)
					*TOTFL(1)	
					* HP(1)	
					* TC(1)	

*Group superiority significant at p .05.
 † stands for Intrinsic Religionists.

TABLE 34

Step III
 Summary of Discriminant Analyses for the Differentiation Between
 Intrinsic Religionists and Nonreligionists on the
 Salient Variables Predicted by Allport's Theory

(n = 34)
 Hypothesis 2

Salient Theoretical Measures	Direct Method		Wilks' Method		
	p	Correct Classif.	p	Classif.	
Preventative and Therapeutic	NS(.07)	85% (29/34)	.0005	88% (30/34)	Discriminant Measures with Group Obtaining Healthiest Scores in Brackets
Preventative Alone	.016	82% (28/34)	.0011	82% (28/34)	*TOTFW(1) * PI(1) NDS(1) S1(1) S2(1) S3(1)
Therapeutic Alone	NS	56% (19/34)	NS	56% (19/34)	*TOTFW(1) * PI(1) NDS(1) S1(1) S2(1) S3(1)

*Group superiority significant at p .05.
 † stands for Intrinsic Religionists.

iv) Hypothesis of Step IV Confirmed. "Poorly integrated and poorly unified intrinsics" could be clearly differentiated from "well integrated and well unified extrinsics" on the basis of mental health criteria ($p = .018$). See Table 35.

- Poorly integrated-unified intrinsics could be differentiated from well integrated-unified extrinsics with 100% accuracy (16/16) by both the Direct and the Wilks' discriminant functions each comprised of 14 measures of General Mental Health. See Table 35 (top section) for the list of these discriminating measures.

On 11 of the 13 discriminating measures for which direction could be determined, the intrinsics' scores were in the direction of superior mental health. The extrinsics show superiority on two.

- Poorly integrated-unified intrinsics could be differentiated from well integrated-unified extrinsics with 88% accuracy (14/16) by both the Direct and the Wilks' discriminant functions each comprised of eight measures of Positive Mental Health. See Table 35 (middle section) for the list of these discriminating measures. On five of the seven discriminating measures for which direction could be determined, the intrinsics score in the direction of superior mental health. The extrinsics are superior on two.

- Poorly integrated-unified intrinsics could be differentiated from well integrated-unified extrinsics with 94% accuracy (15/16) by a Direct discriminant function comprised of nine measures of Negative Mental Health; and, could be differentiated with 88% accuracy (14/16) by a Wilks' discriminant function comprised of four of the best discriminating measures of Negative Mental Health. See Table 35 (bottom section) for the lists of the discriminating measures.

Without exception, the intrinsics score in the direction of superior mental health on the discriminating measures of Negative Mental Health.

TABLE 35

Step IV
 Summary of the Discriminant Analysis for the Differentiation Between
 'Poorly Integrated and Poorly Unified Intrinsic Religionists' and
 'Well Integrated and Well Unified Extrinsic Religionists' on
 Mental Health Variables

(n = 16)

Mental Health Variables	Direct Method		Wilks' Method		Discriminant Measures with Group Obtaining Healthiest Scores in Brackets
	Correct Classif.	P	Correct Classif.	P	
General Mental Health	100% (16/16)	.018	100% (16/16)	.018	TC(E) FWPS(I) FLPS(I) TPOS(I) LOV(I) FG(E) PRES(I) HP(?)
Positive Mental Health	88% (14/16)	NS	88% (14/16)	NS	TC(E) FWPS(I) FLPS(I) TPOS(I) LOV(I) FG(E) PRES(I) HP(?)
Negative Mental Health	94% (15/16)	NS	88% (14/16)	.038	SC(I) GM(I) PD(I) N(I) FLNG(I) FLNG(I) * S1(I) * S2(I) * S3(I)

*Group superiority significant at p .05.
 I stands for Intrinsic Religionists.
 E stands for Extrinsic Religionists.
 ? stands for Unknown.

v) Hypothesis of Step V Confirmed. Intrinsic religionists could be differentiated from nonreligionists, matched for goals, on the basis of mental health criteria ($p < .01$). See Table 36.

