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THE UNIVERSITY OF ALBERTA

RELIGIOSITY, RATIONALITY, AND STRESS

by

DONNA M. ZINGLE

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled RELIGIOSITY, RATIONALITY, AND STRESS submitted by DONNA M. ZINGLE in partial fulfilment of the requirements for the degree of MASTER OF EDUCATION in COUNSELLING PSYCHOLOGY.

Supervisor

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ABSTRACT

A total of 352 individuals participated in this research project. Three questionnaires were administered: Batson's three dimensional measure of religiosity (Means, End and Quest) was used as the independent variable. A measure of irrational beliefs (AII), and two measures of stress (State and Trait Anxiety) were the dependent variables. Data from each of the three religious orientation groups were analyzed with regard to the relationship between religiosity and rationality and between religiosity and the two measures of stress using a one way analysis of variance and Scheffe Post-hoc pairwise contrasts.

The findings demonstrate clearly that it is the orientation one has to religion, rather than religiosity per se, that is the determining factor as to whether or not an individual is irrational and also whether or not one is highly stressed. Individuals who are deeply committed to their faith and who live their faith (End orientation) are significantly less stressed and significantly less irrational than individuals who are superficial in their religious beliefs (Means orientation) or who are constantly questioning their religious beliefs (Quest orientation).

Results of this study suggest the need for psychologists to examine the issue of religious values within the psychotherapeutic setting. Rather than work around or neglect religious beliefs, psychologists should consider gaining insight into these religious beliefs and to employ this support system as a tool in therapy. Furthermore it is evident, from the results of this study, that any researcher investigating the impact of religiosity on other variables should use a

measure that takes into account the concept of different orientations to religiosity rather than using unidimensional measures such as church attendance.

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CHAPTER 1

INTRODUCTION

The fundamental assumption underlying cognitive psychology is that psychopathology is the result of distorted, maladaptive and irrational thoughts, beliefs and attitudes. Ellis, one of the earliest psychologists to take this view in his theory of Rational Emotive Therapy (R.E.T.), contends that human emotions are largely the result of thoughts and beliefs that individuals hold regarding situations, others and themselves.

Cognitive psychology takes as its main premise a contention which can be traced as far back as the stoic Epictetus (60 A.D.) that "men are not disturbed by things, but by the views they take of them". A classic treatise on the ability of the human mind and spirit to use control over cognitive processes is Frankl's book Man's Search For Meaning. His attitude was "...no matter what the world does to us, no matter what the nature of external events may be, we always retain the power to think about them in whatever way we wish" (Allen, 1983, p.124).

Of recent concern to some cognitive psychologists has been the effect of stress and anxiety on mental and physical health. A recent study of teachers (Anderson, 1985) has found a strong correlation between level of stress and possession of irrational ideas (as defined by R.E.T.). Ellis contends individuals create their own feelings of st ess by the kinds of beliefs they hold. Beliefs that Ellis feels result in disturbed emotionality or stress are those he calls irrational. His ABC theory of personality (Ellis, 1960; 1962; 1977;

1984b) holds that it is rarely the stimulus A which causes the emotional reaction C in the individual. Rather it is usually B, the individual's beliefs about or interpretation of A, that determine the reaction. People have innumerable beliefs (B), that is cognitions, thoughts or ideas, about their Activating events (A). These beliefs tend directly to exert strong influences on their cognitive, emotional and behavioral consequences (C). Thus B is seen as a mediator between A and C. People therefore prejudicially view or experience A in the light of their emotional consequences C (desires, preferences, disturbances, motivations). According to Ellis (1984b), humans virtually never experience A without B and C but also rarely experience B and C without A. Human emotion therefore is considered to be essentially an evaluative cognitive process which is determined and sustained by the individual's beliefs through a form of self talk. Anxiety, disturbed emotionality and debilitating stress result from self-talk that is based on irrational beliefs, that is beliefs that are illogical, unempirical and unrealistic. Ellis (1984b) defines irrational beliefs as those cognitions, ideas and philosophies that lead to people's "absolutistic" demands, commands, and necessities. Ellis further argues that irrational thinking is synonymous with religious thinking (Ellis, 1977; 1978; 1980; 1981; Wessler, 1984). Although Ellis alleges (1980; 1981; 1984a; 1984b) that R.E.T. does not attack all religious hypotheses but only those that are "absolutistic", he lists as dogmatic and "absolutistic" in character religions such as Catholic, Protestant and any others which include "...worship of divine or superhuman powers" (Ellis, 1984a, p.266).

While Ellis clings tenaciously to this viewpoint, many other writers and researchers have shown that devoutly religious people experience less anxiety and stress (Sturgeon & Hamley, 1979; Lovekin & Maloney, 1977; Baker & Gorsuch, 1982); less fear of death (Templer, 1972; Downey, 1984; Baker & Gorsuch, 1982; Nelson & Cantrell, 1980; Spilka, Hood Jr., & Gorsuch, 1985); a lower rate of suicide (Stack, 1983a, 1983b; Stark, Doyle & Rushing, 1983; Kilbourne & Richardson, 1984); a clearer purpose in life (Crandall & Rasmussen, 1975; Doerkson, 1978; Hague, 1978); significantly lower substance abuse (i.e., drugs, alcohol) and better familial relationships (Kilbourne & Richardson, 1984) than their non religious or superficially religious counterparts.

A strange paradox thus becomes evident. On one side of the argument is Ellis who conjectures that religious people hold irrational ideas and thus should be highly stressed. In contrast to views such as that of Ellis are the observations of a number of researchers whose findings suggest that religious individuals experience less stress than their less religious counterparts.

In attempting to understand this paradox one wonders if the definition of religiosity might be the problem. Batson & Ventis (1982); Baker & Gorsuch (1982); Bergin (1983); Gorsuch (1984); Donahue (1985) state the reason we have conflicting reports on religion and various aspects of mental health (such as stress and anxiety) is that some researchers have not accounted for different levels of religiosity. Batson (1976; Darley & Batson, 1973; Batson & Ventis, 1982) suggests three orientations to religiosity: "Means", the superficially religious persons who use religion as means to selfish ends; "End", those who are

deeply committed to and live their faith; and "Quest", those who are in a continual search for deeper meaning and commitment. One might conjecture that deeply religious (end dimension) people who have perfectionist ideas, could score high on the irrational beliefs measure but might not sustain the irrational beliefs as they have a supreme Being on whom they can depend and thus are less likely to experience the ultimate level of anxiety that leads to dysfunctional stress in their lives. On the other hand, one might surmise that superficially religious (means dimension) people who score high on irrational beliefs may sustain the irrational beliefs thus experiencing debilitating stress. Furthermore one could postulate that people who are not satisfied with accepting a specific religious dogma but are in a continual search for deeper meaning in life (quest dimension) may not score as high on irrational ideas as end dimension people, but may score higher on a measure of stress.

As religion is a part of many, if not the lives of most people, particularily in North America where the vast majority of people adhere to a belief in God and where organized religion is a significant part of public life, it could be seen as important to examine this issue. Thus the purpose of this study was to gain insight into this problem and hopefully resolve the apparent paradox between the research facts and the contention of Ellis that religiosity implies irrationality and stress.

Stated more explicitly, the purpose of this study was to attempt to answer the following questions:

(1) What is the relationship between each of the three religious orientations: Means, End and Quest to irrational beliefs.

(2) What is the relationship between each of the three religious orientations: Means, End and Quest to levels of stress?

CHAPTER 2

THEORY AND RELATED LITERATURE

Introduction

In order to answer the questions posed in the introduction of this thesis the relationships that exist among religiosity, rationality and stress will be discussed. To take into account each of the possible relationships among these variables the relevant literature will be discussed under the following subheadings: rationality and stress, religiosity and stress, and rationality and religiosity. Also, as Batson's multidimensional measure of religiosity will be used in this study a rationale for its use will be presented.

Relationship Between Rationality and Stress

A major problem in understanding the dynamics of stress is that there is not a commonly accepted definition (Moracco & McFadden, 1982), therefore how one conceptualizes stress has significant implications for research. In this study the emphasis was on stress as a negative reaction. Some authors incorporate both negative and positive reactions into their concept of stress. Selye (1980), for example distinguishes between eustress, the pleasant stress of positive events and distress, the damaging stress of negative events. However such conceptions tend to equate stress with arousal and tend to disregard the fact that a positive event may actually cause distress and be detrimental if an individual perceives he or she lacks the skills to cope with that event (Heibert, 1983).

Furthermore it is important to clarify the perspective of stress that is assumed. For example, the stimulus perspective focuses on certain stressors (situations) as inherently stress inducing thus the stress response is viewed as being the direct result of the stressor (situation). The problem with viewing stress from this perspective is that it does not account for the fact that different individuals respond in different ways to an identical situation. A second view, the response perspective focuses on the stress response and coping strategies of the individual thus the situation is viewed as a stressor only when such a response occurs. However, this perspective does not account for why some situations are experienced across individuals as more stressful than others. The focus in this study is on the third alternative, the interactional perspective, which is seen as an interface between the first two perspectives. That is psychological stress is viewed as residing neither in the situation nor the person but rather depends on a transaction between the two (Lazarus, 1981). This perspective is held by many other authors, particularly those of a cognitive orientation, such as Ellis (1978) and Michenbaum (1975). Thus cognitive strategies from the interactional perspective are aimed at helping people "..alter their negative, self-castigating, and self-denigrating thought patterns so that they become more positive, reality oriented, and self supporting" (Heibert, 1986, p.4).

The importance of the role of cognitive processes in the experience and control of stress has been demonstrated through innumerable studies. Michenbaum (1975) reviews several studies that demonstrate how a specific emotion experienced by a person depends not only on his state

of physiological arousal, but also on the way in which the person interprets or labels this state. Sarason (1984), measuring test anxiety in college students, found that cognitive interference was an important factor in lowering the performance of highly test anxious people. In a review of literature Folkman (1984) concludes "...generalized beliefs about control and situational appraisals of control can alter the extent to which an encounter is appraised as threatening and/or challenging and can influence coping" (p.850). That is, stress arises from how the person appraises an event and adapts to it. Lazarus (1981) proposes that it is not so much the major life changes as much as our interpretation of the everyday annoyances or hassles of life that contribute in a significant way to illness and depression. Beck and Rush (1973), studying mental hospital patients with "anxiety and phobic neuroses" found this type of patient, as opposed to normal subjects, consistently "...magnifies the possibility and intensity of unpleasant outcomes in his cognition of the situation" (p.76). Using Ellis' terminology these authors conclude that the "..resulting tendency to catastrophize develops" (p.76).

A major paraclete of the cognitive approach is Ellis (1960, 1962, 1980, 1984a, 1984b). The central theme of his Rational-Emotive therapy (Ellis, 1962) is that man's

> emotional or psychological disturbances are largely a result of his thinking illogically or irrationally, and that he can rid himself of most of his emotional or mental unhappiness, ineffectuality and disturbance if he learns to maximize his rational and minimize his irrational thinking (p.36).

Numerous studies have demonstrated a clear relationship between the possession of irrational beliefs (as defined by Ellis) and stress. Anderson (1985) found a positive relationship between irrational beliefs and perceived job related stress in a study of teachers. Taft (1968) discovered a strong positive relationship between possession of irrational beliefs and several measures of anxiety. A team of researchers (Schill & Ramanaith, 1982) reported that college students who endorsed fewer irrational beliefs as defined by Ellis coped more efficiently with stressful life events. In a study using inmates at a federal correctional institute, Evans and Picano (1984) found support for Ellis' contention that irrational beliefs are associated with maladjustment. Hamberger and Lohr (1984) and Suinn and Deffenbacher (1980) review and report several studies that support Ellis' assumption that irrational beliefs (through self verbalizations) are related to emotional upset and anxiety related behavior. A study by Nolan, Boyd and Greiger (1983) adds validity to Ellis' assertion that the ability to tolerate frustration depends primarily on the beliefs people hold about frustrating circumstances rather than the event or circumstances themselves. Newmark, Freking, Cook and Newmark (1973) in studying neurotic personality disorders discovered that the neurotic group showed significantly higher endorsement of irrational beliefs than did the normal group. Furthermore, Barabaz and Barabaz (1981) found that R.E.T. trained subjects experienced less stress as measured by lower skin conductance responses to test anxiety.