- Intrinsic could be differentiated from nonreligionists when matched for goals with 96% accuracy (25/26) by a Direct discriminant function comprised of 16 measures of General Mental Health 11 of which favour the intrinsic. They could also be differentiated with the same level of accuracy by a Wilks' discriminant function comprised of nine of the best discriminating measures of General Mental Health, six of which favored the intrinsic. See Table 36, top section, for lists of the discriminating measures.
- Intrinsic could be differentiated from nonreligionists when matched for goals with 77% accuracy (20/26) by a Direct discriminant function comprised of nine measures of Positive Mental Health, six of which favour the intrinsic. They could also be differentiated with 81% accuracy (21/26) by a Wilks' discriminant function comprised of three best discriminating measures of Positive Mental Health, two of which favour the intrinsic. See Table 36, middle section, for lists of the discriminating measures.
- Intrinsic could be differentiated from nonreligionists when matched for goals with 100% accuracy (26/26) by a Direct discriminant function comprised of eight measures of Negative Mental Health six of which favour the intrinsic. They could also be differentiated with 92% accuracy (24/26) by a Wilks' discriminant function comprised of five best discriminating measures of Negative Mental Health four of which favour the intrinsic. See Table 36 for lists of the discriminating measures.

vi) Hypotheses of Step VI Confirmed. All three hypotheses of this step were supported by Univariate F-Ratio tests for group differences. The results, summarized in Table 30, may be stated as follows:

TABLE 36

Step V
 Summary of the Discriminant Analysis for the Differentiation Between
 Intrinsic Religiosity and Nonreligiosity
 Matched for Goals on Mental Health Variables
 (n = 26)

Mental Health Variables	Direct Method		Wilks' Method	
	p	Correct Classif.	p	Correct Classif.
General Mental Health	.013	96% (25/26)	.0005	96% (25/26)
				Discriminant Measures with Group Obtaining Healthiest Scores in Brackets
				TC(1) FLPS(1) TPOS(NR) PI(1) NDS(NR) LOV(1) FG(NR) PRES(1) HP(1)
				* SC(1) GM(1) PD(1) N(NR) FLNG(1) S1(NR) S3(1)
				TC(1) FLPS(1) TPOS(NR) PI(1)
				* SC(1) GM(1) N(NR) FLNG(1) S1(NR)
Positive Mental Health	NS	77% (20/26)	.038	81% (21/26)
				Discriminant Measures with Group Obtaining Healthiest Scores in Brackets
				TC(1) FLPS(1) TPOS(NR) PI(1) NDS(NR) LOV(1) FG(NR) PRES(1) HP(1)
				TC(1) FLPS(1) TPOS(NR) PI(1) NDS(NR) LOV(1) FG(NR) PRES(1) HP(1)
				* SC(1) GM(1) PD(1) N(NR) FLNG(1) S1(NR) S3(1)
				TC(1) FG(NR) *PRES(1)
				* SC(1) GM(1) N(NR) FLNG(1) *S2(1)
Negative Mental Health	.028	100% (26/26)	.004	92% (24/26)
				Discriminant Measures with Group Obtaining Healthiest Scores in Brackets
				TC(1) FLPS(1) TPOS(NR) PI(1) NDS(NR) LOV(1) FG(NR) PRES(1) HP(1)
				* SC(1) GM(1) PD(1) N(NR) FLNG(1) S1(NR) S2(1) S3(1)

*Group superiority significant at p .05 level.
 I stands for Intrinsic Religiosity.
 NR stands for Nonreligiosity.
 (?) stands for Unknown.

- Intrinsic religionists were found to have significantly higher scores on measures of "Direction and Purpose in Life" than extrinsic religionists ($p = .0000$).
- Intrinsic religionists were found to have significantly higher scores on measures of "Direction and Purpose in Life" than nonreligionists ($p < .01$).
- Extrinsic did not differ to nonreligionists on measures of "Direction and Purpose in Life" (NS).

CHAPTER VII
DISCUSSION AND CONCLUSION

Having concluded the previous chapter with a summary of the results of the hypotheses testing for each step of the six-step purpose, this chapter will discuss those findings in terms of how they relate to the specific aspect of the purpose investigated by each of the individual steps; and, to the overall purpose for the present study which is to empirically examine Allport's hypothesis that intrinsic religion is conducive to mental health.

Discussion of the Results in Terms of
How They Relate to the Specific Aspect of the
Purpose Investigated by Each of the Individual Steps

Step I

The test results, as can be readily seen by reading the brief summary or viewing the summary table (Table 31) presented for the first Step in Section 2 of Chapter VI, provide strong support for the hypothesis that intrinsic religionists can be differentiated from extrinsic religionists on the basis of mental health criteria ($p = .0000$) with the intrinsics consistently scoring in the direction of the better mental health.