One could conclude, with a high degree of certainty from an examination of the literature on rationality and stress reviewed here,

that there is a clear positive relationship between possession of irrational beliefs and stress. In the introduction of this thesis it was stated that Ellis declares irrational thinking as synonymous with religious thinking. If Ellis is correct in his assumption one could reasonably assume that religious people should also be highly stressed. However, as previously stated, other researchers and writers have presented evidence that contradicts the negative view Ellis espouses concerning religion. To help resolve this apparent dilemma the relationships: between religiosity and stress, and also between rationality and religiosity will be examined.

Relationship Between Religiosity and Stress

As was stated earlier there is contradiction among writers concerning the relationship between religiosity and stress. There has in fact been a perennial concern in the psychology of religion as to whether or not religion exerts a positive or negative influence on the lives of individuals. On the positive side are researchers such as Ratsoy (1986) who through examination of the current understandings about the nature of stress, its sources and its long term consequences, maintains

> certain classes of people are known to be well adjusted, to enjoy remarkably good health and longevity; these include members of certain religious groups, symphony conductors, and successful career women. Apparently pride of accomplishment and faith play a role in diminishing the ill effects of stress (p.7-8).

On the other hand are those who subscribe to the negative effects theory. Ellis (1962, 1977, 1978, 1981, 1983, 1984a, 1984b) like Freud

(Batson & Ventis, 1982) maintains that religion is not only associated with mental illness, ~~but~~ is mental illness and agrees with Freud (1964) in calling it a "universal obsessional neurosis of mankind". Along the same line, deprivation theorists (Hague, 1986) reason that people engage in "religious activities as a kind of compensation for...personal feelings of inferiority" (p.20). Thus we have writers firmly entrenched at opposite ends of the pole, arguing that religion plays either a beneficial or detrimental role in the lives of people. A considerable amount of research has been conducted to attempt to prove support for both positions. A review of this research follows.

Examination of empirical studies exploring the relationship between religion and mental health leads one to question the negative view expressed by Freud and Ellis. For example, Bergin (1983) in examining the relationship between religion and mental health concludes that numerous studies are consistent in indicating that "conversion" and related intense religious experiences are therapeutic as they significantly reduce pathological symptoms. Furthermore he suggests gradual converts to more conventional religiosity are sometimes superior in their life adjustment, and the effects of psychotherapy are not any better by comparison. Similarly Kilbourne & Richardson (1984) examining the issue of whether religion and psychotherapy were competitors in the therapeutic marketplace conclude that

> Treatment and conversion function alike to counteract debilitating feelings of demoralization with feelings of self mastery, hope and purpose and provide a person with a powerful set of positive self-attributions, successful outcomes and new learning experiences. Furthermore, both new religions and psychotherapies provide their followers with a set of

> legitimated, justificatory and excusatory accounts to explain their past, present and future behaviors (p.244).

The support for a relationship between religiosity and varying correlates of stress is voluminous. Shaver, Lenauer, and Sadd (1980) examined the nature of religiousness among 2500 American women and concluded that certainty of beliefs (either strong religiousness or confident nonreligiousness) was associated with good mental and physical health. Utilizing data gathered via the Survey Research Center at Berkeley and the National Opinion Research Center at the University of Chicago, Stark (1971) found that the mentally ill were less religious than the normal controls. Thus Stark concludes that theories that presume psychopathology to be a primary source of ordinary religious commitment are false. Lindenthal, Meyers, Pepper, and Stern (1970) in a study involving a cross section of 938 adults conclude that a measure of psychopathology was found to be negatively correlated with church affiliation, and with church attendance. That is, the more psychologically impaired the individuals were, the less likely they were to attend church or to turn to prayer for support. Paragment, Steel and Tyler (1979) further demonstrated that attendance at religious services was associated with numerous psychosocial benefits and increased personal satisfaction. Furthermore these authors assert that intrinsically motivated members in general manifested more favorable competence attributes and evidenced more feeling of personal control over their lives than less intrinsically motivated members. Ness and Wintrob (1980) in a study of a Pentecostal congregation in Newfoundland noted that the more frequently people engaged in religious activities the less likely they were to report symptoms of emotional distress.

They conclude "...that it is the consistency of participation in religious activity rather than simply the content of involvement, that is predictive of symptom reduction" (p.312).

Nevertheless, Levin and Markides (1986) exhort caution in accepting religious attendance as a measure of religious commitment, particularly with the elderly. Contrary to the results of older studies measuring religious attendance and mental health, these authors discovered that both significant and zero order associations could be explained away by removing the effects of physical capacity with the elderly. These authors suggest that religious attendance, particularly with the elderly may be more an indicator of functional health. In a review of the literature of the effects of religion on behavior Argyll (1985) demonstrates religion does affect the health and happiness of church members: they get divorced less often, claim to be more happily married, are found to be in better health, the suicide rate is one-half that of non-church goers, the level of neuroticism is found to be lower and they evidence less fear of death. Furthermore, results of studies by Pargament and Hahn (1986b) and Pargament (1986a) support the view that people turn to God for help in coping more commonly as a source of support during stress rather than as a moral guide or as an antidote to an unjust world.

Examination of the literature on specific correlates of stress with religiosity gives us additional, albiet sometimes conflicting, evidence. Stack (1983a, 1983b); Stark, Doyle & Rushing (1983); and Kilbourne & Richardson (1984) provide clear evidence that individuals with a high level of commitment to religious beliefs have lower suicide

levels than those with little religious commitment. Moreover Stack (1983a) affirms "...the religious factor tends to be more closely associated with suicide than the rate of unemployment, a control taken from one of the dominant paradigms on suicide" (p.239). Thus to the extent that suicidal tendency is an indication of debilitating stress, the findings of these authors provide convincing evidence that it is the degree of religious commitment rather than religiosity per se that determines whether or not an individual will be severely stressed. Therefore it becomes evident that any research project examining stress and religiosity should control for level of conviction. This present study attempts to do that.

In a review of the literature on the correlation between religiosity and various forms of neuroticism, Francis (1985) reported mixed results. He relates five studies that report religiosity is associated with greater personal stability and adjustment; three studies that associate religiosity with lower self-esteem, greater anxiety and higher neuroticism; and three studies that find no significant correlates in either direction. However, Francis cautions acceptance of some of the results as, when he partialled out sex differences on two studies, what originally looked like a significant positive correlation between religion and neuroticism proved to be simply an artifact of uneven gender distribution in the samples. Therefore as having a significantly higher proportion of females in a research project tends to inflate scores on measures of neuroticism, this researcher will ensure that gender differences are taken into account in this study.

Studies examining death anxiety further present us with conflicting evidence. Templer (1972) and Downey 91984) found that those individuals who have strong religious convictions and attachment, who attend religious functions more frequently, and who interpret the Bible literally have lower death anxiety. Downey (1984) furthermore reported a curvilinear relationship between religiosity and death anxiety. The middle-aged men who were moderately religious evidenced a significantly higher fear of death than did men who were either low or high on religiosity. Downey concludes that these results indicate that the degree of certainty or commitment is more crucial than the nature of conviction. Lending additional support to these studies on death anxiety, and religiosity, Minear and Brush (1980) discovered people who were supportive of the right to commit suicide had anxiety concerning their own death, had more seriously considered suicide, and were much less religiously committed. Therefore as previously stated, any serious study of religiosity should monitor the element of conviction. As a result, degree of religious conviction will be controlled for in this study to further assess the impact.

On the other hand, investigation of mentally ill and normal samples, led Feifel (1959) to conclude that religious subjects in both samples were more fearful of death. Alexander and Alderstein (1959) found both religious and nonreligious individuals evidenced death anxiety, although qualitative differences were found. Janz (1983) discovered that religious attitudes were found to both facilitate and prevent the emotional integration of death, dependent on whether the religious orientation was traditionally or existentially based. Those

individuals whose religious orientation was existential demonstrated better emotional integration of death or in other words less anxiety about death. Surveying the literature tying religion to death, fear and anxiety, Spilka, Hood Jr. and Gorsuch (1985) indicate the great majority (24 out of 36) reported that stronger faith was affiliated with less death concern and fear. Using the dichotomy utilized by Allport and Ross (1967 Kahoe and Dunn (1975), Milton and Spilka (1976), and Patrick (1979) found Extrinsic religiosity positively and Intrinsic religiosity negatively correlated with death anxiety. As these studies point out, it appears that the orientation one has to religion or the way one uses religion determines to a great extent whether or not religion plays a positive or negative influence in one's life. Thus it appears essential that any serious study of religiosity should take into account different ways of being religious. This research project therefore, will use a measure that assesses different orientations to religiosity.

It would seem reasonable to assume that people scoring high on measures that assess "meaning in life" or "self-actualization", would be individuals who would score low on measures of stress. Meaning in life and religious commitment were examined by Crandall and Rasmussen (1975), Doerkson (1978), and Hague (1978). These researchers found a significant positive correlation between these two variables. In addition, research investigating the relationship between a measure of self-actualization and religiosity (Graff & Ladd, 1971) found that measures of self-actualization and religiosity are related to each other. Consequently these studies showing a positive relationship

between religious commitment and "meaning in life" or "self-actualization" provide further support for the contention that people who are deeply committed to their religious beliefs are apt to experience less stress in their lives.

Funk (1956), studying anxiety in a college population found that high anxiety students expressed significantly more religious doubts, more guilt about not living up to their religion and more need for religious consolation than low anxiety students. This would seem to indicate that students who have well defined religious beliefs, or in Funk's terms have fewer religious doubts, are less anxious. However, a more recent study (Watson, Morris, Foster & Hood Jr., 1986) found students at a religious college were less socially anxious than students at a public university, a result contradicting the idea that deeply religious persons are especially sensitive to evaluation by others. Sturgeon and Hamley (1979); Lovekin and Maloney (1977); and Baker and Gorsuch (1982) found that intrinsics came out healthier than extrinsics in studies relating religiosity and trait anxiety. Baker and Gorsuch conclude that "...prior research failing to distinguish these two orientations of religiousness should be questioned" (p.121). Therefore in line with the argument by these authors this variable will be controlled in this study.

In summary, it is evident that there is some conflicting evidence concerning the relationship between religioisty and various correlates of mental health. What is clearly apparent is that whether religion exerts a positive or negative influence on life depends on how one approaches religion. That is, individuals with an intrinsic orientation

to religion, individuals with a high degree of certainty of belief or individuals with a high level of commitment to religious beliefs have been shown to have better mental health and exhibit less anxiety. For example these individuals have been shown to experience less trait anxiety (stress); be less likely to commit suicide, be mentally ill, get divorced, or experience death anxiety than their extrinsic or less-committed counterparts.

Thus it becomes abundantly clear that further research must take into account different orientations of religiosity. It is not acceptable to simply use a broad category of religious versus non-religious. Accordingly, the present study has as a central feature a measure of religiosity which taps three dimensions of commitment.

Relationship Between Rationality and Religiosity

It will be recalled that religious beliefs, according to Ellis (1962, 1977, 1978, 1981, 1983, 1984a, 1984b) are essentially irrational and neurotic in that they encompass many common irrational beliefs within a single ideological system. From Ellis' (1977, 1978, 1980, 1981, 1983; Walls, 1980) perspective, religion assumes an absolute moral code, encourages dogmatism and rigidity, leads to self-blame and contributes to many irrational beliefs and behaviors. Ellis (1980) declares irrational thinking as synonymous with religious thinking when he states: "The elegant therapeutic solution to emotional problems is to be quite unreligious...the less religious they [people] are, the more emotionally healthy they will be" (p.637).

Although, in more recent writings, Ellis (1981, 1983, 1984a, 1984b) insists that he does not object to religion per se, he declares that "devout religiosity" is a form of childish dependence. Catholics, Orthodox Jews and Protestants are considered by him to cling to their beliefs in a profoundly dogmatic, "absolutistic", rigid and closed manner. Moreover, Ellis insists that "...all feelings of inadequacy, insecurity, worthlessness, slobhood, inferiority, etc. are really forms of self-malediction and are magical religious concepts" (1978, p.12). It is patently evident therefore, that Ellis would perceive that religiosity and irrationality would be positively correlated.

A number of researchers have tested Ellis' ideas empirically and the results of their studies are presented below. As one will be made aware, studies testing the hypotheses of a relationship between religiosity and possession of irrational beliefs have had mixed results, ranging from clear support to negation of Ellis' postulate.

Primavera, Tantillo, and Delisio (1980) conclude from their findings that a person who endorses irrational beliefs will tend to be dogmatic and also tend to be religious for reasons of social support and external reinforcement. As the scale used by Primavera et al was one designed to measure a person's Extrinsic religious orientation, their conclusions apply only to those with an Extrinsic religious orientation. Consequently it appears inappropriate for these authors to categorically state that the results of their study "support Ellis' views about religion" (p.37) in that religiosity or being religious equates with irrationality.

Joubert (1978, 1984) found support for the hypothesized relationship for males but not for females. Furthermore, he did not find any significant difference in the number of irrational ideas endorsed by different members of different religious groups. Hearne (1971) on the other hand, did report a difference in the number of irrational ideas endorsed by five major religious groups. People listing "No Religion" obtained the lowest irrationality score, thus Hearne concludes that the more conservative one's religion tends to be, the less rational or sane the individual is and that religion to some degree can determine how rational a person will be. However it is interesting to note that in assessing these same groups on a test measuring "role satisfaction" and "self acceptance" the "No Religion" group scored the lowest, indicating a relatively lower sense of personal identity. Yet Hearne blindly declares that his results support Ellis' contention.

McDonald and Games (1972) did not find a relationship between possession of irrational ideas and frequency of church attendance when the whole range of people were assessed. However, when these researchers took the extreme top attendance group, high irrational ideas scores were associated with frequency of church attendance. It is important then to be reminded of the caution stated earlier in this study questioning the use of church attendance as a measure of religiosity.

Jolish (1978), investigating Ellis' assertion regarding the relationship between religiosity and mental health in a Jewish population, found the data failed to support Ellis' ideas. That is,

Jolish found no relationship between religiosity and mental health thus neither lending support to or negating the stance taken by Ellis.

Bergin (1983) in his analysis of 24 studies on religiosity and mental health concludes that 47% of the studies indicate a positive relationship, 23% a negative relationship and 30% a zero relationship. Thus concludes Bergin

> ...77% of the obtained results are contrary to the negative effect of religion theory...although the findings...provide no support for an Ellis-type theory, they also do not provide much more than marginal support of a positive effect of religion (p.176).

The question then becomes: Are Ellis and the writers who support his contention correct, or are the writers who argue to the contrary correct? The thesis of this research project is that both are probably correct and that the discrepancy in observations can be explained by the fact that various researchers used different definitions of religiosity. Bergin (1980b) concludes that some of the differences between theistic and non theistic psychologists such as Ellis are due to a failure to differentiate between diverse forms of religious influence, which vary from benevolent to detrimental. As Primavera, Tantillo and Delisio (1979) suggest "...perhaps it is not religiosity that is neurotic, but the individual's orientation toward religion that determines neuroticism or sound mental health" (p.35).

In reviewing studies where religiosity was related to a number of variables many researchers (Faulkner & DeJong, 1966; Keene, 1967; King & Hunt, 1971; Hunt & King, 1972, 1975; Gorsuch & McFarland, 1972; Fehr & Heintzelman, 1977; Hood, 1978; Baker & Gorsuch, 1982; Batson & Ventis, 1982; Bergin, 1983; Donahue, 1985) argue that contradictory findings can

be explained by the fact that samples in different studies may have contained varying proportions of individuals from different categories of religiosity. Furthermore Bergin (1983), in his critical evaluation and meta-analysis of religiosity and mental health, suggests that the ambigious results of research reflects a multidimensional phenomenon that has mixed positive and negative aspects and that the "...most definitive thing that can be said is that religious phenomena are multidimensional" (p.179).

This then leads one to postulate that if the sample contains more people with an extrinsic religious orientation the correlation with mental health will be negative and if the sample contains more people with an intrinsic orientation the correlation with mental health will be positive. As a result, it becomes obvious that research in the area of religiosity has to take into account these different orientations to religiosity.

Batson's categorization of three orientations therefore were used in this study with the expectation that this apparent inadequacy in research metholodogy could be corrected by using such a research design. A case for using Batson's categorizations follows.

Religion as Multidimensional: A Case for Batson's Model

Many authors and researchers see religious involvement as characterized by several dimensions (Faulkner & DeJong, 1966; Keene, 1967; Glock & Stark, 1965; Hunt & King, 1971; King & Hunt, 1972, 1975; Fehr & Heintzelman, 1977; Gorsuch & McFarland, 1972; Batson & Ventis, 1982; Gorsuch, 1984; Deconchy, 1985; Donahue, 1985; Bergin, 1983;

Malony, 1985; Allen & Spilka, 1967; Spilka, Hood Jr. & Gorsuch, 1985; Hague, 1986).

To understand why Batson chose to develop a measure that included three orientations to religiosity one has to examine the historical perspective. Early studies support the two types of religious orientation proposed by Allport (1966; Allport & Ross, 1967) namely: that of intrinsic and extrinsic religiosity. No approach to religiosity has had as great an impact on the empirical psychology of religion (Donahue, 1985) as Allport's Religious Orientation Scale (ROS) which is one of the most frequently used measures of religiosity. Hunt and King (1971, King & Hunt, 1972, 1975) review the early conceptual history of the Intrinsic and Extrinsic (I-E) orientations to religion. These authors indicate that Allport distinguished between two basic types of religious sentiment: Intrinsic, in which all life is understood; and Extrinsic, which is the religion of comfort and social convention, a self serving, instrumental approach shaped to suit oneself. To use the terminology devised by Allport and Ross (1967) "the extrinsically motivated individual uses his religion, whereas the intrinsically motivated lives his" (p.434).

Considerable research has been conducted lending credence to using these two dimensions when assessing religiosity. For example, meta analysis of the I-E dimension led Donahue (1985) to conclude that "the findings currently available bode well for the potential of the I-E framework as a powerful explanatory tool in personality-social psychology" (p.416). Donahue's major findings, in his meta-analytic review of research, indicate that Intrinsic religiosity tends to be

uncorrelated with negatively evaluated characteristics such as trait anxiety and tends to be as positively correlated with other measures of religiosity. Furthermore Donahue argues that the lack of doctrinal content and open-ended definition of intrinsic religiosity makes it useable with "...virtually any Christian denomination..." (p.415). On the other hand he declares that the Extrinsic religious orientation tends to be positively correlated with negatively evaluated characteristics such as prejudice, dogmatism, trait anxiety, and uncorrelated with a measure of religious belief and commitment. This Donahue maintains is not surprising as he feels E is not so much a measure of religion per se as an attitude toward religion. Thus concludes Donahue Extrinsic religiosity does a good job of measuring "the sort of religion that gives religion a bad name" (p.416).

Although Allport's constructs have proven to be fruitful sources of research hypotheses, Batson and Ventis (1982) insist the I-E dichotomy is conceptually inadequate and propose an alternative to the intrinsic-extrinsic conceptualization. The major dissatisfaction with the I-E approach according to Batson and Ventis is that Allport wandered away from the richness of his original distinction between "mature" and "immature" religiosity. Batson declares the Intrinsic scale does not effectively measure mature religiosity and that this scale has been reduced to "single-mindedness" and may in fact measure a fanatical devotion to orthodoxy. Allport's original definition of mature religiosity (Batson & Raynor-Prince, 1983a) included three key points, namely that mature religious sentiment is integrative and accepting of complexity; is self critical and doubting; and emphasizes a continuing

tentative search for more knowledge about religious questions.

In an attempt to rectify these key omissions Batson (1976; Darley & Batson, 1973; Batson & Ventis, 1982) proposed a three dimensional model: Means (extrinsic), End (intrinsic) and Quest. Means dimension individuals are described as having a superficial orientation to religion and using religion as a "means" to self-serving (selfish) ends. End dimension individuals are characterized as being deeply committed to and living their faith. Quest dimension individuals are characterized as having "an open-ended, responsive dialogue with existential questions raised by the contradictions and tragedies of life" (Batson & Ventis, 1982, p.152 & 154).

Support for Batson's model comes from several sources. Gorsuch (1984) in an article entitled Measurement: Boon and Bane of Investigating Religion, argues against the idea of developing new scales, and insists

> we need to extend and revise the current scales...a new scale should be developed only if it can be argued that a new concept has been devised which is unrelated to factors already found...[and] it is demonstrated to add unique information over and above scales already in existence (p.234).

He gives as an example of a new development that adds unique information Batson's religion as a "Quest" dimension. Gorsuch suggests that Batson's focus is on the goals or styles of religion and that the assumption within the Batson paradigm is that people who are members of the same religious group can vary widely in their beliefs and approaches to religion.

Additional support for Batson's model comes from Donahue (1985). In his meta-analysis, Donahue recognizes Means, End and Quest as three

separate, orthogonal, replicable dimensions and acknowledges that Batson has made an important contribution to the psychology of religion through the "Quest" concept. "The necessity for constant spiritual questing and growth is central to what is best in all religious traditions and has been the hallmark of such twentieth century religious luminaries as Thomas Merton and others..." maintains Donahue (p.414). And this ideal of continuing growth, according to him is not addressed in the "I" scale. According to Batson and Ventis (1982) high scores on the Quest dimension presuppose an openness to existential concerns, a tolerance of ambiguity and the resulting state of what Festinger (1957) calls cognitive dissonance or flexibility in cognitive restructuring, and a sensitivity to the needs of others.

Batson and others have attempted to empirically validate the Means, End and Quest dimensions against a variety of constructs including brotherly love, personal freedom (Darley & Batson, 1973; Batson, Schoenrade & Pych, 1985; Batson & Ventis, 1982); complexity of thought about existential concerns (Batson & Raynor-Prince, 1983a); level of moral judgement (Sapp & Jones, 1986); social desirability (Watson, Hood Jr., Morris, 1985; Watson, Foster, Hood J., 1986); social desirability and racial prejudice (Batson, Naifeh & Pate, 1978); helping behavior (Darley & Batson, 1973; Batson, 1976; Batson & Gray, 1981a; Batson, Duncan, Ackerman, Buckley, & Birch, 1981b; Batson, O'Quin, Fultz & Vanderplas, 1983b); and empathy (Watson, Hood Jr., Morris & Hall, 1984; Watson, Hood Jr. & Morris, 1985). The research of these authors has added to the credence of using Batson's construct of three orientations to religiosity.

Batson and Ventis (1982) contend that the Quest orientation is a "more psychologically adaptive" (p.170) form of religiosity than the End orientation. Batson and his colleagues refer to the results of several studies (Darley & Batson, 1973; Batson, 1976; Batson & Gray, 1981a; Batson, Duncan, Ackerman, Buckley, & Birch, 1981b; Batson, Naifeh & Pate, 1978) as affirmation of Batson's view that the quest orientation reflects openness and an increased compassion and sensitivity to the needs of others. The end orientation is seen as being more rigid and hypocritical in that it is related to the "appearance" of being helpful or concerned.

Watson, Hood Jr., & Morris (1985) however, bring into question this interpretation. These authors, using the dimensions of empathy and religion, examined the variable of "persistence in helping" and concluded that "...the already demonstrated linkages between religiosity and persistence in helping do not definitely reveal an egoistic motivation..." that is "persons who score high along the End dimension may persist either because they are selfishly motivated or because they are experiencing a genuine compassion for the person in need" (p.83). These authors suggest their study presents the possibility that different dimensions of religiosity may be associated with different strengths, that is, a cognitive strength for Quest and an emotional strength for End. Consequently the Quest orientation individuals are described as having greater intellectual sensitivity and complexity. While End dimension individuals are described as having greater emotional sensitivity even though they may not be particularly insightful about others.

Further insight into this End-Quest controversy was gleaned from a series of five studies conducted by Watson, Morris, Foster & Hood Jr. (1986). These authors questioned the usefulness of the Marlowe Social Desirability scale (SDS) used by Batson and others. The SDS was found by Watson, et al to be negatively correlated with several other measures conceptually related to social desirability. As a result they suggest it is inappropriate to use the SDS in attempting to assess whether or not persistent helping behaviors are motivated by their social desirability. Consequently Watson et al (1986) conclude one should proceed with caution in attempts to link the End orientation with exaggerated social desirability concerns as "...good reason exists for suspecting that religious subjects score high on this questionnaire because it has a substantial number of items confounded by a religious relevance dimension" (p.230). As a result Watson et al (1986) suggest the positive correlation between the SDS and End orientation may in fact reflect

> the attempt of religious persons to live, however unsuccessfully, according to the normative values of their belief system, and that these values in turn are recorded by the Crowne and Marlowe instrument (p.231).