The mental health criteria included both ends of the continuum of mental health ranging from measures of psychopathology such as neurosis, personality disorder and general maladjustment to measures of very desirable aspects of mental health such as personality integration, positive self-concept, and fulfillment in life. More specifically the intrinsic religionists when compared to extrinsic religionists reported themselves to have more of the following positive qualities of mental health:

i) Time Competence (TC). The intrinsics indicated more of a tendency to live primarily in the present, free from guilts and regrets of the past or unrealistic expectations and fears of the future.

ii) Life Goals (FWPS, FWNG & TOTFW). The intrinsics, according to their self-reports, were more able to see their lives within some context or perspective and had more clearly defined life goals and a greater sense of direction and purpose in life.

iii) Life Fulfillment (FLPS, FLNG & TOTNG). The intrinsics described themselves as having found or as being in the process of finding more fulfillment in life.

iv) Positive Self-Concept (TPOS). The intrinsics reported themselves to have greater self-worth or self-esteem in terms of identity, self-satisfaction, behavior, physical self, moral-ethical self, personal self, family self, and social self.

v) Personality Integration (PI). The intrinsics more closely resembled well-integrated persons.

vii) Feeling Loved (LOV). The intrinsics more often reported themselves to feel that they are loved.

viii) Past Forgiveness (FG). The intrinsics more frequently reported that they felt they could be forgiven for the past.

ix) Present Meaning (PRES). The intrinsics more frequently reported themselves to have found acceptable meaning for the present.

x) Future Hope (HP). The intrinsics expressed more hope for the future.

Not only did the intrinsics claim to have more of the desirable characteristics of mental health but they also claimed to have fewer of the undesirable traits associated with mental pathology. More specifically, they reported themselves to have fewer indices of the following undesirable characteristics:

i) Self-Criticism (SC). The intrinsics were less critical of themselves.

ii) General Maladjustment (GM). The intrinsics showed fewer similarities to maladjusted people.

iii) Personality Disorder (PD). The intrinsics had less resemblance to personality disordered persons.

iv) Neurosis (N). The intrinsics had less resemblance to neurotics.

v) Stress (S_1 , S_2 , S_3). The intrinsics reported themselves to have fewer stressful events in their lives; to experience less personal stress with each stressful event (S_2); and, to experience less total stress when both the number of stress events and amount of stress experienced per event is taken into consideration (S_3).

As one can see from the above, the intrinsics, by their own self report, clearly claim to have superior mental health as compared to extrinsics. The question of interest at this point is whether or not their superior mental health scores do, in fact, reflect superior mental health or whether they reflect an overly defensive response style where the intrinsics do not readily admit psychological weakness. Could the intrinsic religionists be deliberately or subconsciously distorting in the direction of portraying a more "healthy" appearance? If such should be the case, then, rather than having superior mental health, the results would indicate that the intrinsic subjects are simply more defensive about admitting their psychological difficulties than are the extrinsics.

This possibility was a concern in the Nelson (1980) study which is the forerunner to the present investigation. She was able to determine the likelihood of such an interpretation being valid by examining one of the four validity scales of the Minnesota Multiphasic Personality Inventory (MMPI), the K Scale, which measures a test-taking attitude described as defensiveness against psychological weakness. She found that rather than score as overly defensive subjects, the intrinsic religionists scored in the same range as normal, adjusted and superior individuals. From this she concluded that the intrinsic group's scores on the K Scale of the MMPI, rather than indicate extreme defensiveness, appear to reflect a tendency towards healthy adaptation (Nelson, 1980, pp. 216-217).

For further confirmation in addition to that provided by the Nelson study, that the intrinsics' superior scores do not result from excessive defensiveness, the present investigator scored the Defensive Positive Scale (DP) of the Tennessee Self Concept Scale and computed the means and standard deviations for the intrinsic and extrinsic groups independently. The results were the following. The mean score on DP for the intrinsics was 59.83 ± 11.02 and for the extrinsics was 56.33 ± 8.85 . When these statistics are compared to those obtained by the comparison groups in the standardization sample, one will observe that the

intrinsic scores most resemble those obtained by the well-integrated group (PI group) which has a mean of 58.70 and a standard deviation of ± 8.61 .

The extrinsics, on the other hand, most resembled the Norm Group ($x = 54.40 \pm 12.38$). From this we may conclude that rather than score as overly defensive subjects, the intrinsic religionists scored in the same range as well integrated individuals. Thus, the intrinsic group's scores on DP, rather than indicate extreme defensiveness, appear to reflect a tendency towards healthy adaptation as the Nelson study concluded.

If this conclusion is correct and the superior mental health scores of the intrinsic do in fact reflect superior mental health as would be suggested from the above findings, then Allport's hypothesis that intrinsic religion is conducive to mental health will have been supported and the corner-stone will have been laid for testing the direction of that established relationship in the later steps. Before proceeding to the problem of the direction of the relationship however, Step II is needed to complete the foundation. The reason why this is necessary is because the first step merely establishes the fact that intrinsic religion is more associated with mental health than is extrinsic religion. It does not provide any support that intrinsic religion is more closely associated with mental health than is no religion. Thus, the next step

in empirically examining Allport's hypothesis that intrinsic religion is actually "conducive" to mental health is to determine whether or not intrinsic religionists have superior mental health when compared to those who do not embrace religion; for if intrinsic religion facilitates better mental health, as Allport suggests, then intrinsic religionists should not only have better mental health than extrinsic religionists but should also have better mental health than nonreligionists.