Summarizing the results of the five studies, these investigators concluded that the End orientation was not related to maladaptive psychological functioning in fact "...Quest seemed more problematic in it consequence" (p.230). Although there is some disagreement as to which is psychologically the most adaptive orientation, End or Quest, all seem in agreement that the Means orientation is a maladaptive and unhealthy form of religiosity. Indeed, Batson & Ventis (1982) in a

review of empirical studies declare that the means orientation "appears to have a pervasive negative relationship to mental health, regardless of how mental health is conceived" (p.242). In this same review Quest and End orientations were found to have positive relationships with at least some concepts of mental health. The End (intrinsic) orientation was associated with reports of greater freedom from worry and guilt and reports of greater personal competence and control but not with greater open-mindedness and flexibility. The Quest orientation was positively associated with reports of greater open-mindedness and flexibility, greater personal competence and control, and greater self acceptance but not with greater freedom from worry and guilt. Therefore one could agree with Pargament (1986a) in saying whereas the End (intrinsic) orientation may help "free" the individual from anxiety and fears it may also limit his/her ability to question, change or solve problems creatively. Whereas the Quest orientation may facilitate growth, creativity and change, it may not provide a reassuring response to situations which arouse tension. One could therefore conclude with assurance the End dimension individuals should experience significantly less stress than Quest dimension individuals. Moreover Quest dimension individuals should experience less stress than Means dimension individuals.

Concluding Comments

Taking into consideration all the research reported in this chapter it would seem logical to conclude that:

(1) There is a positive relationship between possession of irrational beliefs and stress.

(2) There is some evidence for a negative relationship between religiosity and stress.

(3) There are both supporting and contradictory studies as to the relationship between rationality and religiosity.

The paradox referred to in the introduction of this present study is thus evident. According to Ellis, religious people hold irrational beliefs and therefore should be stressed. In contrast to Ellis' views are the observations of a number of researchers whose findings suggest that religious individuals, particularly of the intrinsic or End orientation, experience less stress than their less religious counterparts. In attempting to understand this dilemma one is led to the proposition that the definition of religiosity and the use of different measures of religiosity may be the cause of the contradictory findings. Batson's three religious orientations should help with the resolution of this problem. In trying to understand this paradox in the light of findings of the different studies cited, one is led to the strong possibility that while individuals of the Means and End type orientation might be expected to be more irrational, the End group might very well be less irrational. Ellis sees religion as having many "shoulds" that religious people feel compelled to obey. These shoulds and oughts according to Ellis, lead these people to view transgressions from the absolute rules as catastrophic. Perhaps in fact, in the case of End dimension individuals, there is not an automatic transition from "I should or ought to obey the commandments of God" to feelings of

condemnation and worthlessness "if I fail to obey". In other words these individuals may not view transgressions as evidence of worthlessness as they have a "God who loves them and is willing to forgive all transgressions". Therefore it is plausible that End individuals are less irrational than their Means and Quest counterparts.

As religion is indeed a part of many, if not most people's lives, particularly in North America where the vast majority of people adhere to a belief in God and where organized religion is a significant part of public life, it is obviously important to examine this issue. Thus the purpose of this study was to gain insight into this problem and hopefully resolve this apparent paradox.

Stated more explicitly, the purpose of this study was to attempt to answer the following questions:

(1) What is the relationship between each of the three religious orientations as defined by Batson and possession of irrational beliefs as defined by Ellis?

(2) What is the relationship between the three religious orientations as defined by Batson and the individual's level of stress?

Hypotheses

Hypothesis 1 Individuals who score high on the End religious orientation will score significantly lower on a measure of irrational beliefs than will individuals who score high on either the Means or Quest religious orientations.

Hypothesis 2 Individuals who score high on the End religious orientations will score significantly lower on a measure of situational

stress, State anxiety, than will individuals who score high on either the Means or Quest religious orientations.

Hypothesis 3 Individuals who score high on the End religious orientation will score significantly lower on a measure of characteristic stress, Trait anxiety, than will individuals who score high on either the Means or Quest religious orientations.

CHAPTER 3

METHODOLOGY

Instruments

The questionnaire used in this study (see Appendix A) is comprised of four parts. The first part included a number of questions about demographic data. The second part is the State-Trait Anxiety Inventory. The third is the Adult Irrational Ideas Inventory and the fourth is the three dimensional measure of Religiosity devised by Batson (1976) and revised (Batson & Ventis, 1982). Each of these sections of the questionnaire are described below.

Background

Demographic information regarding sex, age, level of education, marital status, occupational status, occupation, place of work, spouse's occupation, church attended, and religious preference was obtained.

State Trait Anxiety Inventory (STAI) by Spielberger (1968, 1977).

The STAI has been used extensively in research and clinical practice (Spielberger, 1983) and has become the standard international measure of anxiety (Robyak, 1986). It is comprised of separate self-report, likert-type scales for measuring state and trait anxiety. According to Spielberger (Robyak, 1986) trait anxiety is assessed by measuring the frequency at which anxiety is experienced and state anxiety by measuring the intensity of the emotional state at particular times. The S-Anxiety scale (STAI Form Y-1) consists of twenty

statements that evaluate how respondents feel "in a work situation" and the T-Anxiety Scale (STAI Form Y-2) consists of twenty statements that assess how people generally feel. The wording of the instructions on the S-anxiety scale was changed to include the phrase "in a work situation" in accordance with instructions on pages 2 and 3 of the manual where the author suggests that "...when the STAI is administered for research purposes the examiner may wish to alter instructions for the S-Anxiety scale in order to focus on a particular time" (Spielberger, 1983, p.3).

Each STAI item is given a weighted score of one to four. A rating of four indicates the presence of a high level of anxiety for ten S-Anxiety items and eleven T-Anxiety items. A high rating on the other items indicates an absence of anxiety. Scores for both the S-Anxiety and the T-Anxiety scales can vary from a minimum of 20 to a maximum of 80. Details about scoring are available in the test manual (Spielberger, 1983).

The internal consistency for both scales was measured using alpha coefficients (KR-20 modified by Cronbach, 1951). S-Anxiety alpha coefficients are reported as .87 and T-Anxiety alpha coefficients are reported as .89 in the normative sample. Test-retest reliability coefficients are reported as high for the T-Anxiety scale (median reliability coefficient score .77) and low for the S-Anxiety scale (median reliability coefficient .33) as would be expected from a measure assessing changes in anxiety ranging from situational stress.

Several studies have established construct validity and these are reported in the manual. The test was found to discriminate between

normals and psychiatric patients for whom anxiety was a major symptom. Concurrent validity was established by correlations with several other Trait-Anxiety measures. Correlations between T-Anxiety Scale and the I.P.A.T. and Taylor Anxiety Scale ranged from .73 to .85. Convergent and divergent validity were established by correlation with other personality tests such as the Minnesota Multiphasic Personality Inventory. A comprehensive review of validity and reliability is listed in the State Trait Inventory: A Complete Bibliography (Spielberger, 1983) which lists over 2000 archival publications in which the STAI was used to measure anxiety.

Adult Irrational Ideas Inventory (AII) by Davies & Zingle (1970).

The AII Inventory is an abridged version of the II Inventory (Zingle, 1965) which was developed to assess the degree to which adolescents possess the irrational beliefs Ellis (1962) proposed as being prevalent in neurotic individuals. The AII Inventory is a 60 item scale which is appropriate for use with adults. Responses are recorded on a 5 point likert-type scale which ranges from strongly disagree to strongly agree. Statements have been worded such that strong agreement is sometimes scored high (5) and sometimes scored low (1). This procedure was used by the authors to eliminate the effect of response set.

Reliability was established by using both Kuder-Richardson split-half and test-retest procedures. Reliability estimates ranged from .74 to .78. Content validity assumptions are supported by its derivation from the II Inventory, item selection by the concurrence of

two judges familiar with Ellis' irrational beliefs, review by Ellis himself; and subjective to item analysis.

Evidence of construct validity is provided by several sources. For example, mental hospital patients and alcoholic patients received scores reflecting significantly ($p<.01$) more irrationality than did a normal group.

Although seven other objective tests of irrational beliefs exist only Jones' (1968) Irrational Beliefs Test comes close to the AII in terms of empirical evidence for its usefulness (Martin, Dolliver & Irwin, 1977). The choice between using the AII or the Jones' instrument was made on practical grounds, as one of the authors of the AII Inventory was more readily accessible to this researcher.

Three Dimensional Measure of Religiosity (Batson)

Three tests (6 subscales) are used to obtain scores for Batson's three orientations to religion: Religion as Means (Means), Religion as End (End), and Religion as Quest (Quest).

1) Religious Life Inventory (RLI) by Batson (1967); Darley & Batson (1973); Batson & Ventis (1982).

The RLI consists of three subscales:

External - which measures the importance of others (churches, clergy, parents) in one's religious development.

Internal - which measures the degree to which an individual's religion is a result of internal needs for certainty, strength, and direction.

Interactional - which measures the degree to which an individual's religion involves an open-ended, responsive dialogue with existential questions raised by the contradictions and tragedies of life.

2) Religious Orientation Scale (ROS)

The ROS was originally devised by Allport and Ross (1967) and revised by Batson (1976) from two category, forced choice statements to a likert-type nine point scale. In this study the scales will be changed from a nine point scale to a five point scale ranging from strongly disagree to strongly agree in accordance with the procedure used by Watson, Hood Jr., Morris and Hall (1984) and Watson, Morris, Foster, Hood Jr. (1986). In a personal communication with the present author Watson indicated that he has used this test as a five point scale during the past several years and found it to be quite satisfactory. The ROS consists of two subscales:

Extrinsic - which measures the degree to which an individual uses his religion as a means to selfish ends.

Intrinsic - which measures the degree to which an individual lives his religion.

Nearly 70 published states have used Allport's ROS making it one of the most frequently used measures of religiousness (Donahue, 1985).

3) Doctrinal Orthodoxy Scale (DOS)

Batson (1967) patterned this scale after the orthodoxy scale presented by Glock and Stark (1966), which was designed to measure traditional Christian beliefs.

Scores on each of these six scales have been standardized and intercorrelated. The resulting intercorrelation matrix has been factor analyzed (a principal components analysis with orthogonal rotation was employed). Across many studies (Batson, 1976; Batson, Naifeh & Pate, 1978; Darley & Batson, 1973; Batson, Schoenrade & Pych, 1985; Batson & Raynor-Prince, 1983a; Batson & Gray, 1981a; Batson, Duncan, Ackerman, Buckley & Birch, 1981b; Batson, O'Quin, Fultz & Vanderplas, 1983b; Sapp & Jones, 1986; Watson, Hood Jr., Morris & Hall, 1984; Watson, Hood Jr., Morris, 1985; Watson, Morris, Foster, Hood Jr., 1986) these analyses have consistently produced the same three factors: Religion as Means, Religion as End, and Religion as Quest. Batson along with other researchers have regularly presented the correlations of the dependent variable with both the factor scores and the individual scales. The results for the Means, End and Quest factors have been virtually the same as those for the E, I, and Q scales, of the RLI, respectively (Donahue, 1985).

To establish discriminate validity and to assess whether the three-dimensional analysis actually measured the two separate components of Allport's concept of mature religion, the six scales were administered to individuals whom were expected to score especially high on the End and Quest dimension. Relative to a sample of 31 Princeton undergraduates in general, Batson (1976) found that the evangelicals scored significantly ($p<.05$) higher on the End and Means factor and significantly lower ($p<.05$) on the Quest factor. The social service group scored significantly ($p<.05$) higher than the general sample of Princeton undergraduates on the Quest factor. These results indicated

that the End and Quest factors did, indeed, measure two different aspects of religious orientation and that these factors could discriminate in a predictible fashion between individuals that one would expect to be especially high or low on these orientations.

Scores on each of the three orientations can be computed by inserting the standard scores for each scale into the following equation:

Means = (.9 X Extrinsic) + (-.2 X Intrinsic) + (.3 X External)

End = (.3 X Intrinsic) + (.3 X External) + (.3 X Internal) + (.3 X Orthodoxy)

Quest = (.9 X Interactional) + (-.2 X Orthodoxy)

Scores for each of these factors are computed for every individual, thus each subject has a score on each dimension. These factor scores provide an empirical measure of the degree to which an individual orients toward religion in each of the three ways: Means, End and Quest. Because the three factors are orthogonal, each defines a dimension of religious orientation that is uncorrelated with the independent of the other two. Therefore how a subject scores on one factor says nothing about how they score on the other two. A subject theoretically could score high on two and low on one, high one one and low on two, etc. The scoring procedure is described in The Religious Experience (Batson & Ventis, 1982).