Step II

The test results for Step II, which are summarized in Table 32 of Chapter VI, provide strong support for the hypothesis that intrinsic religionists can be differentiated from nonreligionists on the basis of mental health criteria ($p = .0000$) with the intrinsic religionists consistently scoring in the direction of better mental health. The mental health criteria referred to here are the same mental health variables discussed in the previous step. Thus, the intrinsic religionist when compared to the nonreligionist scores in the direction of:

- i) more time competence
- ii) more clearly defined life goals
- iii) more fulfillment in life
- iv) more self-worth
- v) more highly integrated personality
- vi) more unified personality
- vii) feeling more loved
- viii) more past forgiveness
- ix) more acceptable meaning for the present
- x) more hope for the future

- i) less self-criticism
- ii) less general maladjustment
- iii) less disorder of personality
- iv) less neurosis
- v) less stress

The above findings that intrinsic religionists score in the direction of better mental health as compared to nonreligionists now completes the foundation for the following steps. Empirical

evidence has thus shown the intrinsic religionists to have superior mental health scores compared to both extrinsic religionists (Step I) and nonreligionists (Step II). This finding is an essential prerequisite if the hypothesized causal relationship between intrinsic religion and mental health is true; for if intrinsic religion does indeed enhance or facilitate mental health, then the intrinsic religionists would have superior mental health scores compared to both extrinsics and nonreligionists.

Having established that a strong positive relationship exists between intrinsic religion and mental health in Steps I and II, the next step in empirically testing Allport's hypothesis that intrinsic religion is conducive to mental health is accomplished by testing his rationale that explains why intrinsic religion is expected to enhance mental health. This is undertaken in Step III.

Step III

According to Allport's rationale, intrinsic religion is conducive to mental health because it is both preventative and therapeutic. The salient variables of Allport's rationale as to why intrinsic religion is preventative and therapeutic were extracted from his rationale and used to differentiate intrinsics from both extrinsics and nonreligionists. Before discussing the results provided in Step III for these attempts to discriminate intrinsics from the two comparison groups on the basis of these salient variables alone, the investigator will first present support for Allport's rationale that was unexpectedly provided by Step I.

In Step I, 19 measures of mental health were used to discriminate intrinsics from extrinsics on the basis of general mental health criteria. These included measures of Allport's eight salient variables. When the Wilks' method was used to select out of the 19 measures the most discriminating combination of variables that best differentiated intrinsics from extrinsics, the combination of measures that were chosen were precisely those from Allport's rationale as to why intrinsic religion is expected to be preventative, plus one additional measure (SC). All of Allport's salient "preventative variables" were included (goals, personality integration, personality unity and stress), and the function thus composed of the preventative variables plus one

self-criticism score was able to clearly differentiate between the groups ($p = .0000$) and correctly classified 85 of the 96 subjects this reflects an accuracy level of 89%. On all the measures the intrinsics scored in the direction predicted by Allport's rationale.

The findings of Step III provide further support for Allport's rationale. Intrinsic religionists were clearly differentiated from both extrinsics (Table 33) and nonreligionists (Table 34) on the basis of his rationale, with the intrinsics consistently scoring in the expected direction. As may be suspected from the unexpected finding of Step I, most of the differentiation between intrinsics and the two comparison groups was achieved by the salient "preventative variables" rather than by the salient "therapeutic variables". The "preventative variables" alone were able to discriminate between the groups with accuracy levels ranging from 82% to 84% whereas the therapeutic variables alone failed to discriminate intrinsics from nonreligionists and only differentiated intrinsics from extrinsics with 65% accuracy.

Another finding from the discriminant analyses at this third step, which provides additional support for Allport's rationale for intrinsic religion being preventative, is provided by the Wilks analyses summarized in Table 33. When the Wilks method chose the best discriminating combination of variables from the

total list of preventative and therapeutic variables, it selected all of the "preventative variables" plus one therapeutic measure. When the Wilks was required to select the most discriminating combination of variables from the "preventative variables" alone, it again chose all of the "preventative variables". This not only indicates that the "preventative variables" clearly differentiate intrinsic religionists from extrinsic religionists but furthermore indicates that they discriminate best when they are all present, working together.

The Wilks analyses involving the differentiation of intrinsics from nonreligionists (see Table 34) showed the same trend as did the above analyses but in each of the comparable Wilks analyses one of the "preventative variables" (personality unity) was not required to maximize the group differences.