While the evidence provided by Batson and his colleagues, and reported here, about the validity and reliability of the RLI is not as strong as that provided for the other two instruments in this study it is nonetheless very convincing. Furthermore, the evidence already reported in Chapter II of this thesis supporting this religiosity scale

makes it by far the best measure available to assess these three dimensions of religiosity (Donahue, 1985; Gorsuch, 1984).

Pilot Study

The Inventories described above, as well as the question to assess the individual's background were combined to create the Study of Attitudes and Beliefs Questionnaire (see Appendix A). It was then administered to 20 individuals across a wide range of educational background, age, reading ability and socio-economic status. All respondents were interviewed following the completion of the questionnaire to assess the acceptability and appropriateness of the instrument. All twenty of the pilot subjects indicated that they understood the questions and their comments suggested that the questionnaire possessed face validity. The time to complete the questionnaire ranged from 25 to 55 minutes. This seemed to the researcher to be a time commitment that one could expect of volunteer subjects.

Sample

Two primarily principles were involved in selecting the sample used in this study. Firstly, every consideration was given to making the sample representative of Edmonton. Secondly, a large enough total sample was necessary to ensure that at least 50 subjects could be identified as representing each of the three religious orientations. After scoring the first questionnaires that were completed, it became evident that to obtain approximately 50 subjects in each of the three

religious categories that a total sample of approximately 1000 would be necessary. Since gathering data from such a large sample would be prohibitive from both a time and cost perspective it was decided to sample some groups where individuals were more likely to score in the upper end of the religiosity measures used in this study. Thus the decision was made to go to some church groups to obtain part of the sample to ensure adequate representation.

Bearing in mind that the dependent variable being considered in this study was stress, it seemed reasonable to sample some groups that by definition are highly stressed. Therefore two groups that were sampled were cardiac patients and patients from two Psychiatric Units who were diagnosed as highly anxious. As a result the total sample was composed of individuals from the general population, various churches and highly stressed patients from Psychiatric Units and a cardiac self help group. With all groups participation in this study was strictly on a volunteer basis and confidentiality was strictly maintained.

The procedure used to select each of the groups was a follows:

General Population

Sampling was done using a random number table and applying it to the 1985 telephone directory (see Appendix B). Only households in Edmonton were selected (St. Albert, Spruce Grove, Sherwood Park and business addresses were excluded). An explanatory letter (Appendix C) was sent out to 250 households. This letter was followed by a phone call to determine who was willing to participate. The questionnaire was hand-delivered to the participants and a self-addressed pre-stamped envelope was provided to encourage its return. Most of the contact was

done in the evenings to ensure that instructions were understood and to improve the return rate of the questionnaires.

Of the 250 households contacted:

56 of the residents had moved (22.4%)

31 were unable to be contacted (12.4%)

40 were not interested in participating (16%)

123 households were willing to participate (49.2%)

From [redacted]3 households 163 individuals were given questionnaires. Of these [redacted]dividuals 149 completed and returned the questionnaire.

Hospital: Psychiatric

Psychologists in the Psychiatric Units of the Misericordia and General Hospitals (Edmonton) were asked to assist with this study. They were requested to allow only those patients who were suffering from anxiety related disorders to complete the forms. A total of 61 individuals were asked to complete the questionnaire and all of the individuals completed and returned the questionnaire.

Hospital: Cardiac Self Help Group

Members of the Cardiac Self Help group (University of Alberta Hospital, Edmonton) were contacted by newsletter (Appendix D) requesting their cooperation in this study. A total of 78 out of 105 individuals completed and returned the questionnaire.

Church Groups and Organizations

Various Christian Churches and organizations (Christian Businessmen's Association, Young Life Organization) were contacted and their cooperation in this study was requested. Eighty questionnaires

were distributed and 64 individuals completed and returned the questionnaire.

Compilation of Data

Once the questionnaires were returned they were checked, coded and the data entered into two files. The data were checked for accuracy by running APC with the two files (APC is an MTS programme which compares two files and prints the line numbers where dissimilarity occurs), then destroying the extra file. A total of 352 questionnaires were completed and scored.

Recognizing the importance of the first principle enunciated above the respect to obtaining a representative sample, and recognizing the fact that the General sample group meets the usual criteria of a representative sample, steps were taken to ensure that the other groups sampled were comparable to the General sample in terms of being representative of the general Edmonton population. Thus the religious and hospital groups were compared to the General sample with respect to: sex, age, schooling, home ownership, marital status, occupational status, religious preference and church attended. As there were no significant differences on these variables, except that there were slightly fewer Catholics in the three special groups, the decision to combine these groups with the random sample appeared appropriate. Thus the data analyzed in this study included data from the combined sample of 352.

Procedure for Selecting Subjects for Analysis

As the researcher was interested in people who were clearly of only one religious orientation, only the top 50 in each category (Means, End,

Quest) were chosen for analysis. Because the three factors are orthogonal and each defines a religious orientation that is uncorrelated with and independent of the other two the researcher employed the following selection procedure to ensure that people were clearly at the upper end of only one religious orientation.,

All the scores of 352 participants were listed in descending order in each of the three categories: Means, End, and Quest. The subjects with the highest 50 scores in each of the three categories were selected after discarding subjects whose scores which came within 0.3 on another category.

For example:

Individual	Means	End	Quest	
A	1.2109	-0.0267	1.2804	discard subject A
B	0.3800	1.5702	-0.0692	keep subject B as high End subject
C	0.5721	-1.8254	0.2698	keep subject C as high Means subject.

Selection in this manner ensured the sample was made up of individuals who scored high on only one category. Consequently enabling the researcher to make statements such as "high Means scorers tend to be..., high End scorers tend to be..., or high Quest scorers tend to be..." without confusing it with individuals who score high on more than one category.

Table I gives the number and percentage of individuals from the total group that were used in analysis of data.

Table I

Total Sample: Number Used in Analysis

	Sample Group	Number Used in Data Analysis
General Population	149	59
Religious Groups	64	36
Hospital: Psychiatric	61	26
Hospital: Cardiac	78	29
Total	352	150

Of the 150 subjects chosen for analysis 53% (n=79) were males and 47% (n=71) were females as shown in Table II.

Table II

Sex of Respondents

	N	%
Male	79	53
Female	71	47

Tables III and IV give the breakdown of the sample groups into the three religious categories.

Table III

Distribution of Sample Groups In The Three Religious Orientations

	N	Means	End	Quest
General Population	59	22	15	22
Religious Groups	36	2	30	4
Hospital: Psychiatric	26	13	2	11
Hospital: Cardiac	29	13	3	13
Total	150	50	50	50

Table IV

Percentage Distribution of Sample Groups In The Three Religious Orientations

	N	Means	End	Quest
General Population	59	37%	26%	37%
Religious Groups	36	6%	83%	11%
Hospital: Psychiatric	26	50%	8%	42%
Hospital: Cardiac	29	45%	10%	45%

Description of Sample

To provide the reader with a description of the 150 subjects (50 Means, 50 End and 50 quest) who comprised the final research group, data about age distribution, residence, education, marital status,

occupational status, church attended and religious preference are provided in Tables V to XI.

Statistical Treatment

To prepare the data for statistical treatment, responses to the questionnaire were transformed to computer readable format. In order to obtain the total scores for Speilberger's State-Trait Anxiety Inventory and the AII Inventory the Lertap program was used to obtain total test scores for each of three Inventories.

Similarily the Lertap program was used to obtain the six subscores on the Religious Orientation section. Once these subscores were obtained the Fortran program was used to combine the six scores mathematically to produce the three Religious Orientation scores, Means, End and Quest. To check the accuracy of this program several tests were hand scored and the results compared. Data were then analyzed using the Statistical Package for the Social Sciences Program (SPSSx, 1983) for SES frequencies and Anoval6 (revised May, 1980) for analysis of variance using the fixed model for equal observations. Tests of significance were applied to the analyses.

Table V

Distribution By Age

Age	Frequency	Valid Percent	Cumulative Percent
under 20 yrs	4	2.7	2.7
20 - 30 yrs	44	29.3	32.0
30 - 40 yrs	32	21.3	53.3
40 - 50 yrs	20	13.3	66.7
50 - 60 yrs	30	20.1	100.0
Total	150		

Table VI

Distribution By Residence

	Frequency	Percent
Own	78	52.0
Rent	55	36.7
Live with Parents	14	9.3
Not Noted	3	2.0
Total	150	

Table VII

Distribution By Education

	Frequency	Valid Percent
Elementary	5	3.3
Junior High	2	3.3
High School: complete	27	18.0
High School: incomplete	18	12.0
College/Tech: complete	22	14.7
College/Tech: incomplete	7	4.7
University: complete	40	26.7
Other	4	2.7

Table VIII

Distribution By Marital Status

	Frequency	Valid Percent
Single	32	21.3
Married	86	57.3
Common-Law	4	2.7
Divorced	13	8.7
Separated	10	6.7
Widowed	5	3.3
Total	150	

Table IX

Distribution By Occupational Status

	Frequency	Valid Percent
Employed Full Time	60	40.0
Employed Part Time	12	8.0
Unemployed	10	6.7
Retired	15	10.0
In School	23	15.3
Keeping House	13	8.7
Employed Full Time/In School	2	1.3
Employed Part Time/Keeping House	5	3.3
Employed Part Time/Retired	2	1.3
Employed Part Time/In School	8	5.3
Total	150	

Table X

Distribution By Church Attended

	Frequency	Percentage
Do Not Attend	48	32.0
Anglican	13	8.7
Baptist	10	6.7
Greek Orthodox	3	2.0
Lutheran	8	5.3
Mennonite	1	.7
Mormon	1	.7
Pentecostal	5	3.3
Presbyterian	1	.7
Roman Catholic	15	10.0
Ukrainian Catholic	1	.7
United	8	5.3
Christian	4	2.7
Other	32	21.3
Total	150	

Table XI

Distribution By Religious Preference

	Frequency	Percentage
Anglican	14	9.3
Baptist	6	4.0
Greek Orthodox	4	2.7
Jewish	2	1.3
Lutheran	11	7.3
Mennonite	2	1.3
Mormon	1	.7
Pentecostal	6	4.0
Presbyterian	3	2.0
Roman Catholic	20	13.3
Ukrainian Catholic	1	.7
United Church	15	10.0
Protestant Unspecified	9	6.0
Christian Unspecified	29	19.3
Eastern Religions	3	2.0
Agnostic	1	.7
No Preference/Affiliation	11	7.3
Other	12	8.0
Total	150	

CHAPTER 4

RESULTS

Data for each of the three hypotheses were subjected to a one-way analysis of variance. Three separate analyses were conducted. To assist the reader in interpreting the results each hypothesis is restated and is followed by the relevant statistical findings and appropriate conclusion.

Hypothesis 1

Individuals who score high on the End religious orientation will score significantly lower on a measure of irrational beliefs than will individuals who score high on either the Means or Quest religious orientation.

The mean scores on the AII Inventory for each of the three groups are provided in Table XII

Table XII

Irrational Ideas Mean Scores of the Three Religious Orientation Groups

	Means Group	End Group	Quest Group
AII Inventory Scores	170.42	152.35	162.28

Results of the one-way analysis of variance (Anovl6, revised May, 1980) using the fixed effect model for equal observations are presented in Table XIII.

Table XIII

Analysis of Variance: Irrational Ideas

Source	DF	MS	F	P
Groups	2	4078.95	10.09	.000
Error	147	404.06		

It is clear from the analysis of variance results that there are significant differences ($p<.01$) among the religious orientation groups on the Irrational Ideas scores as measured by the AII Inventory. To determine which of the specific means differ from each other the Scheffe post-hoc pairwise contrasts were made. This test was preferred because it is the most rigorous method for multiple comparisons with regard to type I error (Ferguson, 1981). The results of the Scheffe test are provided in Table XIV.

Table XIV

Scheffe Post-Hoc Pairwise Contrasts: Irrational Ideas

Group	Mean Diff	Df 1	Df 2	F	P
Means-End	18.07	2	147	20.17	.000
Means-Quest	8.14	2	147	4.18	.13
End-Quest	-9.93	2	147	5.97	.05

The End religious orientation group is significantly less irrational than either the Means religious orientation group ($p<.01$) or the Quest religious orientation group ($p<.05$). The Means and Quest groups do not differ significantly from each other. Thus, it can be concluded, with confidence that hypothesis one is supported. Individuals who are of an End religious orientation possess significantly fewer irrational ideas than do their Means and Quest religious orientation counterparts.