It may be apparent to the careful observer that in Step II and in the present step, the group discriminations between intrinsics and nonreligionists are not as sharp as those between intrinsics and extrinsics. The reason for this may be due to the fact that the nonreligious group in the present study was a relatively loosely defined group. The reader will recall that in order to obtain a large enough sample for the analysis, the investigator had to use 40% cut-offs rather than the conventional 50% cut-offs in the derivation of the nonreligious group.

This change was expected to decrease the distinctiveness of the nonreligious group. There is evidence that, in fact, it did decrease the distinctiveness of the nonreligious group for over half of the nonreligious subjects (10/17) would have been excluded from the group if the 50% cut-off level had been adhered to. The second indication of decreased distinctiveness is that less than half of the 17 nonreligionists (8/17) described themselves as definitely not religious on Self-Report item #8. The third piece of evidence is that five of the 17 "nonreligionists" had church affiliations.

The investigator would have liked to have been able to purify his nonreligious group but his small sample size could not tolerate such purification as he would have ended up with a sample of seven or fewer nonreligionists. This points to the necessity of some future study either obtaining a larger general sample than did the present study or of sampling more nonchurch groups in order to obtain an adequate number of the more rigorously defined nonreligionists. Out of the 211 subjects who completed the questionnaires in the present study, only seven subjects which is 3% of the sample would have qualified as nonreligious by the conventional 50% cut-off criterion.

Step IV

In the previous three steps, Allport's hypothesis that intrinsic religion is conducive to mental health has received strong and consistent support. Steps I and II showed that intrinsic religionists have superior mental health scores as compared to both extrinsic religionists and nonreligionists. Step III, with substantial unexpected help from Step I, provided support for the rationale proposed by Allport to account for the strong association between intrinsic religion and better mental health. This rationale is based on the assumption that intrinsic religion is conducive to mental health because it is preventative and therapeutic. While support was given to Allport's general rationale including both the preventative and therapeutic effects of intrinsic faith, the strongest support was given to Allport's rationale for intrinsic religion being "preventative".

The findings of the first three steps together provide convincing support for Allport's rationale for the direction of the positive relationship between intrinsic religion and mental health. This evidence is not conclusive however, for there is still the possibility that while Allport's rationale is supported, the superior mental health actually precedes the development of intrinsic faith. Perhaps as suggested earlier, the superior mental health may, in fact, be a prerequisite for developing an intrinsic faith. It is feasible that only well integrated and

well unified persons who are well adjusted can develop an intrinsic orientation in the first place whereas poorly integrated and poorly unified persons who are not as well adjusted cannot advance past an extrinsic level in religion. Thus, the superior mental health may actually be a prerequisite for developing an intrinsic faith rather than the intrinsic faith enhancing the better mental health. This would not only explain the intrinsic group's superior mental health scores but it could also account for Allport's rationale being supported, i.e., the intrinsics were more developed individuals to begin with and such elements as are predicted by Allport's rationale are simply associated with the higher developed personalities.

Step IV investigated this possibility. It first determined that there were, in fact, intrinsics who were significantly more poorly integrated and more poorly unified relative to their extrinsic counterparts. This finding eliminates the possibility suggested above that only well integrated and well unified persons can develop an intrinsic orientation. Second, it demonstrated that poorly integrated and poorly unified intrinsics could be differentiated with 100% accuracy from well integrated and well unified extrinsic religionists on the basis of mental health criteria with the intrinsics scoring in the direction of better mental health on 11 of the 13 discriminating measures (see Table 35). The same groups could be differentiated with a high level of accuracy on

the basis of positive mental health measures only (88% accuracy) and on the basis of negative mental health measures only (88% to 94% accuracy). While the intrinsics again scored in the direction of better mental health on both of these criteria, on the negative mental health measures they were superior on all scores, whereas on the positive mental health measures they were superior on only five of the seven measures for which direction could be determined. To briefly summarize, the intrinsics, though poorly integrated and poorly unified relative to their extrinsic counterparts still score in the direction of superior mental health when compared to the extrinsics.

When the findings presented in the above paragraph are applied to the "chicken or the egg problem" of which came first the intrinsic faith or the well developed personality we may conclude the following two points:

- A well integrated and well unified personality is not a prerequisite for the development of an intrinsic faith.
- A well integrated and well unified personality does not account for the superior mental health associated with intrinsic religion.

When these two points are, in turn, applied to Allport's hypothesis, they provide impressive support for the direction of the relationship that he predicts, namely that the intrinsic

religion is conducive to better mental health and not that the better mental health (here epitomized by high levels of personality integration and personality unity) enables the development of an intrinsic faith.

Thus far, the results of the first four steps have provided empirical evidence

- that intrinsic religion is associated with superior mental health (Steps I & II).
- that Allport's rationale for this positive association is supported (Steps I & III).
- and that the direction of the relationship predicted by Allport is supported (Step IV).