Hypothesis 2

Individuals who score high on the End religious orientation will score significantly lower on a measure of situational stress, State Anxiety, than will individuals who score high on either the Means or Quest religious orientation.

The mean scores on Spielberger's S-Anxiety Scale of the STAI form Y-1 for each of the three religious orientation groups are provided in Table XV.

Table XV

State Anxiety Mean Scores of the Three Religious Orientation Groups

	Means Group	End Group	Quest Group
STAI Scores	39.42	32.21	40.60

Results of the one-way analysis of variance using the fixed effect model for equal observations are presented in Table XVI.

Table XVI

Analysis of Variance: State Anxiety

Source	DF	MS	F	P
Groups	2	1008.46	6.75	.002
Error	147	149.39		

From the analysis of variance results one can conclude that there are significant differences ($p<.002$) among the religious orientation groups on situational stress scores as measured by the S-Anxiety scale (STAI form Y-1). To determine which of the specific means differ from each other the Scheffe post-hoc pairwise contrasts were made. The results of the Scheffe test are provided in Table XVII.

Table XVII

Scheffe Post-Hoc Pairwise Contrasts: State Anxiety

Group	Mean Diff	Df 1	Df 2	F	P
Means-End	7.21	2	147	8.70	.015
Means-Quest	-1.18	2	147	0.24	.889
End-Quest	-8.39	2	147	11.54	.004

The End religious orientation group is significantly less stressed than either the Means religious orientation group ($p<.02$) or the Quest religious orientation group ($p<.01$). The Means and Quest groups do not differ significantly from each other. Thus, it can be concluded, with confidence that hypothesis two is supported. Individuals who are of an End religious orientation experience significantly less situational stress than do their Means and Quest religious orientation counterparts.

Hypothesis 3

Individuals who score high on the End religious orientation will score significantly lower on a measure of characteristic stress, Trait Anxiety, than will individuals who score high on either the Means or Quest religious orientations.

The means scores on Spielberger's T-Anxiety Scale of the STAI form Y-2 for each of the three religious groups are provided in Table XVIII.

Table XVIII

Trait Anxiety Mean Scores of the Three Religious Orientation Groups

	Means Group	End Group	Quest Group
STAI Scores	41.25	33.67	42.20

Results of the one-way analysis of variance using the fixed effect model for equal observations are presented in Table XIX.

Table XIX

Analysis of Variance: Trait Anxiety

Source	DF	MS	F	P
Groups	2	1068.85	6.51	.002
Error	147	164.21		

It is clear from the analysis of variance results that there are significant differences ($p<.01$) among the religious orientation groups on the characteristic stress scores as measured by the T-Anxiety scale (STAI form Y-2). To determine which of the specific means differ from each other the Scheffe post-hoc pairwise contrasts were made. The results of the Scheffe test are provided in Table XX.

Table XX

Scheffe Post-Hoc Pairwise Contrasts: Trait-Anxiety

Group	Mean Diff.	Df I	Df 2	F	P
Means-End	7.58	2	147	8.74	.014
Means-Quest	-0.95	2	147	0.14	.932
End-Quest	-8.53	2	147	10.86	.005

The End religious orientation group is significantly less stressed than are either the Means religious orientation group ($p<.01$) or the Quest religious orientation group ($p<.01$). The Means and Quest groups do not

differ significantly from each other. Thus it can be concluded, with a high degree of confidence that hypothesis three is supported. Individuals who are of an End religious orientation experience significantly less characteristic stress than do their Means and Quest religious orientation counterparts.

Summary of Conclusions

As all of the hypotheses are strongly confirmed one can conclude:

1) Individuals who score high on the End religious orientation score significantly lower on a measure of irrational beliefs than do individuals who score high on either the Means or Quest religious orientation.

2) Individuals who score high on the End religious orientation score significantly lower on a measure of situational stress, State Anxiety, than do individuals who score high on either the Means or Quest religious orientation.

3) Individuals who score high on the End religious orientation score significantly lower on a measure of characteristic stress, Trait Anxiety, than do individuals who score high on either the Means or Quest religious orientation.

CHAPTER 5

DISCUSSION, IMPLICATIONS AND SUMMARY

Discussion

The purpose of this study was twofold. The first part was to investigate the relationship between each of the three religious orientations and the possession of irrational beliefs. As was hypothesized individuals who scored high on the End religious orientation scored significantly lower on a measure of irrational beliefs than did individuals who scored high on either the Means or Quest religious orientation.

The second purpose was to investigate the relationship between each of the three religious orientations and the individual's level of stress. Also, as was hypothesized, individuals who scored high on the End religious orientation scored significantly lower on both measures of stress (situational and characteristic) than did individuals who scored high on either the Means or Quest religious orientation.

To get a clearer picture of this relationship between the three dependent variables and the independent variable, Pearson Product Moment correlation coefficients were calculated using the Dest02 program (revised Sept, 1981). The results are presented in Table XXI.

Table XXI

Pearson Product Moment Correlation Coefficients

	Means	End	Quest
State Anxiety	0.275*	-0.231*	0.193*
Trait Anxiety	0.301*	-0.169**	0.278*
AII Inventory	0.443*	-0.105	0.205*

* $p<.01$
** $p<.05$

Examination of this data provides the reader with an even more graphic representation of the relationship among the variables examined in this study. The analysis of variance data presented in Chapter 4 demonstrate that the End religious orientation group differs significantly from the Means and Quest religious orientation groups on both the stress measures and the irrational ideas measure. While the correlation data support these findings they provide an even clearer picture of the relationship among the variables. Not only is the correlation between End orientation and stress significantly different from the correlation between the Means and Quest orientation and stress but the correlation between End orientation and stress is significantly negative while the correlation between the other two orientations and stress is significantly positive. That is the higher one scores on the End orientation, the less stressed one is. Furthermore, even though the relationship between End [illegible]tion and irrationality is not significant it does appear that irrationality is also negatively related to End religiosity scores. In other words, the higher one scores on the

End orientation the more rational the individual will tend to be while the higher one scores on the Means and Quest religious orientation the more stressed and irrational the individual will tend to be.

The evidence presented in this study has shed light on the paradox between the research evidence and the contention of Ellis that religiosity implies irrationality which in turn leads to stress. Ellis equates religiosity per se with neurosis. This study has demonstrated that it is the orientation one has to religion that determines whether or not an individual labeled "religious" is irrational and highly stressed. The findings of this study, which are in opposition to the stance taken by Ellis, demonstrate convincingly that people who are deeply committed to and live their faith are less irrational and less stressed than people who are either superficial in their religious beliefs or who are constantly questioning their religious beliefs.

The basic view of RET is that sustained negative emotions are generally either a form of irrational thinking or are the result of irrational thinking. How does one explain then why End religious orientation individuals do not appear to sustain the negative emotions experienced? To answer this question and to demonstrate how irrational statements could lead to stress in Means and Quest religious orientation individuals, one could examine the model proposed by Ellis.

Ellis defines irrational beliefs (1984a) as those cognitions, ideas and philosophies that sabotage and block people [illegible] their basic or most important goals. To understand [illegible] End orientation individuals do not sustain irrational beliefs and why Means and Quest orientation individuals do sustain irrational beliefs, we need to look

at these individuals in the light of the A-B-C theory devised by Ellis. As you will recall in the introduction of this thesis, A is defined as the Activating Event, B is the individual's cognitions, thoughts or ideas about A, and C is the consequences. In his conceptualization, A does not cause C although it may contribute to it. Instead it is B the individual's Belief System about A that more directly and significantly "causes" C. Stress thus is not the result of a stressor but rather is the result of the individual's appraisal and interpretation of the stressor which in turn is based on the individual's system of beliefs.

The process can perhaps best be illustrated by example. The possible combination of individuals of the End orientation holding a rational Belief System (rB) verses individuals of the Means or Quest orientation holding an irrational Belief System (iB) with reference to an Activating Event (A) and the respective Consequences (C) are diagrammed in Figure 1. To illustrate this process Ellis' irrational ideas number four will be used. Irrational Idea No. 4: If I am rejected, if I fail, or if I am treated wrongly or badly then someone deserves to be strongly blamed or punished. (Sometimes I should blame or punish myself because I decide "It was my fault.") (see Figure 1)

As we see in the case of the individual with a Means or Quest orientation, with an irrational belief system, the individual does not just acknowledge but also catastrophizes the undesirability of the situation, illogically holding the empirically unvalidated premise that it should not be so, that it is "awful" and "unbearable". The anxiety statements of these individuals involves "absolutistic" thinking which exaggerates the situation thus the emotions experienced are

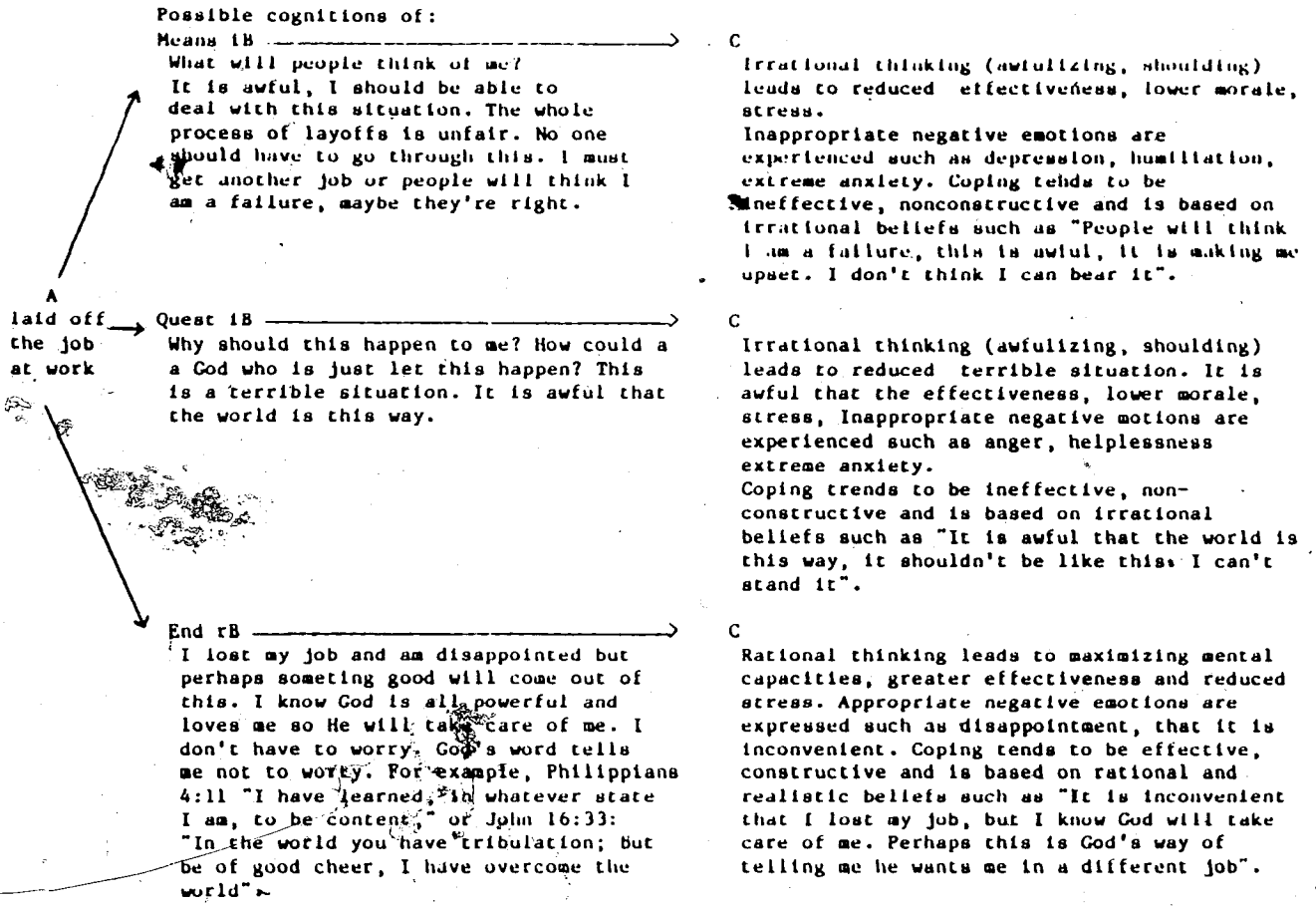

Figure 1. An illustration of Ellis' ABC model of human behavior demonstration: the Consequences (c) of holding a Rational Belief system (rb) versus an Irrational Belief System (iB) with respect to the appraisals of an Activating Event (A) by each of the three religious orientations.

inappropriate and extreme such as depression, humiliation, anger, helplessness and stress. As these emotions are perceived as undesirable events in themselves, a vicious cycle is initiated of being upset about being upset. This process is self-defeating and blocks or interfers with effective coping strategies.