While these empirical findings provide considerable support for Allport's hypotheses that intrinsic religion is conducive to mental health, the support is still not conclusive:

The fact of a positive relationship has been established, the rationale for the relationship has been supported, and the direction of the relationship has received support; but, the word conducive implies cause and this has not been established. It could be that intrinsic faith and better mental health are not causally related variables but rather covary with a mutual concomitant variable.

This possibility was considered by Nelson (1980) who examined two possible concomitant variables "level of education" and "social class". Both of these were eliminated as possible confounding variables by the evidence she presented. This has already been discussed in Chapter II of the present paper. From her research into the possibility of Social class being a concomitant variable she discovered that "number of life changes" was clearly related to psychiatric symptomology. This alerted her to the possibility that any life goal, religious or otherwise, could be responsible for the better mental health found in the intrinsics.

Intrinsic religion clearly reduces the number of changes in life by providing long term goals towards which the intrinsics are always striving in a constant direction. These goals not only reduce the number of change events in a person's life but also contribute to mental health by enhancing the processes of personality integration to stress. Within this context, Nelson was alerted to the possibility that any long term goal, religious or otherwise, could provide the same stabilizing, integrating and unifying effect on the personality as does intrinsic faith and in turn make the person more stress resistant. This possibility is explored in Step V.

Step V

The results for Step V are summarized in Table 36. These show that the intrinsic religionists could be differentiated from nonreligionists when matched for goals with the intrinsic obtaining the better mental health scores on 11 of the 16 measures of mental health. As in the previous Steps, when the groups were discriminated on the basis of positive mental health and negative mental health separately, best discrimination (100% accuracy) was made on the basis of the measures of negative mental health with the intrinsic superior on four of the five discriminating measures.

When these findings are applied to the question of whether any goal, religious or otherwise, could provide the same mental health benefits as intrinsic religion the answer appears to be "NO". In the present step the subjects were matched for the degree to which their lives were directed by definite goals. The intrinsic and nonreligionists had equally well or equally poorly defined life goals the only difference being that the intrinsic's life goal was his faith whereas the nonreligionists' life goal included any type of life goal other than religion. In spite of equivalent goals however, the intrinsic still scored in the direction of superior mental health. From this one may conclude that "life goals" do not account for the superior scores in mental health obtained by the intrinsic religionists.

CONCLUSION

The findings of the present research provides empirical support for Allport's hypothesized relationship in the following ways:

- i) They demonstrate that intrinsic religion is clearly associated with superior mental health (Steps I and II).
- ii) They provide support for Allport's rationale that accounts for this positive association (Steps I and III).
- iii) They provide empirical evidence for the direction of the relationship predicted by Allport.
- iv) And finally, while they provide no direct evidence of cause, they discredit alternative explanations to that of Allport's for the cause of the relationship, e.g.,;
 - excessive defensiveness on the part of the intrinsics
 - a well integrated and well unified personality
 - level of education
 - social class
 - life goals

In addition to the above evidence directly obtained from the 5 preceding steps in Allport's hypothesis, an examination of the results show that the intrinsics consistently obtain scores which reflect greater resistance to stress when compared to all comparison groups. This finding, gleaned from the previous 5 steps, is summarized in Table 37. Inspection of the Table reveals that the intrinsics consistently reported themselves to experience less stress per stress factor (S_2) regardless of the number of stress factors

TABLE 37
Differences Between Groups on Three Measures of Stress

Groups Being Compared	Stress	Groups	M	SD	Wilks Lambda	F	p
Intrinsics (I) ($n = 48$)	S ₁	I	11.13	7.88	.897	10.82	.001
		E	17.86	11.84			
Versus	S ₂	I	2.14	0.84	.801	23.33	.0000
		E	2.86	0.61			
Extrinsics (E) ($n = 48$)	S ₃	I	26.19	23.74	.854	16.13	.0001
		E	51.69	37.03			
Intrinsics (I) ($n = 17$)	S ₁	I	13.41	6.31	.985	.50	NS
		Non	15.12	7.68			
Versus	S ₂	I	1.95	.73	.805	7.45	.009
		Non	2.69	.82			
Nonreligionists (Non) ($n = 17$)	S ₃	I	27.42	17.23	.890	3.95	.05
		Non	42.12	25.16			
Extrinsics (E) ($n = 17$)	S ₁	E	15.71	8.12	.981	.6	NS
		Non	18.24	10.65			
Versus	S ₂	E	29.33	17.84	.988	.31	NS
		Non	32.78	14.07			
Nonreligionists (Non) ($n = 17$)	S ₃	E	41.94	25.03	.978	.71	NS
		Non	50.06	30.75			
Low Integration- Unity Intrinsics(I) ($n = 8$)	S ₁	I	7.13	3.48	.751	4.64	.05
		E	19.86	16.37			
Versus	S ₂	I	1.91	1.10	.705	5.86	.02
		E	2.97	.57			
High Integration- Unity Extrinsics(E) ($n = 8$)	S ₃	I	18.00	14.61	.706	5.83	.03
		E	57.13	43.43			
Intrinsics (Matched Goals)	S ₁	I	15.77	7.30	.976	.58	NS
		Non	13.61	7.05			
Versus	S ₂	I	1.93	.72	.744	8.25	.008
		Non	2.81	.85			
Nonreligionists (Matched Goals)	S ₃	I	32.62	20.38	.971	.72	NS
		Non	40.23	25.21			

experienced (S_1). In some comparisons, they actually experienced more stress factors, when compared to nonreligionists for example. Table 37 also reflects the fact that extrinsic religionists did not differ to nonreligionists on any of the measures of Stress.

This observation that intrinsics consistently report themselves to experience less Stress per factor regardless of the number of stress factors experienced provides additional support for Allport's rationale as to why intrinsic religion is conducive to mental health.

Then the above-mentioned five types of evidence are considered collectively, while they do not prove causality, they provide support for Allport's hypothesis that intrinsic religion is conducive to mental health.

Having thus established support for Allport's hypothesis, before terminating this paper, the present investigator wishes to further clarify the relationship between religion and "direction and purpose in life". This will be accomplished in the sixth supplementary step of this paper.

Step VI - A Supplementary Step

The results for this step which are summarized on page 217 reveal that intrinsic religionists consistently score in the direction of having more "direction and purpose in life" than both extrinsic religionists and nonreligionists. The extrinsics, on the other hand do not differ from the nonreligious in "direction and purpose in life". Interpreted this means that religion does not necessarily provide "direction and purpose in life"; but rather, that a particular orientation in religion (intrinsic) is positively associated with "direction and purpose in life". This has direct implications for those who may seek "direction and purpose in life" through religion.

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APPENDIX I

5

6

7



.82 North Arm,
E. Aylmer, Que.
J9H-1T7

Dear

My name is Ernie Nelson and I am presently carrying out a study on the relationship between religious orientation and certain personality variables for my doctoral dissertation at the University of Ottawa.

The study applies to males only between the ages of 16 and 100, and simply requires them to complete questionnaires in their homes and return them to myself in self-addressed and pre-stamped envelopes, which will be provided.

Personal names are not required but telephone numbers are in order to trace lost questionnaires as it is very important that all questionnaires be returned. Also, it is necessary to know one's age in order to analyze the results. Please be assured, however, that all identifying information will be kept confidential.

If your congregation or group is able to participate in this study, all that would be required of you is to have it announced to your group asking for as many males as possible between the ages of 16 and 100 to volunteer. Trained research assistants would then hand out the questionnaire packages at the close of the session in which the study was announced.

I would like to collect this data within the next few weeks and would like to know if your group is able to participate, and if so, when it would be most convenient for my research team to bring the questionnaires to your group. To indicate whether or not you can participate, please fill out the enclosed form and return in the self-addressed envelop or call me or my research team collect any evening at the following number; 1-819-684-4678. Ask to speak to any of the following : Ernie Nelson, Ruth Nelson, Bonnie Nelson, or Laura Mattson.

For any group that is interested, I would be pleased to share the overall results of the study with them, when the study is complete.

I look forward to hearing from you.

Yours sincerely,

Ernie L. Nelson

NAME OF CONGREGATION OR GROUP:.....

ADDRESS:.....

TELEPHONE:.....

CONTACT PERSON:.....

WE ARE ABLE TO PARTICIPATE IN YOUR RESEARCH PROJECT YES

NO

APPENDIX II

For this study, the Religious Orientation Scale was entitled "Inquiry Concerning Social and Religious Values". The five items marked by asterisks are not part of the ROS, and were not included in the analysis of the present paper.

INQUIRY CONCERNING SOCIAL AND RELIGIOUS VIEWS

The following items deal with various types of religious ideas and practices, and social opinions. We should like to find out how common they are.

Please indicate the response you prefer, or most closely agree with, by putting an X in the box, in the right margin, that corresponds to your choice.

If none of the choices expresses exactly how you feel, then indicate the one which is closest to your own views. If no choice is possible you may omit the item.

There are no "right" or "wrong" choices. There will be many people who will agree with all possible alternative answers.