In contrast one can examine the logic of the individuals with an End orientation who exhibit a rational belief system. This type of individual acknowledges the undesirability of the situation but does not make the automatic transition (made by Means & Quest individuals) to "this awful, horrible or terrible". The situation is viewed by individuals of the End orientation as merely inconvenient or disadvantages that "things did not go the way I wanted them to go". There is no fear of catastrophy as these individuals believe in and trust an "all powerful God" who loves them and will take care of them. Moreover having such trust provides them with a great deal of confidence to cope with problems.

In summary, it was found in this investigation, that End religious orientation individuals hold rational beliefs which keeps stress to a minimum. On the other hand, Means and Quest religious orientation individuals hold irrational beliefs which aggravate stress by acting on the perception of stress itself.

Implications for Practice

The results of this study patently indicate the need for psychologists to examine the issue of religious values within the psychotherapeutic setting. The opportunity to utilize associated

support systems, such as religion, to induce and maintain change is a potentiality that psychologists cannot afford to ignore and indeed becomes imperative to address as recent studies indicate "...laypersons, clients and potential clients want sources of counselling that are willing and capable of addressing their religious concerns" (Quackenbos, Privette & Klentz, 1986, p.84). Thus psychologists are admonished not to negate their client's religious beliefs but rather to gain insight into these beliefs and to utilize this support system as a tool in therapy. Religion has relevance to guilt management, forgiveness, bitterness, feelings of helplessness, life planning, moral values and other issues. As this study points out individuals who are deeply committed to and live their faith fare better in coping with the everyday hassles of living. Perhaps those who are superficially committed to or constantly questioning their faith could be aided by working through the religious issues or discrepancies that are hindering them. Possibly we should consider the suggestion of Quackenbos, Privette and Klentz (1986) that secular psychologists should have special preparation for dealing with religious issues in their training. At present we have specialized training for psychologists to deal with sex problems, marital problems, eating disorders, and so forth. Considering that 90% of the American population (Bergin, 1983b) have expressed some kind of religious belief and 50% say they belong to a religious institution (Malony, 1986), it could be considered essential that we have specialized training in the area of religious counselling. That is, rather than function as ministers or religious teachers,

secular psychologists could function as facilitators for clients with concerns and questions in the religious as well as the secular realms.

Of further concern is the attitude of some psychologists such as Ellis, towards clients who express religious beliefs. Although Kivley (1986) found that most therapists stated that they did not agree with the statement that religious belief is a neurosis, the majority of these therapists hold views of religious belief which "...might be interpreted as a basis for labeling religious belief as a neurosis" (p.39). On a positive note are the results presented by Houts and Graham (1986). They found that both religious and nonreligious clinicians perceived the moderately religious client as having a more pessimistic prognosis and greater psychopathology than the very religious client, despite the fact that both clients affirmed traditional Christian values. The major difference between the very religious and moderately religious client was the strength of conviction they expressed in endorsing those values.

Implications for Further Research

Implications for further research work are readily apparent. Firstly, it is evident that any research involving religiosity must use a measure that takes into account different orientations to religiosity. It is no longer acceptable to use a unidimensional measure such as church attendance.

A possible avenue of research would be to use physiological measures of anxiety (stress) such as measuring: blood pressure, galvanic skin response, or heart rate. In this study self report measures of anxiety were used. It would be interesting to know if these

physiological measures would yield the same results as in the self report measures with the three religious orientations.

Summary

One very powerful answer to the paradox referred to in the introduction of this study has been found. Contrary to the belief of Ellis, this study has demonstrated that it is the orientation one has to religion, rather than religiosity per se, that is the determining factor as to whether or not an individual is irrational and therefore highly stressed. Individuals who are deeply committed to their faith and who live their faith (End orientation) are significantly less stressed and are significantly less irrational than individuals who are superficial in their religious beliefs (Means orientation) or who are constantly questioning their religious beliefs (Quest orientation).

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APPENDIX A

STUDY OF ATTITUDES

AND BELIEFS.

University of

Alberta

THE FOLLOWING QUESTIONS ARE DESIGNED TO FIND OUT ABOUT THE ATTITUDES AND BELIEFS HELD BY PEOPLE FROM DIFFERENT WALKS OF LIFE.

PLEASE ANSWER ALL THE QUESTIONS FRANKLY AND HONESTLY.

EACH INDIVIDUAL'S RESPONSES WILL BE KEPT

STRICTLY CONFIDENTIAL.

IF YOU HAVE ANY QUESTIONS OR CONCERNS PLEASE DO NOT HESITATE TO ASK.

THANK YOU FOR YOUR COOPERATION.

1-6
7[1]

BACKGROUND

Answer the following questions by circling the answer that applies to you.

Please answer all the questions with one response.

If you make an error please erase it.

Office use only.

1. Are you male or female? **1.** male **2.** female 8

2. Which age group do you belong to?

1. under 20 years **2.** 20-30 years **3.** 30-40 years
4. 40-50 years **5.** 50-60 years **6.** over 60 years 9

3. What is the highest level of education that you have completed?

	1 Elementary.	College or Tech.	5 Complete
	2 Junior High		6 Incomplete
High School	3 Complete	University	7 Complete
	4 Incomplete.		8 Incomplete

Other. (Specify).....10

4. Do you own or rent your home? 1 Own 2 Rent 3 Live with parents. 11

5. What is your current marital status?

1. Single **2.** Married **3.** Common law
4. Divorce **5.** Separated **6.** Widowed 12

6. What is your occupational status? (You may circle more than one response.)

1. Employed full-time. **2.** Employed part-time.
3. Unemployed. **4.** Retired.
5. In school. **6.** Keeping house.

13

7. What is your normal occupation?

.....14-17

8. What kind of place do you work for? (e.g. shoe store, oil company, railway, etc)

.....18-30

9. What is your spouse's occupational status?

1. Employed full-time.	2. Employed part-time.	21
3. Unemployed.	4. Retired.	22-25
5. In school.	6. Keeping house .	

10. What is your spouse's normal occupation and kind of work place?

..... 26-26

11. Which church, if any, do you attend? 29-30

12. What is your religious preference?

1. Anglican	01	11. Ukrainian Catholic	11
2. Baptist	02	12. United Church	12
3. Greek Orthodox	03	13 Protestant unspecified	13
4. Jewish	04	14. Christian unspecified	14
5. Lutheran	05	15. Moslem	15
6. Mennonite	06	16. Other eastern religions	16
7. Mormon	07	17. Atheist	17
8. Pentecostal	08	18. Agnostic	19
9. Presbyterian	09	19. No preference/affiliation ..	19
10. Roman Catholic	10	20. Other (specify)	87

31-32

PART ONE

Section A

A number of statements which people have used to describe themselves, in a work situation, are given below.

Read each of them and cross the number which indicates how you feel when you are at work (if you are a housewife - when performing household duties).

There are no right or wrong answers.

Do not spend too much time on any one statement but give the answer which seems to describe your feelings while you are at work.

1 Not at all
2 Somewhat
3 Moderately so
4 Very much so

	Not at all	Somewhat	Moderately so	Very much so	
1. I feel calm.	1	2	3	4	33

	Not at all	Somewhat	Moderately so	Very much so	
2. I feel secure.	1	2	3	4	34
3. I am tense.	1	2	3	4	35
4. I feel strained.	1	2	3	4	36
5. I feel at ease.	1	2	3	4	37
6. I feel upset.	1	2	3	4	38
7. I am presently worrying over possible misfortunes.	1	2	3	4	39
8. I feel satisfied.	1	2	3	4	40
9. I feel frightened.	1	2	3	4	41
10. I feel comfortable.	1	2	3	4	42
11. I feel self-confident.	1	2	3	4	43
12. I feel nervous.	1	2	3	4	44
13. I am jittery.	1	2	3	4	45
14. I feel indecisive	1	2	3	4	46
15. I am relaxed.	1	2	3	4	47
16. I feel content	1	2	3	4	48
17. I am worried.	1	2	3	4	49
18. I feel confused.	1	2	3	4	50
19. I feel steady.	1	2	3	4	51
20. I feel pleasant.	1	2	3	4	52

Section B

A number of statements which people have used to describe themselves are given below.

Cross the number which best describes how you feel.

There are no right or wrong answers.

Do not spend too much time on any one statement, but give the answer which seems to describe how you generally feel.

1 Almost never
2 Sometimes
3 Often
4 Almost always

	Almost never	Sometimes	Often	Almost always	
21. I feel pleasant.	1	2	3	4	53
22. I feel nervous and restless.	1	2	3	4	54
23. I feel satisfied with myself.	1	2	3	4	55
24. I wish I could be as happy as others seem to be.	1	2	3	4	56
25. I feel like a failure.	1	2	3	4	57
26. I feel rested.	1	2	3	4	58
27. I am calm, cool, and collected.	1	2	3	4	59
28. I feel that difficulties are piling up so that I cannot overcome them.	1	2	3	4	60
29. I worry too much over something that really doesn't matter.	1	2	3	4	61
30. I am happy.	1	2	3	4	62
31. I have disturbing thoughts.	1	2	3	4	63
32. I lack self-confidence.	1	2	3	4	64
33. I feel secure	1	2	3	4	65
34. I make decisions easily.	1	2	3	4	66
35. I feel inadequate.	1	2	3	4	67

	Almost never	Sometimes	Often	Almost always	
36. I am content.	1	2	3	4	68
37. Some unimportant thought runs through my mind and bothers me.	1	2	3	4	69
38. I take disappointments so keenly that I can't put them out of my mind.	1	2	3	4	70
39. I am a steady person.	1	2	3	4	71
40. I get in a state of tension or turmoil as I think over my recent concerns and interests.	1	2	3	4	72

73-80 BLANK

PART TWO

1-6 DUP 7[2]

Read the following statements carefully. Then indicate how much you either agree or disagree by putting a cross through the number that represents your opinion.

1. I strongly disagree
2. I disagree
3. I am undecided
4. I agree
5. I strongly agree

Example. "I like doing these types of questions." 1 2 3 4 5

If you agree you would cross 4.

Answer all the questions with only **one** answer.

If you make an error make sure you erase the undesired answer completely.

There are no right or wrong answers.

There is no time limit but do not spend too long on any one question.