1. Religion is especially important to me because it answers many questions about the meaning of life.
 - a) definitely disagree
 - b) tend to disagree
 - c) tend to agree
 - d) definitely agree

a
b
c
d

2. One reason for my being a church member is that such membership helps to establish a person in the community.
 - a) definitely not true
 - b) tends not to be true
 - c) tends to be true
 - d) definitely true

a
b
c
d

- * 3. During the last three months I have participated in family prayers or some other form of family worship (don't include grace)
 - a) not at all
 - b) one or more times but not every week
 - c) weekly
 - d) twice or more a week but not every day
 - e) once daily

a
b
c
d
e

4. Occasionally I find it necessary to compromise my religious beliefs in order to protect my social and economic well-being.
 - a) definitely disagree
 - b) tend to disagree
 - c) tend to agree
 - d) definitely agree

a
b
c
d

- * 5. During the last three months I read the bible or other religious material.
- a) Not at all
 - b) One or more times but not every week
 - c) Once a week
 - d) Two or more times weekly but not every day
 - e) Once daily or oftener
6. It is important to me to spend periods of time in private religious thought and meditation
- a) frequently true
 - b) occasionally true
 - c) rarely true
 - d) never true
7. If I were to join a church group I would prefer to join (1) a Bible Study group or (2) a social fellowship
- a) I would prefer to join (1)
 - b) I probably would prefer (1)
 - c) I probably would prefer (2)
 - d) I would prefer to join (2)
8. Quite often I have been keenly aware of the presence of God or the Divine Being.
- a) definitely not true
 - b) tends not to be true
 - c) tends to be true
 - d) definitely true
- * 9. During the last three months I listened to religious radio or T.V. programs
- a) not at all
 - b) One or more times but not every week
 - c) Once a week
 - d) Two or more times weekly but not every day
 - e) Once daily or oftener
10. What religion offers me most is comfort when sorrows and misfortune strike.
- a) I definitely disagree
 - b) I tend to disagree
 - c) I tend to agree
 - d) I definitely agree
11. It doesn't matter so much what I believe so long as I lead a moral life.
- a) I definitely disagree
 - b) I tend to disagree
 - c) I tend to agree
 - d) I definitely agree

a
b
c
d
e

a
b
c
d

a
b
c
d

a
b
c
d

a
b
c
d
e

a
b
c
d

a
b
c
d



12. I pray chiefly because I have been taught to pray.
- a) definitely true of me
 - b) tends to be true
 - c) tends not to be true
 - d) definitely not true of me

a
b
c
d

13. The church is most important as a place to formulate good social relationships.
- a) I definitely disagree
 - b) I tend to disagree
 - c) I tend to agree
 - d) I definitely agree

a
b
c
d

- * 14. During the last three months I attended religious services
- a) not at all
 - b) One or more times but not every week
 - c) Once a week
 - d) Twice a week
 - e) At least three times weekly or oftener

a
b
c
d
e

15. My religious beliefs are what really lie behind my whole approach to life.
- a) this is definitely not so
 - b) probably not so
 - c) probably so
 - d) definitely so

a
b
c
d

16. The purpose of prayer is to secure a happy and peaceful life.
- a) I definitely disagree
 - b) I tend to disagree
 - c) I tend to agree
 - d) I definitely agree

a
b
c
d

17. Although I believe in my religion, I feel there are many more important things in my life.
- a) I definitely disagree
 - b) I tend to disagree
 - c) I tend to agree
 - d) I definitely agree

a
b
c
d

- * 18. During the last three months I prayed privately (Don't include table grace)
- a) Not at all
 - b) one or more times but not every week
 - c) Once a week
 - d) Once a day
 - e) two or more times daily

a
b
c
d
e

19. I read literature about my faith (or church)

- a) frequently
- b) occasionally
- c) rarely
- d) never

a
b
c
d

20. I try hard to carry my religion over into all my other dealings in life.

- a) I definitely disagree
- b) I tend to disagree
- c) I tend to agree
- d) I definitely agree

a
b
c
d

21. The prayers I say when I am alone carry as much meaning and personal emotion as those said by me during services

- a) almost never
- b) sometimes
- c) usually
- d) almost always

a
b
c
d

22. A primary reason for my interest in religion is that my church is a congenial social activity

- a) definitely not true of me
- b) tends not to be true
- c) tends to be true
- d) definitely true of me

a
b
c
d

23. If not prevented by unavoidable circumstances, I attend church:

- a) more than once a week
- b) about once a week
- c) two or three times a month
- d) less than once a month

a
b
c
d

24. Although I am a religious person I refuse to let religious consideration influence my everyday affairs.

- a) definitely not true of me
- b) tends not to be true
- c) tends to be true
- d) clearly true in my case

a
b
c
d

25. The primary purpose of prayer is to gain relief and protection.

- a) I definitely agree
- b) I tend to agree
- c) I tend to disagree
- d) I definitely disagree

a
b
c
d