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	
1. Jeers humiliate me even when I know I'm right.	1	2	3	4	5	8
2. I worry about situations where I am being tested.	1	2	3	4	5	9
3. The best way to teach a child right from wrong is to spank him when he is wrong.	1	2	3	4	5	10
4. I must learn to "keep my head" when things go wrong.	1	2	3	4	5	11
5. I think I am getting a fair deal in life.	1	2	3	4	5	12

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	
6. I worry about eternity.	1	2	3	4	5	13
7. I am happiest when I am sitting around doing little or nothing.	1	2	3	4	5	14
8. I prefer to be independent of others in making decisions.	1	2	3	4	5	15
9. If a person is ill-tempered and moody, he will probably never change.	1	2	3	4	5	16
10. I get very upset when I hear of people (not close relatives or close friends) who are very ill.	1	2	3	4	5	17
11. Crime never pays.	1	2	3	4	5	18
12. My family and close friends do not take enough time to become acquainted with my problems.	1	2	3	4	5	19
13. People who do not achieve competency in at least one area are worthless.	1	2	3	4	5	20
14. We are justified in refusing to forgive our enemies.	1	2	3	4	5	21
15. I frequently feel unhappy with my appearance.	1	2	3	4	5	22
16. I feel that life has a great deal more happiness than trouble.	1	2	3	4	5	23
17. I worry over possible misfortunes.	1	2	3	4	5	24
18. I often spend more time in trying to think of ways of getting out of something than it would take me to do it.	1	2	3	4	5	25
19. I tend to look to others for the kind of behavior they approve as right or wrong.	1	2	3	4	5	26
20. Some people are dull and unimaginative because of defective training as child.	1	2	3	4	5	27
21. Helping others is the very basis of life.	1	2	3	4	5	28

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	
22. School promotions should be for intellectual merit alone.	1	2	3	4	5	29
23. It is very important to me when I do a good job to be praised.	1	2	3	4	5	30
24. I find it difficult to take criticism without feeling hurt.	1	2	3	4	5	31
25. It is terribly upsetting the way some students seem to be constantly protesting about one thing or another.	1	2	3	4	5	32
26. It is impossible at any given time to change one's emotions.	1	2	3	4	5	33
27. I tend to worry about possible accidents and disasters.	1	2	3	4	5	34
28. I need to learn how to keep from being too assertive or too bold.	1	2	3	4	5	35
29. To cooperate with others is better than doing what you feel should be done.	1	2	3	4	5	36
30. Sympathy is the most beautiful emotion of man.	1	2	3	4	5	37
31. People who criticize the government are either ignorant or foolish.	1	2	3	4	5	38
32. I wish that more affection were shown by members of my family.	1	2	3	4	5	39
33. When a person is no longer interested in doing his best, he is done for.	1	2	3	4	5	40
34. I get very angry when I miss a bus which passes only a few feet away from me.	1	2	3	4	5	41
35. My place of employment and/or my neighborhood provide adequate opportunity for me to meet and make friends.	1	2	3	4	5	42
36. I can walk past a grave yard alone at night without feeling uneasy	1	2	3	4	5	43

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	
37. I avoid inviting others to my home because it is not as nice as theirs.	1	2	3	4	5	44
38. I prefer to have someone with me when I receive bad news.	1	2	3	4	5	45
39. It is necessary to be especially friendly to new co-workers and neighbors.	1	2	3	4	5	46
40. The good person is usually right.	1	2	3	4	5	47
41. Sometimes I feel that no one loves me.	1	2	3	4	5	48
42. I worry about little things.	1	2	3	4	5	49
43. Riches are a sure basis for happiness in the home.	1	2	3	4	5	50
44. I can face a difficult task without fear.	1	2	3	4	5	51
45. I usually try to avoid doing chores which I dislike doing.	1	2	3	4	5	52
46. I like to bear responsibilities alone.	1	2	3	4	5	53
47. Other people's problems frequently cause me great concern.	1	2	3	4	5	54
48. It is sinful to doubt the bible.	1	2	3	4	5	55
49. It makes me very uncomfortable to be different.	1	2	3	4	5	56
50. I get terribly upset and miserable when things are not the way I would like them to be.	1	2	3	4	5	57
51. I find that my occupation and social life tends to make me unhappy.	1	2	3	4	5	58
52. I am afraid in the dark.	1	2	3	4	5	59
53. Many people that I know are so unkind or unfriendly that I avoid them.	1	2	3	4	5	60
54. It is better to take risks and to commit possible errors, than to seek unnecessary aid of others.	1	2	3	4	5	61

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	
55. I get disturbed when neigbors are very harsh with their little children.	1	2	3	4	5	62
56. I find it very upsetting when important people are indifferent to me.	1	2	3	4	5	63
57. I have sometimes had a nickname which upset me.	1	2	3	4	5	64
58. I have sometimes crossed the street to avoid meeting some person.	1	2	3	4	5	65
59. When a friend ignores me I become extremely upset.	1	2	3	4	5	66
60. My feelings are easily hurt.	1	2	3	4	5	67
						68-80
						Blank

PART THREE

This section includes some commonly heard statements about one's religious life. They are very diverse.

Indicate how much you agree or disagree by crossing the number that represents your opinion.

1-6
DUP
7[3]

1 I strongly disagree
2 I disagree
3 I am undecided
4 I agree
5 I strongly agree

Example "I enjoy the winter weather."
If you disagree you would cross 2.

Try to answer all the questions.
Give only one answer per question.
Do not spend too long on any one question.
There are no right or wrong answers, some people will agree and others will disagree with each of the the statements.

Section A

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	
1. The church has been very important for my religious development.	1	2	3	4	5	8

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	
2. My religious development is a natural response to the innate need of man for devotion to God.	1	2	3	4	5	9
3. It might be said that I value my religious doubts and uncertainties.	1	2	3	4	5	10
4. My minister (or youth director, camp counsellor, etc) has had a profound influence on my personal religious development.	1	2	3	4	5	11
5. God's will should shape my life.	1	2	3	4	5	12
6. It is necessary for me to have religious beliefs..	1	2	3	4	5	13
7. When it comes to religious questions, I feel driven t o know the truth.	1	2	3	4	5	14
8. A major factor of my religious development has been the importance of religion for my parents.	1	2	3	4	5	15
9. I do not expect my religious convictions to change in the next few years.	1	2	3	4	5	16
10. Religion is not something I have ever felt personally compelled to consider.	1	2	3	4	5	17
11. I have been driven to ask religious questions out of a growing awareness of the tensions in my world and in my relation to my world.	1	2	3	4	5	18
12. My religion serves to satisfy needs for fellowship and security.	1	2	3	4	5	19
13. My religious development has emerged out of my growing sense of personal identity.	1	2	3	4	5	20
14. Whether I turn out to be religious or not doesn't make much difference to me.	1	2	3	4	5	21
15. Certain people have served as "models" for my religious development.	1	2	3	4	5	22
16. I have found it essential to have faith.	1	2	3	4	5	23
17. God wasn't very important for me until I began to ask questions about the meaning of my own life.	1	2	3	4	5	24
18. I find it impossible to conceive of myself not being religious.	1	2	3	4	5	25

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	
19. Questions are far more essential to my religious experience than are answers.	1	2	3	4	5	26
20. Outside forces (other persons, churches, etc.) have been relatively unimportant in my religious development.	1	2	3	4	5	27
21. For me, religion has not been a "must".	1	2	3	4	5	28

Section B

1. Although I believe in my religion, I feel there are many more important things in my life.	1	2	3	4	5	29
2. It doesn't matter so much what I believe so long as I lead a moral life.	1	2	3	4	5	30
3. The primary purpose of prayer is to gain relief and protection.	1	2	3	4	5	31
4. The church is most important as a place to formulate good social relationships.	1	2	3	4	5	32
5. What religion offers me most is comfort when sorrows and misfortune strike.	1	2	3	4	5	33
6. I pray chiefly because I have been taught to pray.	1	2	3	4	5	34
7. Although I am a religious person I refuse to let religious considerations influence my everyday affairs.	1	2	3	4	5	35
8. A primary reason for my interest in religion is that my church is a congenial social activity.	1	2	3	4	5	36
9. Occasionally I find it necessary to compromise my religious beliefs in order to protect my social and economic well-being.	1	2	3	4	5	37
10. One reason for my being a church member is that such a membership helps to establish a person in the community.	1	2	3	4	5	38
11. The purpose of prayer is to secure a happy and peaceful life.	1	2	3	4	5	39

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	
12. It is important to me to spend periods of time in private religious thought and meditation.	1	2	3	4	5	40
13. If not prevented by unavoidable circumstances, I attend church.	1	2	3	4	5	41
14. I try hard to carry my religion over into all my other dealings in life.	1	2	3	4	5	42
15. The prayers I say when I am alone carry as much meaning and personal [illegible] those said by me during services.	1	2	3	4	5	43
16. Quite often I have been keenly aware of the presence of God or the Divine Being.	1	2	3	4	5	44
17. I read literature about my faith (or church).	1	2	3	4	5	45
18. If I were to join a church group I would prefer to join a Bible study group rather than a social fellowship.	1	2	3	4	5	46
19. My religious beliefs are what really lie behind my whole approach to life.	1	2	3	4	5	47
20. Religion is especially important to me because it answers so many questions about the meaning of life.	1	2	3	4	5	48

Section C

1. I believe in the existence of a just and merciful personal God.	1	2	3	4	5	49
2. I believe God created the universe.	1	2	3	4	5	50
3. I believe God has a plan for the universe.	1	2	3	4	5	51
4. I believe Jesus Christ is the divine son of God.	1	2	3	4	5	52
5. I believe Jesus Christ was resurrected (raised from the dead)	1	2	3	4	5	53
6. I believe Jesus Christ is the Messiah promised in the Old Testament.	1	2	3	4	5	54
7. I believe one must accept Jesus Christ as Lord and Savior to be saved from sin.	1	2	3	4	5	55
8. I believe in the "second coming" (that Jesus Christ will one day return to judge and rule the world).	1	2	3	4	5	56

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	
9. I believe in "original sin" (man is born a sinner).	1	2	3	4	5	57
10. I believe in life after death.	1	2	3	4	5	58
11. I believe there is a transcendent realm (an "other" world, not just this world in which we live).	1	2	3	4	5	59
12. I believe the Bible is the unique authority for God's will.	1	2	3	4	5	60
						61-80 BLANK

APPENDIX B

To use the random number programme we needed to determine the number of pages , columns and names in each column in the telephone directory.
This was estimated by counting the number of pages in the directory containing households (subtract the government pages, the blue pages and the Edmonton pages as not containing household residences) Our estimate was 742 pages.
The number of columns per page was given as 4.
The number of names per column was estimated by counting the names in 10 columns and dividing by 10. 90 names per column.

The programme was then run as follows:

```
#run PRL: MULTI
#15:18:37
     "Welcome to PRL: Multi .....etc.
Write a random number.
It should be an odd number and five or six digited.
25433
Write the number of dimensions should be less than 6.
3
Write the limits of the dimensions.
Limit of dimension 1 is ?
742
Limit of dimension 2 is ?
4
Limit of dimension 3 is ?
90
Name of the dimensions
Name of 1th dimension is
pages
Name of 2th dimension is
columns
Name of 3th dimension is
lines
Write the sample size it should be less than  1001
250
```

Once the list of random numbers had been generated we adjusted it according to the pages which had been excluded (ie Edmonton pages etc) then selected the Edmonton households indicated by the list.

APPENDIX C

University of Alberta
Edmonton
Canada T6G 2G5

Department of Educational Psychology
Faculty of Education
6-102 Education North Telephone (403) 432-5245

February 5, 1986

A couple of my colleagues and I, here at the University of Alberta, are currently involved in a study about peoples' attitudes and beliefs with regards to several issues.

Your household has been selected at random to participate in the study. The study is completely confidential - your name will not appear anywhere on the questionnaire as the responses will only be used in a combined form with others in the study.

One of my research assistants will contact you by phone in the near future, to determine whether one or more members of your household (over 18 years of age) would be willing to participate in the study. The questionnaire generally takes between 30 - 45 minutes to complete.

Thank you for your consideration in this matter.

Sincerely yours,

Dr. H. W. Zingle, PH.D.
Professor and Chairman
Department of Educational
Psychology

HWZ/jmc

APPENDIX D

Doctor Kappagoda, Director-Cardiac Rehabilitation and Research Professor of Medicine, U. of A. Hospital, has the following message which is fully explanatory! - "As a convenience to the patients enrolled in the Cardiac Rehabilitation Programme, we would like to offer an information sheet which could be taken by them when they leave the City on vacation. The sheet will contain a brief summary of the clinical status and a recent Electrocardiogram. This information could be of value in the event of an emergency." This is yet another example of the thought and excellent service offered by Dr. Kappagoda and his staff. On behalf of our group, I extend our gratitude to him.

This publication comes to you under the cover of a "strange" envelope, along with enclosures which should explain, together with the following announcement by Dr. Zingle: -

"The Educational Psychology Department of the University of Alberta is currently involved in a study of peoples' attitudes and beliefs in relation to stress. Because of the strong association between high stress levels and heart disease, we feel that it would be extremely valuable to include in our study, a group of people who experience difficulties with heart problems.

We have enclosed a questionnaire (and a prestamped, pre-addressed envelope) with the hope that you could spend 30 minutes and complete it for us. The questionnaire is completely confidential and if you have any questions please do not hesitate to contact my research assistant, Jayne Carlielle at 432-2389.

We are anticipating that this research will help towards understanding the relationship between stress, illness and an individual's personal belief system. Once the study has been completed we will report back to the Cardiac Self-Help group on our findings and their implications."

Our Group will try to book Dr. Zingle as a guest-speaker at one of our later monthly meetings which will afford us the opportunity of obtaining, first-hand, the Department's conclusions.

This year's "Year-end "Wrap-up" Barbecue" date is Friday, 6th June 1986 and will be held at 9041 Saskatchewan Drive - the residence of Marline Kalin and Alec Kuryla to whom we express our gratitude for the gracious offer. Venor Calhoun is in charge of weather for that date, and as we all know, he has never let us down in this regard.

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